Multidisciplinary Care in Australia:
a National Demonstration Project in Breast Cancer

Full report
National Breast Cancer Centre
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Collaborations and sites

National Multidisciplinary Care Demonstration Project

The Chief Clinical Collaborators and Local Evaluation Coordinators for the four collaborations involved in the National Multidisciplinary Care Demonstration Project were (listed in alphabetical order):

Collaborations
Barwon and Western Breast Consortium, VIC
North Queensland Breast Cancer Collaboration, NQ
Prince of Wales Hospital, Royal Hospital for Women, Prince of Wales Private Hospital and associated rural sites, NSW
Royal Melbourne Hospital, The Western Hospital and Ballarat Health Services, VIC

Chief Clinical Collaborators
Associate Professor Richard Bell
Dr John Collins
Dr Michael Donnellan
Professor Peter Donnelly
Dr Anthony Green
Dr Craig Lewis

Dr Bruce Mann
Dr Greg Mitchell
Dr Meron Pitcher
Dr Stephen Tobin
Dr Richard Turner
Dr Linda West
Local Evaluation Coordinators

Ms Linda Barrett  Ms Helen Grant
Ms Eileen Bedford  Ms Jane Jones
Ms Karen Eaton  Ms Margaret Stapleton
Dr Rae Garrett

National Profile Study of Multidisciplinary Care

The hospitals that participated in the National Profile Study of Multidisciplinary Care are listed in Appendix IV.

Observational Study of Multidisciplinary Care

The sites that participated in the Observational Study of Multidisciplinary Care are listed below (in alphabetical order).

- Austin and Repatriation Breast Clinic, Austin and Repatriation Medical Centre, VIC
- Centre for Breast Health, Royal Women’s Hospital Brisbane, QLD
- Monash Breast Service, Southern Health – Monash Medical Centre, VIC
- Rachel Forster Breast Clinic, Royal Prince Alfred Hospital, NSW
- Strathfield Breast Centre, Strathfield Private Hospital, NSW

Project Team, Steering Committee and Site Selection Subcommittee

Details of the Project Team, Steering Committee and Site Selection Subcommittee membership are given in Appendices I and II. The input of Professor Tom Anderson, visiting pathology fellow from Scotland and international member of the Site Selection Subcommittee is acknowledged.
Consultants

The cost analysis for the Demonstration Project (see Chapter 13) was conducted by Ms Natalia Price and Mr Michael Lees of M-TAG Pty Ltd. Advice about the costing was provided by Mr Glenn Salkeld, University of Sydney.

Statistical Consultancy services for the Demonstration Project were provided by Dr Julie Winstanley of Osman Consulting Pty Ltd. Statistical advice was provided by Associate Professor Judy Simpson, University of Sydney.

Data from the Royal Australasian College of Surgeons National Breast Surgical Audit were supplied by the Australian Safety and Efficacy Register of New Interventional Procedures – Surgical (ASERNIP-S).

Interviews for the National Profile Study were conducted by the Hunter Valley Research Foundation, NSW.

Observations for the Observational Study were conducted by Dr Deanna Pagnini, an independent consultant.

National Breast Cancer Centre Staff

Over the course of the National Multidisciplinary Care Demonstration Project, National Profile Study of Multidisciplinary Care and Observational Study of Multidisciplinary Care, the following people were involved as staff members in the conduct of the Project(s) and/or the preparation of this report:

Professor Christine Ewan  Dr Anne Grunseit
Professor Sally Redman  Ms Lucinda Freeman
Dr Karen Luxford  Ms Kath Vaughan
Dr Helen Zorbas  Ms Liz Temple
Dr Alison Evans  Ms Christine Hyde
Dr Kathy Rainbird  Ms Ruth McCrudden
Dr Lyn Kemp  Ms Michele Rumsey
Executive summary

Introduction

The Australian Priorities for Action in Cancer Control 2001–2003 identified 13 priority actions for cancer control. Two of those priorities are:

- reorganising breast cancer management to ensure seamless continuity of care from screening, first presentation with symptoms, to diagnosis, treatment and follow-up care
- improving the psychosocial care of women with breast cancer through provision of breast care nurses.

A third action, also related to multidisciplinary care (MDC) is:

- improving outcomes for lung and ovarian cancer by ensuring all people with these cancers are assessed at a multidisciplinary specialist centre as soon as possible after diagnosis.

Optimising Cancer Care in Australia, a report produced by key cancer control groups in 2003, highlights the need to reform cancer services into a ‘more patient-centred model’ (p.11) and calls for strategic reform and reorganisation of service delivery in cancer care. Two of the recommendations from this report are:

- that investigation of incentives required to foster, maintain and evaluate integrated multidisciplinary cancer care in both the public and private sectors be undertaken, with a view to widening availability of multidisciplinary cancer care in all settings
- that a national process of quality-driven organizational reform be implemented to improve ongoing supportive care throughout the cancer journey.

The difficulties inherent in achieving these aims are acknowledged and include Australia’s special geographic circumstances as well as funding arrangements (MBS items), which provide financial disincentives for practitioners to engage in multidisciplinary case conferences. Results reported in this Demonstration Project highlight these issues.

MDC was recommended by the House of Representatives Inquiry as a means of achieving best practice in the management of breast cancer in that ‘through their combined understanding…, all members of the team liaise and co-operate together and with the patient to diagnose, treat and manage the condition…to the
Without a multidisciplinary team, women with breast cancer may not be offered the full range of potential treatments and psychosocial issues may not be considered. The NHMRC Clinical Practice Guidelines for the Management of Early Breast Cancer also recommend that: women with breast cancer should be treated by specialists who have a demonstrated expertise in breast cancer and have access to the full range of multidisciplinary treatment options.

For the purposes of this Demonstration Project, MDC is defined as an integrated team approach to health care in which medical and allied health care professionals consider all relevant treatment options and develop collaboratively an individual treatment plan for each patient. Evidence indicates that a multidisciplinary approach to the care of women with breast cancer can reduce mortality and improve quality of life for women with the disease.

Multidisciplinary care is incorporated in the UK Manual of Cancer Services Standards (2000) for audit of breast cancer services and also features in the Canadian and US strategies for cancer control.

Australia is embarking on the development of a series of National Service Improvement Frameworks (NSIF) as a key direction for the National Health Priority Action Council for 2003–2005, commencing with cancer. The approach taken in the NSIF for cancer reflects the patient journey and pathways of care and aims to identify ideal care, current care, potential gain, critical intervention points and structural change. This Demonstration Project provides information around the critical intervention point of treatment planning following diagnosis. The Principles of Multidisciplinary Care developed for the Project identify the key components for breast cancer treatment planning, the National Profile Study of Multidisciplinary Care carried out as part of the Project describes current care and the results of the Demonstration Project itself identify areas of potential gain and approaches to structural change.

In summary, the Demonstration Project has shown that most specialist clinicians treating women with breast cancer are aware of evidence-based guidelines and that compliance is high. Nevertheless, improvements in the provision of psychosocial support and information about treatment options involving the full range of therapies have been demonstrated following implementation of MDC strategies. While most clinicians recognised the desirability of MDC, a large minority of services did not offer multidisciplinary treatment planning.

There are particular barriers related to communication with rural and regional specialists and general practitioners and the inadequacy of infrastructure resources, both human and technological, to overcome these barriers. Medical funding arrangements need to recognise the benefits of MDC in patient care, given that MDC case conferences impose a cost, whether financial or opportunity cost, on all participants and institutions.
Inadequate logistic and telecommunications support for meetings coupled with the need to overcome reluctance to assume added workload without added remuneration combine to make the achievement of MDC a major enterprise dependent upon the efforts and personal skills of a few committed individuals. The success of MDC is ultimately dependent upon ‘champions’ and individuals with leadership qualities.

If MDC for all cancers is an important objective for Australian health services, structural change will be needed to ensure that making it work is the responsibility of the total system rather than a few committed individuals.

**The National Multidisciplinary Care Demonstration Project**

The National Breast Cancer Centre was commissioned by the Australian Government Department of Health and Ageing to establish a *National Multidisciplinary Care Demonstration Project* for breast cancer in Australia. This Project was supported by two other components: a *National Profile Study of Multidisciplinary Care* and an *Observational Study of Multidisciplinary Care*.

The three-year *National Multidisciplinary Care Demonstration Project* was designed to provide:

1. information about the process, impact, acceptability and costs of the provision of MDC for women with breast cancer in Australia
2. information about MDC that would be applicable to other cancers and other chronic diseases
3. recommendations about the implementation of MDC for breast cancer in Australia taking into account possible funding structures.

While a number of health services in Australia offer some form of multidisciplinary care, published sources reveal little, if any, analysis of its components, barriers or enablers, nor any established or recommended models for the Australian situation. The *National Multidisciplinary Care Demonstration Project* therefore required a definition of MDC relevant for the Australian context. Given the mix of private and public service provision in Australia, and significant regional variations in delivery of and access to services, a flexible principle-based approach to MDC was required. The definition was based on a set of *Principles of Multidisciplinary Care*, with explicit recognition that these would be implemented differently in different locations.

A secondary objective of the Demonstration Project was to evaluate whether this flexible, principle-based approach to MDC was useful in practice. Such an approach to MDC is unique and has the potential for extrapolation to other health care systems, cancers and diseases,
particularly chronic conditions such as diabetes that require input from a range of health care professionals.

**Defining the Principles of Multidisciplinary Care for Australia**

To establish the principles underpinning a flexible approach to MDC, common factors in overseas models of care were reviewed\(^{12,13}\) and key elements of care were identified from research and reports and informed by the experience and knowledge of Australian experts. The draft Principles were reviewed by clinicians, allied health professionals and consumer representatives. The *Principles of Multidisciplinary Care*\(^{14}\) emphasise:

- **a team approach**, involving core disciplines integral to the provision of good care, with input from other specialties as required (where ‘core’ disciplines are surgery, radiology, medical and radiation oncology, pathology and supportive care)

- **communication** among team members regarding treatment planning

- **access to the full therapeutic range** for all women, regardless of geographical remoteness or size of institution

- **provision of care in accord with nationally agreed standards**

- **involvement of the woman** in decisions about her care.

Table 3.1 provides a comprehensive summary of the Principles and the criteria by which they would be satisfied for evaluation purposes.

**National Profile Study of Multidisciplinary Care**

A baseline *National Profile Study of Multidisciplinary Care*, conducted in 2000 prior to the implementation phase of the Demonstration Project, explored the organisation of services for women with breast cancer across Australia in relation to the *Principles of Multidisciplinary Care* and surveyed clinicians’ views about MDC (see Chapter 4). The survey included 60 hospitals across Australia that treated high, medium and low caseloads of women with breast cancer.

The Profile Study confirmed that, despite senior clinical support for MDC, opportunities remained for improvement in its implementation, particularly in rural areas. The majority of clinicians surveyed considered the key components of the *Principles of Multidisciplinary Care*, to be either essential or preferable for the provision of MDC.
Irrespective of caseload, most hospitals in the sample had implemented at least some aspects of MDC. Not surprisingly, the provision of MDC services was generally lower in hospitals with low caseloads, although some low-caseload hospitals provided MDC in accord with at least some of the Principles.

Even in the high-caseload hospitals, opportunities for improvement were identified. Thirty percent of hospitals with high breast cancer caseloads did not have regular multidisciplinary meetings and only 50% of high caseload hospitals had regular MDC meetings that considered all cases. The clinicians reported that none of the multidisciplinary treatment planning meetings involved general practitioners.

Only 45% of high-caseload hospitals had written protocols based on best practice guidelines covering multiple aspects of care. While all high-caseload hospitals had some form of data collection about the management of women with breast cancer, only 40% had a process for the review of the data. Given that these high-caseload hospitals each treat at least 100 women with breast cancer per year, their procedures have a significant impact on the care of women with breast cancer in Australia.

The Profile Study highlighted a disparity between attitudes towards and the implementation of MDC within Australia. For example, all respondents agreed that it is either essential or preferable that women with breast cancer have access to all relevant treatment and support services. However, 15% of hospitals did not have established referral links for reconstructive surgery or psychiatric care, 12% did not provide ‘core’ supportive care services and 27% had no protocols for the management of women with breast cancer. Similarly, while 95% of respondents agreed that it is essential for clinicians involved in the management of women with breast cancer to communicate with one another about their care, 30% of high-caseload hospitals did not have regular multidisciplinary treatment planning meetings and even fewer meetings were held in the medium- and low-caseload hospitals.

The National Profile Study confirmed that, at the outset of the Demonstration Project, there was scope for enhancing the practice of MDC across the spectrum of hospitals across Australia and hospitals were receptive to the concept of MDC.
National Multidisciplinary Care Demonstration Project

Methodology

The three-year National Multidisciplinary Care Demonstration Project investigated the impact, cost and acceptability of implementing MDC for women with breast cancer at three multi-facility sites across Australia (referred to as ‘collaborations’). The Project was overseen by a Steering Committee (see Appendix II). Collaborations were invited to submit an expression of interest and the final selection was made following a rigorous peer-reviewed selection process (described in Chapter 6). A fourth collaboration joined the Project following receipt of additional funding. However, despite a range of efforts one of the main multidisciplinary strategies was not implemented by the fourth collaboration and after 11 months the Chief Clinical Collaborators indicated that it was not feasible to complete the Project.

Each of the collaborations nominated locally relevant MDC strategies designed in accord with the Principles of Multidisciplinary Care. Collaborations were evaluated using a pre–post design over a 21-month period to identify outcomes, barriers, enablers and costs of the strategies implemented, using the Principles as criteria (see Table 5.2). Evaluations were carried out at baseline, during the start-up phase of the study during implementation and after implementation of the nominated strategies. The timeline for the Project phases is summarised in Table 5.1.

Five evaluation tools were used:

- Clinician survey (pre- and post-implementation)
- Consumer survey (pre- and post-implementation)
- Clinical audit (pre- and post-implementation)
- Clinician acceptability survey (post-implementation only)
- Activity logs (ongoing throughout Project)

The description and application of each of the evaluation tools are detailed in Chapters 8–13 and the Appendices of this full report.

In addition, an analysis of the costs associated with case conference meetings and other strategies to implement MDC was performed (Chapter 13). The costing analysis described is based on a report by M-TAG Pty Ltd, an independent health economics consultancy group.
The collaborations

Collaboration 1

The four sites included in Collaboration 1 were:

- Site a: Urban area, population ~198,000
- Site b: Large rural town, population ~30,000
- Site c: Rural town, population ~9,000
- Site d: Rural town, population ~10,000

Organisations involved in the collaboration included one public and two private hospitals in the urban area, three rural district hospitals, an urban radiology clinic, a pathology company, the state cancer council and state breast screening program.

Collaboration 2

Collaboration 2 comprised five sites distributed over a large geographical area of one state:

- Site a: Urban area, population ~94,000
- Site b: Urban area, population ~119,000
- Site c: Urban area, population ~77,000
- Site d: Rural town, population ~10,500
- Site e: Rural town, population ~20,500

The facilities, organisations and individuals involved in Collaboration 2 were public and private surgeons in all five sites, a regional oncology service, public and private radiologists, pathologists, a regional clinical school, a university school of medicine, hospital-based and community nursing services, the state breast screening program, urban and rural divisions of general practice, and a regional rural health training unit.

Collaboration 3

Collaboration 3 involved facilities from various regions within one state, including a major metropolitan city and two large rural centres. The three sites included in the collaboration were:
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- Site a: Region of a metropolitan city, population ~180,000
- Site b: Rural centre, population ~37,000
- Site c: Rural centre, population ~17,500

The facilities involved in Collaboration 3 included two public hospitals and one private hospital from one region in the city and two hospitals in the rural centres.

Strategies adopted by the collaborations

The strategies nominated by each of the collaborations to improve MDC in their region are outlined below. A common focus for the strategies was multidisciplinary case conference meetings: regular meetings dedicated to treatment planning were established where previously none occurred, or the focus of existing meetings was changed to fulfill this remit. The need to strengthen communication and collaborative links was identified by all collaborations, and emphasis on the role of the breast care nurse in this process was a common strategy.

Collaboration 1

Collaboration 1 nominated three strategies:

1. Continued development of the breast clinic in Site a (urban area) to provide a forum and focus to take MDC beyond the point of diagnosis.

2. Development of a multidisciplinary clinic at Site b (rural town) together with enhanced communications, with a view to extending such activity to the remainder of the region in the longer term. Investigation and development of case conferencing throughout the region, using existing information technology and the potential networking of individual practitioners' personal computers.


Collaboration 2

Collaboration 2 nominated over forty strategies. Some were quite specific (eg, developing team letterhead), while others were quite general (eg, strengthening current links within the region). For ease of reporting, the strategies have been summarised into four key areas, as follows:

1. Development of an identifiable multidisciplinary team and strengthening of links between the team members by:
a. developing a team letterhead and other identifiers
b. producing a clinical management pathway to provide an overview of the interdisciplinary interaction between team members
c. holding group meetings and team sessions to address issues such as perceived concerns about loss of clinical independence
d. enhancing the provision of ‘non-core’ services through the standardisation of referral forms and recording outcomes of referrals on the patient management register.

2. Establishment of regular case conference team meetings, with distant sites linked via videoconference facilities.

3. Establishment of collaborative links and strengthening of existing links across the region including:
   a. an assessment of current gaps in service provision
   b. developing a directory of off-site services
   c. establishing shared-care processes to reduce patient travel and family disruption.

4. Improvement of psychosocial support for women with breast cancer by establishing local protocols to ensure all newly diagnosed women consult with a supportive care team member before treatment decisions are made.

**Collaboration 3**

Collaboration 3 nominated a number of strategies to improve MDC that can be summarised into three key areas:

1. Expansion of MDC through the appointment of a breast care nurse to:
   - act as a member of the multidisciplinary team and attend case conference meetings
   - serve as the link to coordinate the seamless passage of women with early breast cancer through the phases of diagnosis, surgery and adjuvant therapy
   - identify and facilitate referral for women requiring counselling for hereditary or psychosocial issues
collaborate with senior nursing personnel across all relevant disciplines to ensure patients receive relevant referrals and information about clinical trials

be present for collaborative treatment planning with the woman and provide supportive care if required

provide feedback to patients about the outcomes of multidisciplinary meetings

establish and strengthen links with Sites b and c by attending satellite clinics, participating in relevant case conferences, formalising links with relevant nursing staff.

2. Strengthening communication within the multidisciplinary team by ensuring that all new ‘cases’ are discussed, including patients from rural centres.

3. Establishment of video- or teleconferencing links with rural centres (Sites b and c) to enable participation in multidisciplinary meetings.

**Outcomes**

**Clinician and consumer surveys**

The results of the survey of clinicians from the three participating collaborations (See Chapter 10) indicate that many improvements in service delivery were made in line with the *Principles of Multidisciplinary Care* over the course of the Project. Key findings reported by clinicians included increases in:

- regular, weekly multidisciplinary meetings dedicated to the planning of treatment for women with breast cancer
- the number of ‘core’ and ‘non-core’ team members attending multidisciplinary meetings
- specialist breast care nurses being recognised as a team member involved in managing women with breast cancer
- provision of routine supportive care to women at diagnosis and after treatment
- referral of women with severe anxiety and/or depression to a psychiatrist, with fewer clinicians managing such women on their own.

While the overall findings relate to all three collaborations participating in the Project, it is worth noting some areas where particular strategies were differentially successful. Both
Collaborations 1 and 2 aimed to improve the involvement of general practitioners in MDC planning meetings. At post-implementation, only clinicians from Collaboration 1 indicated that general practitioners always attended meetings. This finding confirms process reports from these two collaborations – Collaboration 1 reported that general practitioner strategies had been effective, while Collaboration 2 noted a lack of general practitioner attendance despite efforts of collaboration members. Collaboration 1 made significant efforts from the outset of the Project to encourage attendance of general practitioners at MDC planning meetings, including holding focus groups with general practitioners and involving the local Divisions of General Practice in identifying suitable meeting attendees. Collaboration 2 corresponded with general practitioners to encourage participation with little impact on attendance. These findings suggest that specific targeted strategies are required to gain support for such strategies.

A key strategy for Collaboration 3 was the appointment of a specialist breast care nurse as a team member, to be involved in MDC planning meetings, coordinate the passage of women from diagnosis through treatment and help identify and facilitate women for appropriate counselling referral. The appointment of the breast care nurse and recognition of this individual as a team member was reflected in the responses from the clinicians at this collaboration. Of the collaborations, Collaboration 3 demonstrated the greatest pre- to post-implementation increases in the following: increased perception that the specialist breast care nurse was involved in the management of women; increased reporting of the specialist breast care nurse as the nominated team member to provide supportive care for women; and increased provision of supportive care to women at the time of diagnosis. In line with this strategy, an increase in attendance at case conference meetings by supportive care professionals was seen over time. This increase was due not only to attendance by the breast care nurse – a clinical psychologist was also in attendance at some meetings, suggesting that a greater emphasis was placed on psychosocial issues in general following the implementation of MDC strategies at this collaboration.

Information gathered from several sources in the Project led to the conclusion that one of the key benefits of a multidisciplinary approach in the short term is improvement in the provision of psychosocial support for women with breast cancer.

Further improvements in accord with the *Principles of Multidisciplinary Care* were increased support for women being treated for breast cancer and assistance for women with decision making. Over the course of the study, reported routine provision of supportive care to women at the time of diagnosis increased significantly. At the end of the study, clinicians relied significantly less on their own judgement to manage women experiencing severe anxiety.
and/or depression and there was a significant increase in the reported referral of such women to a psychiatrist.

Other increases found during the study, although statistically non-significant, included:

- the number of clinicians who reported that they routinely offered the option of a second consultation to women diagnosed with breast cancer
- recognition that there was an agreed service protocol for accessing interpreters
- reported awareness by clinicians of an agreed strategy for providing women with information about, and access to supportive care services
- awareness of relevant clinical practice guidelines amongst respondent clinicians
- attendance by respondent clinicians at ‘in-house’ multidisciplinary professional development activities.

A number of the findings of the survey of clinicians are validated by the survey of women reported in Chapter 8. Both before and after the implementation of MDC strategies, women tended to report that the people involved in providing their treatment were working as a well-coordinated team, communicating well with each other and keeping the general practitioner informed. The survey of women also indicated a statistically non-significant increase in the provision of information about the psychosocial impact of breast cancer and practical information about adjusting and coping with the disease.

Results from the consumer survey indicate that a high proportion of women were receiving care in accordance with clinical practice guidelines and believed that a team approach was taken to their care before the implementation of MDC strategies. Improvements were seen between the pre- and post-implementation phases of the Project, although few changes were statistically significant. It may be that the impact of MDC strategies needs to be assessed over a longer timeframe in order for the structural and procedural changes implemented to have an observable impact on women with breast cancer.

Overall, the majority of women surveyed at the three collaborations perceived that their care was being coordinated by a team. For the 7% of women who did not perceive that care was coordinated, qualitative data obtained via the consumer survey provides a useful insight into those factors that influence women’s views of their treatment team. In particular, the responses highlighted the importance of clinicians knowing what other people involved in the care of a woman with breast cancer have told the woman about her disease or its treatment. Conflicting
information from different specialists or a lack of awareness of other specialists’ decisions were also raised as issues. These findings suggest that improving communication among multidisciplinary team members may be one of the most important factors in ensuring that women feel that they are receiving care from a coordinated team.

**Activity logs**

Activity logs maintained by the collaborations throughout the Project confirm a number of the findings from the survey of clinicians, including an increase in the number of multidisciplinary meetings dedicated to treatment planning for women with breast cancer and in the number of ‘core’ team members attending multidisciplinary meetings following the implementation of MDC strategies (see Chapter 12).

It is particularly interesting to compare the changes that occurred with time based on the different situations at each of the collaborations at baseline. Where treatment planning meetings were already occurring at baseline and strategies were implemented to alter team composition, the number of meetings held over the course of the Project remained relatively stable. However, at the two collaborations where case conference meetings were not held regularly at baseline, an increase in the number of meetings was seen during the Project. By post-implementation, multidisciplinary case conference meetings dedicated to treatment planning were occurring regularly at the main urban sites of all three collaborations. While the total number of meetings varied depending on the number of participating sites, the number of meetings held at the main urban site for each of the three collaborations was consistent, at 20–21 meetings over the 6-month period (an average of one meeting per week).

Staff attendance at meetings changed over the course of the Project, and by post-implementation, meetings at the main urban sites were generally well attended by the ‘core’ disciplines – these being representatives from surgery, medical and radiation oncology, pathology, radiology and supportive care. Collaborative links had extended beyond the ‘core’ team, with a number of meetings attended by professionals from other disciplines providing specialist services for women with breast cancer, such as breast physicians, physiotherapists, genetic counsellors, occupational therapists, nurses and palliative care specialists. There was also an increased contribution by different core team members to case discussions.

The average number of cases discussed per meeting at collaborations where previously meetings had been infrequent or had not occurred increased over the course of the Project. Some change in the types of cases presented at case conference meetings was also seen over the course of the Project, with an increase in the number of cases of early breast cancer and a decrease in the number of cases of *in situ* disease. The number of radiology
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and pathology reports available at case conference meetings to assist treatment planning also increased over the course of the Project.

Clinical audit

The clinical audit tool was developed to gather objective data about aspects of clinical care for women with early breast cancer (see Chapter 9). However, it was acknowledged from the outset that the design and short duration of the Project were not appropriate to demonstrate clinical outcomes for women with breast cancer and that few, if any, significant changes in treatment were likely to be observed between the pre- and post-implementation phases. Factors influencing this view were the already high standard of practice in Australia at baseline (a national patterns of care treatment survey of 1995 identified a high standard of practice in most aspects of care for women with breast cancer), the relatively small numbers of women participating in the audit, particularly in some subsets of treatment, and the relatively short implementation time of the Project. However, surrogate measures can provide some evidence of change in practice that can reasonably be expected to translate into improved outcomes in the longer term.

The clinical audit indicated that practice during the pre-implementation phase of the National Multidisciplinary Care Demonstration Project was largely in accord with guideline recommendations. For most outcomes measured therefore, either no changes were evident during the post-implementation phase or they were too small to reach statistical significance. Data collected in the clinical audit in which no significant change was evident included: the proportion of women who underwent mastectomy; the proportion of women who were referred to a radiation oncologist prior to breast conserving surgery; the proportion of women with positive nodes who received chemotherapy; the proportion of women whose hormone receptor status was reported; and the proportion of women with oestrogen receptor-positive tumours who received hormone therapy.

Some outcomes did show improvement, but because of the small numbers involved, statistical significance was not tested in some cases and not achieved in others. This was particularly noteworthy in: the proportion of women who were entered into a clinical trial in all three collaborations; the proportion of women who had breast reconstructive surgery after mastectomy at Collaboration 3; the proportion of women who were referred to a medical oncologist prior to commencement of adjuvant systemic or hormone therapy at Collaboration 2; and the proportion of women who received sentinel node biopsy at Collaboration 2.

Some results indicate significant improvements in practice in line with best practice between pre- and post-implementation. A statistically significant increase in the proportion of women
who had a preoperative diagnosis of cancer achieved without open biopsy was seen at Collaboration 2 and an increase of borderline significance was seen at Collaboration 3. This implies a greater use of the triple test approach to diagnosis, correlating the results of clinical examination, breast imaging and fine needle or core biopsy to reach a preoperative diagnosis. In this way, management options can be discussed with the woman prior to her surgery and a one-stage surgical procedure can be performed in the majority of cases. In addition, there was a significant increase in the proportion of women who received sentinel node biopsy at Collaborations 1 and 3. This result reflects an increase in the number of surgeons performing sentinel node biopsy, and was likely to be due to the introduction of the RACS Sentinel Node Axillary Clearance (SNAC) Trial.

Outcomes reported by collaborations

Collaboration 1

Collaboration 1 reported significant achievements in relation to the implementation of multidisciplinary strategies. In Site a, where previously no multidisciplinary meetings were held, regular case conference meetings for treatment planning were implemented. By the end of the Project, multidisciplinary case conference meetings in Site a were well established and were being held on a weekly basis, with approximately 18 participants representing a range of disciplines including general practitioners. Similarly, a multidisciplinary team had formed in Site c, with the team meeting on a weekly basis for case conferencing. Other achievements reported by the collaboration included: establishment of familial cancer clinics; a survey of nurses regarding the identification of psychosocial concerns for women with breast cancer; and the appointment of a regional breast care nurse (funded through the state health department) to help coordinate the provision of care by breast care nurses from across the region.

While Collaboration 1 implemented a number of multidisciplinary strategies over the course of the Project, some major challenges were encountered during this time. Perhaps the greatest barrier to the implementation of multidisciplinary strategies reported by the collaboration was initial resistance to change from some team members. Other reported challenges included: opposition to the establishment of MDC meetings; technical issues related to establishing videoconferencing links; lack of recognition of the importance of psychosocial issues in multidisciplinary discussion; and lack of understanding of the role of breast care nurses.

The implementation of multidisciplinary strategies as reported by Collaboration 1 appeared to have an impact both for women with breast cancer and the clinicians involved in their care. Treatment planning for women with breast cancer in Sites a and b involved multidisciplinary input with a perceived increase in treatment options due to the involvement of medical and
radiation oncologists at the treatment planning meetings. Moreover, breast care nurses were now considered part of the team. At meetings, discussion of issues by members of the team who were aware of the woman’s circumstances and wishes had encouraged the development of individualised treatment plans. The collaboration reported a shift away from talking about ‘cases’ to discussing the woman. Team meetings were perceived to be encouraging practice in accordance with clinical practice guidelines and discussion of new research findings. The Chief Clinical Collaborators indicated that clinicians appeared to gain peer support from the meetings, in particular finding it reassuring to be able to discuss complex cases with the team. At a broader level, networks across the region had been improved through meetings to discuss the implementation of the MDC strategies during the Project.

**Collaboration 2**

The principal achievements reported by Collaboration 2 were the establishment of regular case presentation multidisciplinary meetings in the three main sites. By the end of the Project, multidisciplinary breast cancer meetings were incorporated into routine clinical practice in Sites a, b and c, with participants from all core disciplines regularly attending the meetings. Health care professionals from other specialty areas, such as plastic surgery, psychiatry and genetic counselling, were also involved in the meetings. Links with distant Sites d and e were well established, with clinical staff from these sites attending multidisciplinary meetings either in person or via a videoconference link. Other achievements reported within the collaboration included: the development and utilisation of team identifiers, the promotion of interdisciplinary clinical management pathways, attainment of funds to appoint three part-time breast care nurses, and the establishment of suitable rooms for counselling women with breast cancer following their initial diagnosis.

A key challenge to the implementation of MDC strategies reported by Collaboration 2 related to the large geographical area it encompassed. While initially it had been envisaged that a region-wide multidisciplinary team would be established, it was soon recognised that such an approach was not feasible. Instead, teams were established within the three main sites (Sites a, b and c) and functioned independently of each other. Attempts to overcome the barrier of distance through the use of videoconferencing had mixed success. Other challenges indicated by the collaboration included: the lack of suitably qualified staff across the region, with two resident medical oncology positions unfilled for most of the Project; the redevelopment of the three major public hospitals during the Project timeframe, which caused disruption to meeting venues and availability of videoconferencing facilities; and lack of attendance by general practitioners at the MDC meetings.
Collaboration 2 reported that the implementation of multidisciplinary strategies had a positive impact. Reports from the collaboration indicated that women with early and advanced breast cancer had benefited from a more streamlined and efficient management pathway, improved communication between all disciplines and an increased awareness among team members of the availability of ‘non-core’ services. The regular multidisciplinary meetings established were believed to have facilitated and strengthened lines of communication between all those involved in caring for women with breast cancer in the region, within both the public and private sectors. Some sites reported a ‘revolutionary change’ in the level of communication both between and within disciplines. Other outcomes associated with multidisciplinary meetings, reported by the collaboration, were a raised awareness of the importance of considering patient’s suitability for clinical trials and new insights into the various diagnostic and therapeutic modalities for breast cancer. In addition, team members felt they had enhanced intellectual and practical support. The multidisciplinary meetings were reported to be of educational value to trainee specialists, particularly surgical registrars, who presented cases at the meetings, participated in discussions, interpreted diagnostic images and gained an appreciation of the multidisciplinary model of care.

The implementation of multidisciplinary strategies appeared also to have had an impact at the facility level. The experience of being part of a multidisciplinary team and the perceived benefits of regular multidisciplinary meetings had inspired some members of Collaboration 2 and other groups within the participating sites to adopt a similar approach for other diseases. By the completion of the Project, additional multidisciplinary meetings had been established in various facilities located within the collaboration region for colorectal cancer, melanoma and respiratory medicine.

**Collaboration 3**

Key achievements reported by Collaboration 3 were primarily associated with the improved coordination and continuity of care provided by the breast care nurse. Previously in the large metropolitan site (Site a), women with breast cancer may have been treated in several facilities with little integration of services. The breast care nurse provided an important focal point for all involved in the management of women with breast cancer and appeared to foster a cohesive approach among the multidisciplinary team members. The collaboration reported that continuity of care and psychosocial support provided to women with breast cancer within the collaboration was enhanced by the breast care nurse’s involvement in the pathway from diagnosis to treatment and then to follow-up. Other reported achievements associated with the breast care nurse joining the multidisciplinary team and attending team meetings included: the development of more individualised treatment plans, due to a greater awareness of
psychosocial issues; an increase in the involvement of women in making treatment decisions through their enhanced understanding of breast cancer, its treatment and their options; greater consideration of eligibility of women for clinical trials; the establishment of breast cancer support groups; and the strengthening of links between the urban Site a and one of the rural centres, particularly with regard to assisting those women required to travel to the urban site for treatment.

The main challenges reported by Collaboration 3 tended to be associated with attempts to establish stronger links with the rural centres. The collaboration was unable to establish a direct link between the breast care nurse and one of the rural centres (Site b), primarily because of a reluctance to change long-established care pathways and a lack of support for the Project by some clinical staff. Linking surgeons from the rural centres to the multidisciplinary team meetings via video- or teleconferencing was not implemented during the Project. Reported challenges encountered in relation to the establishment of the video- and/or teleconferencing links included the withdrawal of funding for technical infrastructure, the small number of breast cancer cases from rural centres, and the irregularity and unpredictability of presentation of rural cases by some clinicians. The latter of these issues similarly impacted on ensuring that all cases of breast cancer diagnosed within the collaboration were discussed at the multidisciplinary treatment planning meetings.

The implementation of at least one of the key multidisciplinary strategies had, according to the collaboration's reports, impacted on the provision of care for women with breast cancer. For the women themselves, there appeared to have been improvements in relation to the continuity of care, the provision of information regarding treatment, psychosocial support, involvement in the decision-making process, access to specialty care services if required and, for those women from rural centres, improved transition of care for those requiring treatment in the urban site.

**Survey of acceptability to clinicians and impact of multidisciplinary care**

The implementation of MDC strategies was generally well accepted by the clinicians at each of the collaborations (see Chapter 11). A number of differences between the collaborations involved in the Project were apparent, both in terms of the health care contexts in which they were functioning and the types of multidisciplinary strategies nominated. Despite these differences, the majority of clinicians surveyed across all three collaborations believed the implementation of the multidisciplinary strategies was worthwhile and that it had improved the care of women with breast cancer.
The majority of clinicians were aware that their facility was involved in the *National Multidisciplinary Care Demonstration Project* and that it had been part of a larger collaboration. Most clinicians indicated that the links between their facility and others had been ‘somewhat’ to ‘very’ collaborative in nature and believed that these links were likely to be maintained after completion of the Project. The majority of clinicians could identify at least one multidisciplinary strategy that had been implemented within their collaboration. The strategies that were reported as having been ‘successfully’ implemented reflected those that the collaborations had aimed to implement, with the establishment of the multidisciplinary meetings and the appointment of a breast care nurse being most frequently identified.

However, clinicians perceived that the implementation of multidisciplinary strategies had not proceeded as planned in relation to the rural sites. Indeed, a total of seven clinicians from rural sites were not aware of any strategies that had been implemented in their collaboration. Comments by some of the rural clinicians interviewed provide an important insight into the challenges involved in implementing MDC in such locations. In particular, some suggested that there was a perception that major centres may have been trying to ‘impose’ practices and new models of care on the rural sites, rather than working with the sites to improve care.

In general, clinicians believed that the implementation of multidisciplinary strategies had been beneficial both in terms of improving care for women with breast cancer and enhancing communication between those involved in providing such care. Across the three collaborations, the majority of clinicians (88%) believed that the implementation of the multidisciplinary strategies had improved the care of women with breast cancer within their facility. Similarly, 88% believed that the multidisciplinary strategies had improved communication between team members. Some of the reported outcomes associated with the meetings included increased discussion of the issues associated with providing treatment for breast cancer as well as an improved understanding and respect for colleagues’ roles within the multidisciplinary team. The improved communication inherent in the multidisciplinary strategies was perceived as one of the key impacts at the facility level. Other facility-based outcomes reported by the clinicians included improved coordination of services, greater professional awareness, enhanced team functioning and the perception that women with breast cancer felt they were receiving better care.

The implementation of multidisciplinary strategies also had a positive impact for the clinicians themselves. Clinicians reported that the multidisciplinary approach provided greater emotional and intellectual support, especially with regard to making difficult treatment decisions and discussion of issues or concerns. The supportive environment fostered by the multidisciplinary approach had other associated benefits for clinicians who reported reduced stress and feelings
of enhanced professional satisfaction. Other positive personal impacts reported by the clinicians included improved knowledge, greater understanding of the complexities of breast cancer treatment and improved relationships with the women with breast cancer for whom they were providing treatment. The main negative impact for individual clinicians related to the further demands that the implementation of strategies had placed on their time.

All clinicians who were aware of the strategies that had been implemented within their collaboration indicated that the implementation of multidisciplinary strategies had been worthwhile. However, just over one-third of these clinicians also acknowledged that implementation of the strategies was difficult. Difficulties associated with strategy implementation related to three main issues: the practical issues involved in establishing strategies, such as finding a suitable venue and time for the meetings; political issues involved in gaining support from all team members; and staffing issues, such as not having sufficient oncology staff at a particular site.

Clinicians’ advice to other groups who might be considering implementing multidisciplinary strategies in the future tended to reflect these issues. Also emphasised was the importance of the characteristics of the team leader or Chair, with many clinicians indicating that this had a major impact upon the willingness of other team members to participate. The Observational Study component of the Project confirmed this conclusion (see Chapter 14).

The Demonstration Project had significant flow-on effects that provided further evidence of the perceived benefits of the multidisciplinary approach by the clinicians involved. Most significantly, a number of clinicians reported that their facility was now considering, or had commenced the implementation of similar multidisciplinary strategies for the treatment of patients with other types of cancer (see also Chapter 7).

**Cost of implementing multidisciplinary care**

The aim of the costing analysis was to provide indicative costs for the set-up and implementation of MDC strategies, with a focus on establishing and maintaining MDC case conference meetings (see Chapter 13). It is important to emphasise that, while the costing analysis provides valuable information regarding the cost of implementing MDC strategies, it is *not* a cost-effectiveness study. No attempt was made to forecast or quantify potential cost benefits to patients, clinicians or services.

The costing analysis was based primarily on data from the log sheets completed by each of the collaborations during each phase of the Project and related mainly to the costs associated with case conference meetings. Meeting costs include both infrastructure and the cost associated
with attendance at meetings by all staff (both public and private) involved in managing women with breast cancer. Additional information was obtained from budget statements produced by the collaborations and from telephone interviews with collaboration staff at the end of the Project.

As expected, the costs varied considerably, based on the number of meetings and attendees, and differences between each of the collaborations at baseline, with the average cost of MDC case conference meetings at post-implementation ranging from $178–548 per case presented. Where meetings already existed, the average cost by the end of the Project was around $800 per meeting (or $180 per case presented). Where meetings were newly established, these costs at least doubled. Costs were understandably higher during the start-up phase for each collaboration.

Factors influencing the average cost per meeting and the average cost per case presented included the length of the meeting and number of attendees, together with the number of meetings held and the number of cases presented. In general, newly established meetings seemed to be longer, and the number of cases discussed lower than for well-established meetings, resulting in a higher average cost. It is likely that as meetings become more routine, more time-efficient processes are implemented, leading to an increase in the number of cases discussed during meetings, and a decrease in the time needed to discuss each case.

Meeting organisation tasks included notifying participants about the meeting and gathering patient information and test results before the meeting. Some preparation tasks would be performed in any care plan and therefore not all of the preparatory work should be considered as an additional resource use. The associated costs differed according to who was responsible for these tasks and the situation at baseline, with more time spent on meeting organisation for newly established meetings. It is likely that the amount of organisational time required will decrease with time as attendees become familiar with the processes involved.

The resource costs associated with MDC case conference meetings included room hire and equipment costs. Costs for room hire were generally not incurred, as the meeting rooms used were typically hospital rooms that would otherwise be left vacant. Some catering costs were incurred, although these were generally not large. The use of existing equipment, such as data projectors, represented a significant cost saving compared with the purchase of new equipment.

Only one collaboration used video-/teleconferencing as a regular communication tool for MDC strategies. The necessary equipment was already in place and therefore the only costs incurred were call costs. The costs involved in setting up the technology to be able to run
videoconferencing were not recorded as part of this Project but, although significant, should be viewed as a part of hospital infrastructure required for multiple purposes.

Other costs associated with the implementation of MDC strategies related to staff salaries, personal time of staff members, project management, and other resource costs such as travel and telephone calls. These costs are not necessarily related to the number of case conference meetings held.

Staff employed specifically for the purposes of implementing MDC strategies included breast care nurses, local evaluation coordinators and secretarial support staff. At Collaboration 3, the breast care nurse salary represented the major increase in cost compared with baseline.

A significant amount of personal time was committed to establishing MDC strategies by collaboration staff, and the amount of time spent during the initial stages of the Project was higher where treatment planning meetings were newly established and intensive lobbying of staff was needed to gain acceptance of the nominated strategies. Less personal time was used where the Project strengthened and formalised existing structures and a complete change in processes and attitudes was not required in order for the nominated strategies to be implemented. Although personal time is not an actual expense, it represents a proxy of opportunity cost. In reality, these staff members were not precluded from working but were deprived of leisure time. While valuation of leisure time is difficult, salary rates have been used as an estimation of the professional worth of these individuals’ time. It is important to note that estimates of personal time and the time associated with meeting organisation were made retrospectively and may not be a true reflection of the actual hours spent. In all collaborations, the amount of personal time spent by staff decreased over the course of the Project, suggesting that once strategies have been implemented, less personal time is needed. It is reasonable to assume that a significant change in practice or procedures requires time commitment from the staff involved. Awareness of the potential barriers to the implementation of MDC strategies should help to pre-empt some of the difficulties that may be encountered.

Project management was crucial to the implementation of MDC strategies and the associated cost depended on who was responsible for this task. Where local evaluation coordinators were employed to fulfil this role, the individuals had a dual role of assisting with implementing MDC strategies, and liaising with the National Breast Cancer Centre regarding Project outcomes. The total cost associated with these staff cannot therefore be assigned wholly to the implementation of MDC strategies and it is likely that the cost associated with project management related solely to implementation of MDC strategies is lower than represented here.
Travel and accommodation costs over the course of the Project related to the promotion of MDC strategies rather than travel to MDC case conference meetings. Understandably, these costs were highest during the start-up phase of the Project.

**Observational Study of Multidisciplinary Care**

The aim of the *Observational Study of Multidisciplinary Care* was to explore current ‘best practice’ in the conduct of multidisciplinary breast cancer case conference meetings in Australia, by observing and describing the commonalities and differences of four models of case conferences perceived to be ‘good’ or ‘successful’ (see Chapter 14). Independent observations were made at three consecutive multidisciplinary case conference meetings at four hospitals in Australia that had been identified as having well-established multidisciplinary care meetings. These hospitals did not include any Collaboration sites participating in the *Demonstration Project*. All participating hospitals had high case loads (100 or more cases of breast cancer treated per year) and were located in urban areas of New South Wales, Victoria and Queensland. Three hospitals were public and one was a private hospital.

Information was collected regarding processes, general content, atmosphere and types of issues discussed at the meetings. Brief interviews with members of the multidisciplinary team following each meeting were used to elicit further information about the organisation, style, leadership and benefit of the meetings.

Analysis of the observations of multidisciplinary case conference meetings and interviews with participants about their perceptions of the meetings revealed many factors that were common to all four sites. These factors were perceived by the independent Observer and the meeting participants to contribute to the ‘success’ of meetings. Common factors for all participating hospitals included:

- Meetings were always, or nearly always, held at the same time in the same venue at each site. The type of meeting rooms and available facilities differed between sites.

- Provision of refreshments and food, as meetings were typically held either outside normal working hours, during breakfast or lunchtimes or towards the end of the working day.

- Allowing approximately 45–60 minutes for case discussions. the number of cases discussed per meeting varied considerably between and within sites and any additional time was used for educational purposes.
• Sound preparation of materials and information in advance of the meeting; the types of materials and the way in which they were prepared varied between sites.

• Strong leadership and facilitation of meetings by the Chair, which was a surgeon at each site. The most important roles of the Chair included: keeping meetings to the agenda, commencing discussions, encouraging involvement of all participants in case discussions and decision-making, and, at the conclusion of each case discussion, summarising the discussion and inviting any further input before moving to the next case. An alternating Chair was used at one site.

• Representation at meetings and input into discussions from across the core disciplines.

• Strategies for communication of case discussion outcomes to the woman concerned, and/or to her general practitioner.

• Motivational factors for attending meetings included:
  • perceived benefits of the meetings for both clinical participants and their patients
  • opportunity to interact with other members of the multidisciplinary team in a generally friendly and inclusive atmosphere
  • opportunity for educational interaction and professional development
  • streamlining of referral pathways.

While the mental health and wellbeing of participating health care professionals was not measured directly in the *Observational Study*, participants’ perceptions of the many benefits to themselves and their patients of the multidisciplinary case conferences indicated a positive approach of clinicians to their professional life, which may possibly extend to improvements in their overall mental health and wellbeing, as supported by international findings. The clinicians surveyed in the Demonstration Project indicated that benefits to themselves of a fostering multidisciplinary care approach included reduced stress and feelings of enhanced professional satisfaction (see Chapter 11).

**Barriers and limitations to change**

The limited nature or lack of change detected in some areas during the Demonstration Project may be attributed to barriers to change, high standards of care at the outset of the Project or methodological limitations of the evaluation conducted.
A number of barriers to change were encountered by the Collaborations implementing MDC strategies. Clinicians surveyed identified demands on their personal time and lack of payment for attendance at the multidisciplinary meetings as issues of concern. Other barriers included practical issues (e.g., finding a suitable meeting venue and time), gaining support from all team members and clinical staffing issues.

Rural, remote and small sites within the collaborations reported little change in service linkage or referral to other facilities for the provision of core services not locally available. In a number of collaborations, strategies to improve links with rural facilities were reported as being difficult to implement and not always perceived as effective.

An important insight into barriers to MDC is offered by the fourth collaboration, which withdrew part way through the Project, unable to achieve the MDC strategies nominated by the Collaboration (see Chapter 7).

One of the main issues reported by Collaboration 4 was that a number of clinicians at one site did not see any benefit in adding what they perceived to be ‘another meeting’ to already functioning meetings. Other issues appeared to relate to confidentiality and privilege, with some clinicians expressing concern about the potential legal implications within their State of discussing patients in an open forum such as a multidisciplinary meeting. Despite the best efforts of the Chief Clinical Collaborators at each site, the link between the urban and regional sites could not be established. It was apparent that despite verbal and written assurance of support for the Project throughout the collaboration, some clinicians were not fully supportive of the undertaking. In the regional site where only a few clinicians were active in the breast cancer field, linking into meetings at other sites was considered an unnecessary undertaking in an already busy working week. The clinicians could not perceive any further benefits either for themselves or for their patients. The lesson to be learnt from this aspect of the Project is that for urban and rural multidisciplinary links to work, the potential benefit of such links to clinicians and to patients needs to be apparent from the outset.

Other lessons learnt from Collaboration 4, which were also apparent from the experiences of the three participating collaborations, included: the difficulty of trying to change long-established practice patterns; the importance of having at least one champion for the initiatives at each participating site; the benefits of modifying an existing meeting rather than to trying to establish a new one; and the need for considerable organisational assistance to establish new meetings.

Other areas where little or no change was evident between study phases were those in which standards of care were already high at the outset of the study and remained so at the end of the...
study. For example, in both study phases clinicians reported that women were typically informed of their diagnosis by either a surgeon or general practitioner and never by a junior doctor or nurse. Further examples were evident in the findings of the clinical audit and consumer survey (see Chapters 8 and 9).

Change was also not evident in the level of collaboration reported between team members outside the multidisciplinary treatment planning meetings. The Principles of Multidisciplinary Care identify collaborative working links as an important component supporting a multidisciplinary approach. The lack of reported change could indicate that collaboration was already perceived as adequate or that such effects may take time to emerge or that structural barriers to collaboration exist.

Methodological constrains on the Demonstration Project may also have impacted on the ability of the evaluation to detect change over a limited timeframe. It is likely that over a longer timeframe structural and procedural changes implemented will have an observable impact on the management of women with breast cancer. Other methodological restrictions included that only women with early breast cancer were considered eligible for the cohorts for the clinical audit and consumer survey (and hence improvements for women with advanced or in situ disease were not investigated for these tools) and some samples were too small for subset analysis or change detected within the Project timeframe only reached borderline significance.
Summary and recommendations

The Principles of Multidisciplinary Care developed to guide and evaluate strategy implementation were a useful and valid framework

The framework is flexible to allow strategies to be tailored according to local services and needs, and could be applied readily to other cancers, health care systems and diseases, particularly chronic conditions requiring input from a range of health care professionals.

Using these Principles, clinicians were able to:

- establish regular dedicated treatment planning meetings
- improve attendance of core disciplines at meetings
- incorporate the breast care nurse as a team member
- improve coordination and continuity of care for women with breast cancer and streamline management pathways
- increase consideration of different treatment options and links to other specialty services.

Recommendation 1

That the Principles of Multidisciplinary Care developed for breast cancer be used as the basis for developing similar frameworks for other cancers and other chronic diseases requiring multidisciplinary input.
Successful and sustainable multidisciplinary case conferencing requires a minimum set of conditions

These conditions include:

- strong leadership and chairing skills sufficient to enable full participation of all disciplines
- supporting infrastructure (e.g., venue, facilities, equipment)
- sound preparation of relevant materials and information in advance of meetings
- inclusion of all disciplines and mutual respect between participants leading to productive group dynamics
- incentives for participants to attend meetings
- timely communication of the outcomes of case discussions to the woman concerned, and/or to her general practitioner.

Recommendation 2

That a brief user-friendly guide for establishment, preparation and support for multidisciplinary meetings be developed for use by health service providers.
There are a number of incentives for clinicians and the health system to participate in multidisciplinary care

These incentives include:

- patient care is more likely to be evidence-based with implications both for clinical outcomes and cost-effectiveness
- all treatment options can be considered, and treatment plans tailored for individual patients
- referral pathways are more likely to be streamlined
- clinicians have enhanced educational opportunities
- meetings provide opportunities for clinicians to interact with colleagues.

Although the clinical audit showed that clinical practice during the pre-implementation phase of the *National Multidisciplinary Care Demonstration Project* was largely in accord with guideline recommendations, nevertheless the Project provided evidence that significant improvements in practice in line with current and best practice recommendations also occurred.

**Recommendation 3**

That the National Cancer Plan and National Service Improvement Frameworks should explicitly quantify:

- efficiency dividends for institutions
- service improvement implications for patients

in order to promote the benefits of multidisciplinary care.
The Project demonstrated benefits of MDC for women undergoing treatment for breast cancer in the Australian context

Although the Project was not expected to provide quantitative evidence of improved clinical outcomes it can be anticipated that, as reported in the international literature, clinical outcome improvements will follow long-term implementation of MDC strategies.

Positive outcomes for women receiving treatment for breast cancer in this Project included:

- increased perception by women that their care was being managed by a team
- greater likelihood of receiving care in accord with the guidelines, including psychosocial support
- increased access to information, particularly about psychosocial and practical support.

Recommendation 4

That clinical outcome studies to establish the benefits of multidisciplinary care for patients with other cancers and chronic diseases, such as diabetes, within the Australian health care system be encouraged in order to provide an evidence base for broader implementation of multidisciplinary care.
A principal conclusion to be drawn from this Project is that the presence of a breast care nurse in a multidisciplinary team is beneficial both for the women and the clinicians

The breast care nurse enhanced continuity of care and communication about treatment, as well as the recognition by other clinicians of psychosocial issues and the need for appropriate referral.

**Recommendation 5**

That the role and effectiveness of breast care nurses is supported at all levels by:

- informing health service providers of the benefits of the breast care nurse role in the provision of multidisciplinary care

- promoting the adoption of the core competencies currently being developed by the National Breast Cancer Centre for the breast care nurse role, to nurse training programs nationally

- providing opportunities for nurses caring for women with breast cancer to access specialist training to support that role.
Barriers encountered in the implementation of MDC strategies included resistance to change; lack of time, resources and clinical staff; and the challenge of covering large geographical areas

In overcoming these barriers, the Project identified several key resource requirements for MDC:

- local clinical opinion leaders acting as advocates for MDC are crucial in lobbying staff and overcoming initial resistance
- the difficulty of changing long-established practice patterns should not be underestimated and should be addressed with evidence of benefits from new approaches
- administrative staff can greatly reduce the workload of clinicians in the set-up and coordination of meetings
- support is needed from senior hospital administration in providing meeting infrastructure such as an appropriate venue, and equipment, including telecommunications assistance to overcome the challenge of geographical remoteness.

Recommendation 6

That the establishment and maintenance of multidisciplinary care meetings must be adequately and explicitly resourced by health service providers. Affordability would be enhanced with broader application to other cancers and chronic diseases to amortise infrastructure costs. Areas in which generalisation is already occurring should be studied.
The Project has illuminated aspects of the cost of implementing MDC

It was beyond the brief and the design of this Project to balance costs against outcomes but the analysis indicates that MDC is feasible, given appropriate infrastructure planning and sharing.

- The cost of implementing MDC strategies was dependent on the level of multidisciplinary initiatives already in place at a facility. Costs were higher for newly established strategies compared with adaptation of existing strategies.

- Significant personal time was needed to implement new strategies such as treatment planning meetings. While this does not represent a direct cost to the health service, it should be considered in models of MDC.

- The cost of staff attendance at case conference and educational meetings was dependent on the number and type of attendees and the length and frequency of meetings.

- The average cost per meeting and per case presented at case conference meetings tended to decrease as meetings became better established.

- The use of existing facilities, such as hospital meeting rooms and equipment from other groups reduced the overall cost.

- Capital and equipment costs were significant at some sites but were reduced by cost sharing between different departments and disciplines.

- While travel and accommodation costs can be reduced using video-/teleconferencing, the technology set-up and associated costs, and difficulties in finding mutually acceptable meeting times were barriers to the use of such technology.

Recommendation 7

That hospital funding models and specialist and general practitioner payment schedules should be modified to support the implementation of multidisciplinary care strategies, given their broad application across a number of chronic diseases.
1. Multidisciplinary care for women with breast cancer

1.1 Breast cancer and multidisciplinary care

Breast cancer remains the most common cause of cancer death among women in Australia, with over 10,600 new cases diagnosed and 2500 women dying each year from the disease. In 1997 it was estimated that breast cancer costs Australia over $169.5 million annually to diagnose and treat and there are considerable physical and emotional costs both for the women diagnosed and their families. Although the mortality rate from breast cancer has been decreasing at the rate of 3.7% per year since 1994, the incidence of breast cancer is rising at 1.5% per year.

The diagnosis and management of breast cancer involves many different health professionals who may provide care sequentially, as an integrated team, or using a multidisciplinary approach. Multidisciplinary care (MDC) was recommended by the House of Representatives Inquiry as a means of achieving best practice in the management of breast cancer in that ‘through their combined understanding…, all members of the team liaise and co-operate together and with the patient to diagnose, treat and manage the condition…to the highest possible standard of care’ (p. viii).

Without a multidisciplinary team, women with breast cancer may not be offered the full range of potential treatments and psychosocial issues may not be considered.

A number of papers have described the operation of MDC both overseas and in Australia. However, only four studies were located that evaluated the impact of MDC on treatment patterns or outcomes. All four studies reported benefits from a multidisciplinary approach:

- An American study examined the recommendations of a multidisciplinary panel established as part of a comprehensive cancer centre. Treatment recommendations made by the multidisciplinary panel were compared with earlier recommendations made by doctors who were not part of the multidisciplinary clinic. For 43% of women, the treatment recommended by the multidisciplinary panel differed from that recommended by the other physicians. Where differences occurred, the recommendations of the multidisciplinary panel were more likely to include breast conservation, further workup before definitive treatment, additional pathology,
addition of postmastectomy radiation treatment or hormonal therapy, all of which are in accord with evidence-based guidelines.

- A study in the United Kingdom examined the treatment and survival of 12,861 patients with breast cancer. Considerable variation was found in survival of breast cancer patients between surgeons. The variation in use of chemotherapy and hormone therapy explained about 26% of the survival variation. Patients of surgeons with caseloads of less than 30 new cases per year had lower survival rates. The authors attributed the differences to MDC concluding that, ‘The effect of number of patients treated on outcome of breast cancer may not be a simple function of the skill of the surgical team…… but is rather a function of clinical organisation. The volume effect reflects the ability to bring together the necessary clinical disciplines and expertise across the full therapeutic range.’ (pp1270).

- A Scottish study compared the survival of women who had been treated by specialist and non-specialist teams. The study reported that the five-year survival rate was 9% higher and the 10-year survival 8% higher for patients cared for by specialist surgeons. Again, there were a number of differences between specialist and non-specialist teams but the authors noted that, ‘specialist interest was characterised by their setting up dedicated breast clinics, having a defined association with pathologists and oncologists and organising and facilitating clinical trials as well as maintaining a separate record system of all breast cancer cases in their unit’s care.’

- An American study evaluated the impact of a multidisciplinary breast cancer clinic offering a ‘one-stop shop’ for women newly diagnosed with breast cancer. Using a pre- and post-design, the time between diagnosis and initiation of treatment was significantly decreased in the MDC setting. Patient satisfaction also increased significantly as a result of the involvement of patients’ families and friends and assistance with making treatment decisions.

These studies provide level III evidence that MDC is of value. The effects are consistent and indicate substantial positive effects on treatment patterns and on survival.

MDC is therefore widely recommended as the preferred approach to the management of breast cancer. In Australia, the NHMRC Clinical Practice Guidelines for the Management of Early Breast Cancer recommended that: ‘women with breast cancer should be treated by specialists who have a demonstrated expertise in breast cancer and have access to the full range of multidisciplinary treatment options’.
1.2 Defining multidisciplinary care in the Australian context

Despite the growing body of evidence that MDC can improve the management of breast cancer, there is no universally accepted model, and views differ about how MDC should best be implemented. For example, a number of international cancer centres have established multidisciplinary clinics for women with breast cancer which aim to deliver ‘a one-stop shop’, providing the opportunity for women newly diagnosed with breast cancer to be seen by appropriate specialists from the various disciplines at the one clinic on the same day.8,26,27 In other instances, clinics hold treatment planning meetings that include all relevant specialists as well as the woman herself. Other centres have focused on providing information and psychosocial support in a multidisciplinary setting to women during their first postoperative consultation.28 In the United Kingdom, the restructuring of cancer services as outlined in the Calman-Hine Report supports the delivery of care through designated Cancer Units.29 These Units provide specialist diagnostic and therapeutic expertise and facilities for the management of common cancers.

The application of these models to Australia is complex. Australia has a mixed model of care for women with breast cancer. Following general practice consultation or attendance at BreastScreen Australia for mammography screening, women with early breast cancer are referred to a surgeon. The surgeon may consult with the woman in private practice or at a public or private hospital-based clinic.

In both the public and private sector, if there is a setting where clinicians and allied health professionals work together and meet to discuss treatment plans, MDC may be achieved readily. In contrast, those working individually in private practice may be physically isolated from their colleagues, making MDC difficult.

The Australian health care system also faces the challenge of providing equity of access for women who live in rural or remote locations. Up to 30% of Australian women diagnosed with breast cancer live in rural or remote areas, many without local access to all clinical services. Many rural and remote areas have limited access to specialists, such as medical and radiation oncologists. On-site specialist services, including diagnostic, therapeutic and supportive care, are only likely to be available where population density is sufficient to justify them. Limited access to such services in rural and remote Australia can constitute an additional barrier to MDC.

Because of the diversity of health service delivery settings and models of care in Australia, it may not be appropriate to have one fixed model of MDC. In the United Kingdom, for
example, MDC is often taken to mean that all team members attend MDC meetings prior to clinics each week and that every woman’s case pathology is discussed. This approach is not feasible in Australia, where a surgeon may work 2500 kilometres away from a treatment centre, there may not be a clinic and there may not be a dedicated breast pathologist.

The definition of MDC and models for its implementation require a unique approach within Australia (see Chapter 3).

1.3 Multidisciplinary care for women with breast cancer in Australia in 1999

The National Multidisciplinary Care Demonstration Project commenced in 1999. At this time, there was very little information about the provision of MDC for women with breast cancer in Australia; the small amount of existing data was difficult to interpret because an agreed definition of MDC was lacking. In 1999, MDC appeared not to be widely established (particularly in rural areas) but some groups were exploring innovative approaches that could form the basis of an Australian approach.

There were several issues to confront:

- A survey of 150 Australian surgeons reported that 44% of rural and 10% of urban surgeons disagreed with the recommendation in the NHMRC Clinical practice guidelines for the management of early breast cancer that ‘women should ideally be treated by a specialist who treats a large number of similar patients and who has access to the full range of treatment options in a multidisciplinary setting’. Thirty four percent of rural and 11% of urban surgeons felt it would be difficult to implement this recommendation in their practice.

- A national survey of patterns of care for 5000 women diagnosed with breast cancer in 1995 demonstrated that 19% of women were treated by a surgeon who treated less than 10 breast cancer cases per year and were therefore unlikely to be part of a multidisciplinary team. However, in contrast to findings in the UK, women treated by surgeons with low case loads were just as likely to receive chemotherapy and endocrine therapy as those treated by surgeons with high case loads. Women treated by low case load surgeons were more likely to receive mastectomy. It was difficult to assess the extent to which care was provided by a multidisciplinary team; however, of women seen by the radiation oncologist only 15% were seen before surgery.
• Tulloh and Goldsworthy described the management of women with breast cancer in a rural surgical practice. Management of almost all of the patients was planned in conjunction with an oncologist and/or specialist breast surgeon. A relatively high rate (68%) of breast conserving surgery was achieved.\textsuperscript{24}

• Olver and Selva-Nayagam reported an evaluation of a videoconferencing link between Adelaide and Darwin to enable Darwin clinicians to participate in multidisciplinary oncology meetings at the tertiary referral centre in Adelaide. All clinicians found the telemedicine link to be useful. The major reported benefit was enabling remote area clinicians to participate in multidisciplinary cancer meetings, with other benefits including better support of isolated clinicians, decreased travel for patients and enhanced education and peer review.\textsuperscript{23}

1.4 Conclusions

There is some evidence that MDC can result in improvements in treatment and lead to clinically significant improvements in health outcomes. In 1999, it was evident that MDC in Australia would require a unique approach given the challenges of the mixed public and private health system and the sparse populations in rural and remote areas. The small amount of existing information suggested that MDC was not widely established in Australia particularly in rural areas.\textsuperscript{23}
2. Multidisciplinary care project overview

2.1 Breast cancer as a model for multidisciplinary care

Interest in the benefits of MDC was growing in Australia, and in 1999 the Federal Government commissioned a study of MDC in the Australian context. Breast cancer was chosen as an appropriate model for exploring MDC for several reasons:

- Breast cancer is a major cause of mortality and morbidity in Australia. During the 1990s, there was considerable community and professional concern about the management of breast cancer and about whether all women were receiving best care. The House of Representatives Inquiry into the management and treatment of breast cancer concluded that the evidence gathered by the Inquiry did not support an assertion that Australian women were receiving the best management and treatment possible.

- Many of the international studies examining the impact of MDC had looked at the management of breast cancer, the evidence base for the value of MDC was strongest for breast cancer.

- The publication of the NHMRC Clinical practice guidelines for the management of early breast cancer in 1995 provided an evidence base for treatment decisions. The establishment of an effective multidisciplinary team approach is, to some extent, dependent on agreement about evidence in relation to best practice.

- The small amount of available data indicated that surgeons recognised the value of MDC at least in urban areas.

- The Federal Government had already funded the development of a discussion paper about MDC in breast cancer.
2.2 Objectives

The National Breast Cancer Centre was commissioned by the Federal Government to establish a National Demonstration Project to explore MDC for breast cancer in Australia. The Demonstration Project was established to provide:

- data about the provision of MDC for women with breast cancer in Australia including information about:
  - impact
  - acceptability
  - costs

- information about MDC that would be applicable to other cancers and other diseases

- recommendations about the implementation of MDC for breast cancer in Australia, taking into account possible funding structures.

2.3 Method

The Project was established as a demonstration model in three diverse regions in Australia. A randomised trial methodology was not appropriate to the objectives or timeframe of the study. Given the objectives of the study, the use of multiple data sources, and both quantitative and qualitative methods was a more appropriate approach.

Other features of the Project were:

- The Demonstration Project itself was multidisciplinary from the outset with a broad range of expertise included in the Project team (Appendix I).

- The approach to the intervention and its evaluation was similar to that described by Kerr et al. as an ‘improvement science’ model. In evaluating change in complex healthcare processes, a flexible system of testing, adapting and implementing change is needed. Different organisations will have different priorities and different strengths; interventions may be focused on common themes but may differ in approach.

- The collaborations participating in the Demonstration Project were full partners in the Project’s management. The collaborations were members of the Steering Committee and contributed to shaping the direction of the Project and interpretation of the data.
The Project focused on providing data that would be of immediate use to policy
makers and planners, clinicians and consumers. The data were to be used to inform
national and state policy as well as providing insights for similar groups considering
the implementation of MDC strategies.

As the Project evolved, two other components were added to the initial three-site
Demonstration Project. The first of these additional components was a *National
Profile Study of Multidisciplinary Care*. The study, described in detail in Chapter 4,
provides a broader context for the Demonstration Project by examining the extent
to which MDC was provided in hospitals generally across Australia at the outset of
the Project.

The second additional component was established to provide a better understanding
of the operation of multidisciplinary case conference meetings. As outlined in
Chapter 3, it became evident that the processes adopted in multidisciplinary
meetings were influential in their effectiveness. The *Observational Study of
Multidisciplinary Care* was initiated and is described in Chapter 14.

### 2.4 Project management

A Steering Committee was formed to oversee the Project. Representatives with
multidisciplinary expertise relevant to all aspects of cancer management, as well as individuals
from health administration and key stakeholder groups, such as the professional colleges and
consumer groups, were invited to be members of the Steering Committee. Additionally,
representatives from each of the collaborations participating in the Project were members of
the Steering Committee. The terms of reference and membership of the Steering Committee
are reported in Appendix II.
2.5 Project timeline

National Multidisciplinary Care Demonstration Project

Set-up phase (July 1998 – May 2000)

July 1998 Proposal submitted to the Commonwealth
Feb 1999 Contract between Commonwealth and National Breast Cancer Centre signed for National Multidisciplinary Care Demonstration Project
May 1999 Establishment of Steering Committee
May 2000 Development of evaluation and tools

Recruitment of and negotiation with demonstration sites

Collaboration start-up phase (June 2000 – January 2001)

• Baseline data collected

• Establishment of MDC strategies by collaborations

Implementation phase (February 2001 – August 2001)

• Implementation of MDC strategies

Post-implementation phase (September 2001 – July 2002)

• Post-implementation evaluation conducted

• Implementation strategies continue in collaborations


• Analysis of data and preparation of report
National Profile Study of Multidisciplinary Care

- Survey development (July 2000 – September 2000)
- Identification and recruitment of hospitals (September 2000 – December 2000)
- Surveys conducted (October 2000 – January 2001)
- Data analysis and report preparation (November 2000 – February 2001)

Observational Study of Multidisciplinary Care

- Coding framework developed and piloted (July 2002 – March 2003)
- Main study conducted (April 2003 – May 2003)
3. **Principles of multidisciplinary care**

### 3.1 Developing the *Principles of Multidisciplinary Care*

Because of the challenges facing multidisciplinary care in Australia the first step in establishing the National Multidisciplinary Care Demonstration Project was to define ‘MDC’ for women with early breast cancer in the Australian context. An operational definition of MDC that was sufficiently flexible to account for different systems of service provision was required. The definition was therefore based on a set of Principles with explicit recognition that the Principles would be implemented differently in different locations.¹⁴

To establish the Principles, the common factors in overseas models of care were reviewed¹²,¹³ and the key elements of care were identified from research and reports and informed by the experience and knowledge of Australian experts. The Principles were then reviewed by clinicians, allied health professionals and consumer representatives.

### 3.2 The *Principles of Multidisciplinary Care*

The *Principles of Multidisciplinary Care* (Table 3.1) provide a framework for implementation in the Australian context, and emphasise the importance of the team, communication, access to the full therapeutic range, standards of care and the involvement of the woman.

1. **The team** identifies the ‘core’ disciplines integral to the provision of good care and includes the general practitioner as a member of that team. This Principle emphasises the importance of the consideration of psychosocial as well as clinical aspects of care by inclusion of a supportive care provider in the core team; this may be, for example, a specialist breast care nurse, oncology nurse or social worker. In Australia, the general practitioner may play a number of roles in all stages of the disease process including diagnosis, referral, treatment, coordination of care, continuity of care as well as the provision of information and support to the woman with breast cancer and her family. This Principle also recognises that, in Australia, additional expertise or specialist services may be at some distance away or have limited availability, such as the relative scarcity of specialist psychiatry or genetic services in some regions, and promotes the establishment of referral links with such services.
2. **Communication** highlights the importance of all team members being available to provide input into case discussion, to share expertise and knowledge in the development of an individual management plan, but also recognises the need for diversity in the ways in which case discussion by all team members is facilitated; for example the use of teleconferencing and telemedicine. This Principle also states that multidisciplinary input is considered for all cases, but allows flexibility in the way this is implemented; for example large caseload centres may establish agreed protocols for the management of a common, straightforward case scenario that may not require discussion.

3. **The full therapeutic range** ensures that women are not disadvantaged by geographical remoteness or small size of institution in terms of their access to the full range of treatment options, including clinical trials. The development of collaborative links between smaller rural hospitals and large urban teaching hospitals and other service providers is vital to the provision of best care. This can be supported through the development of working links such as establishing a regular visiting oncology service and establishing referral links for specialist services such as plastic surgery, lymphoedema therapy and genetics.

4. **Standards of care** promote management in accord with nationally agreed standards\(^{32}\) and are supported through activities such as participation in the Royal Australasian College of Surgeons National Breast Audit. This Principle identifies the team's responsibility in ensuring that the treatment plan is acceptable to the woman. In addition, this Principle aims to ensure that treatment decisions are not based on inadequate information; for example all relevant biochemistry, imaging and pathology reports should be available at the time of case conferencing discussion about treatment options.

5. **Involvement of the woman** implies timely and appropriate information transfer among all treating clinicians and between clinicians and the woman. This also supports the women's involvement in discussions about their care and their appreciation of a team approach to their care. In Australia, consumer information about breast cancer has been developed in parallel with clinical practice guidelines to facilitate women's involvement in decision making about their care.\(^{33,34}\) This Principle recognises the diversity of culture and language amongst Australian citizens and ensures that systems are in place to support appropriate information transfer, such as an interpreter service or establishing links with local Aboriginal health care workers. In addition, the
The importance of the provision of psychosocial care as well as clinical care in improving outcomes for women with breast cancer is highlighted; this is supported by strong evidence.35

The implementation of each Principle aims to achieve the corresponding stated outcome (see Table 3.1). There are a number of ways in which these outcomes could be achieved and each outcome is measurable.

### 3.3 The Principles as the basis for the National Multidisciplinary Care Demonstration Project

The Principles of Multidisciplinary Care outlined in Table 3.1 constituted the operational definition of MDC for the purposes of the National Multidisciplinary Care Demonstration Project. It is evident that implementation strategies for these Principles will vary from site to site and over time. The Demonstration Project sites were asked to develop strategies that were locally relevant and feasible and the aim of the Project was to describe and assess those different strategies.

The Demonstration Project also aimed to evaluate whether this flexible principle-based definition of MDC was useful in practice. This principle-based approach to MDC is unique and is applicable to other health care systems and other cancers. The Principles also have the potential for wider extrapolation to other diseases, particularly chronic conditions such as diabetes that require input from a range of health care professionals.
Table 3.1 Principles of Multidisciplinary Care[^14]

<table>
<thead>
<tr>
<th>Principle of care</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Team</strong></td>
<td></td>
</tr>
<tr>
<td>• The disciplines represented by the ‘core’ team should minimally include surgery, oncology (radiation and medical oncology), pathology, radiology and supportive care. The individual woman’s general practitioner will be part of her team.</td>
<td>The ‘breast cancer care team’ is established and known.</td>
</tr>
<tr>
<td>• In order to ensure that the woman has access to the full range of therapeutic options, the ‘core team’ may be expanded or contracted to include services (which may be off site), such as genetics, psychiatry, physiotherapy and nuclear medicine.</td>
<td>Referral networks established for non-core team specialist services.</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
</tr>
<tr>
<td>• A communications framework should be established which supports and ensures interactive participation from all relevant team members at regular and dedicated case conference meetings.</td>
<td>Communication mechanisms are established to facilitate case discussion by all team members.</td>
</tr>
<tr>
<td>• Multidisciplinary input should be considered for all women with breast cancer; however, not all cases may ultimately necessitate team discussion.</td>
<td>A local protocol is established for deciding which cases may not require team discussion.</td>
</tr>
</tbody>
</table>
### Table 3.1 Principles of Multidisciplinary Care (cont’d)

<table>
<thead>
<tr>
<th>Full therapeutic range</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Geographical remoteness and/or small size of the institution delivering care should not be impediments to the delivery of multidisciplinary care for women with breast cancer.</td>
<td>Systems are established for ensuring that all women have access to all relevant services.</td>
</tr>
<tr>
<td>• The members of the team should support the multidisciplinary approach to care by establishing collaborative working links.</td>
<td>Systems are established to support collaborative working links between team members.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standards of care</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All clinicians involved in the management of women with breast cancer should practice in accord with guideline recommendations.</td>
<td>Local clinician data are consistent with national benchmarks.</td>
</tr>
<tr>
<td>• The treatment plan for a woman should consider individual patient circumstances and wishes.</td>
<td>The final treatment plan should be acceptable to the woman.</td>
</tr>
<tr>
<td>• Discussion and decisions about treatment options should only be considered when all relevant patient results and information are available.</td>
<td>Final reports are available to all core team members before treatment planning.</td>
</tr>
<tr>
<td>• In areas where the number of new cancers is small, formal collaborative links with larger units/centres should give support and foster expertise in the smaller unit.</td>
<td>Systems are established for the exchange of knowledge and expertise between larger and smaller caseload centres.</td>
</tr>
<tr>
<td>• Maintenance of standards of best practice is supported by a number of activities which promote professional development.</td>
<td>Systems are established for the support of professional education activities.</td>
</tr>
</tbody>
</table>
Table 3.1 Principles of Multidisciplinary Care¹⁴ (cont’d)

<table>
<thead>
<tr>
<th>Involvement of the woman</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Women with breast cancer should be encouraged to participate as a member of the multidisciplinary team in treatment planning.</td>
<td>Women are supported to have as much input into their treatment plan as they wish.</td>
</tr>
<tr>
<td>• The woman diagnosed with breast cancer should be fully informed of her treatment options as well as the benefits, risks and possible complications of treatments offered. Appropriate literature should be offered to assist her in decision making. This information should be made available to the woman in a form that is appropriate to her educational level, language and culture.</td>
<td>All women should be fully informed about all aspects of their treatment choices.</td>
</tr>
<tr>
<td>• Supportive care is an integral part of multidisciplinary care. Clinicians who treat women with breast cancer should inform them of how to access appropriate support services.</td>
<td>All clinicians involved in the management of women with breast cancer should ensure that women have information about and access to support services.</td>
</tr>
<tr>
<td>• The woman with breast cancer should be aware of the ongoing collaboration and communication between members of the multidisciplinary team about her treatment.</td>
<td>Women with breast cancer feel that their care is coordinated and not fragmented.</td>
</tr>
</tbody>
</table>
4. National Profile Study of Multidisciplinary Care

4.1 Background

The National Profile Study of Multidisciplinary Care was undertaken to place the National Multidisciplinary Care Demonstration Project in the context of Australian practice at the time prior to implementation of the Demonstration Project. No studies comparable to the Demonstration Project were found in the literature.

4.2 Aims

The aims of the National Profile Study of Multidisciplinary Care were to:

- explore the current organisation of services for women with breast cancer across Australia in relation to the Principles of Multidisciplinary Care
- survey clinicians’ views about MDC.

4.3 Methods

4.3.1 Sample

The study involved a representative sample of 60 hospitals, with 20 hospitals from each caseload category. Caseload categories were based on the number of cases of breast cancer treated at a hospital per year with ‘low’ representing one to 29 cases, ‘medium’ 30 to 99 and ‘high’ equal to or greater than 100 cases per year. Hospitals involved in the main National Multidisciplinary Care Demonstration Project were excluded from the sample.

Lists of public and private hospitals by caseload were sought from relevant state and territory health departments. Where required for reasons of confidentiality, private hospitals were listed by identification number only. Hospitals were randomly selected according to caseload and state. The number of hospitals selected from each state and territory was proportional to the number of breast cancer cases treated across the respective state or territory relative to the total number of cases treated in Australia.
A letter was sent to the Chief Executive Officer or General Manager of the selected hospitals either by the researchers or the relevant state or territory health department. If a hospital declined to participate or did not respond, another hospital from the same state or territory and caseload category was randomly selected and invited to participate. The Chief Executive Officer or General Manager of each selected hospital was asked to nominate a clinician or other health care professional with a lead role in the care of women with breast cancer within their institution. For ease of reporting, the term ‘clinician’ will be used to refer to the nominated staff member.

4.3.2 Procedure

A letter containing information about the survey and an invitation to participate was sent to the nominated clinician from each hospital. A trained interviewer contacted consenting clinicians by telephone and arranged a suitable time to conduct a telephone interview. Each clinician was sent a copy of the questions prior to the interview and was encouraged to confer with others to ensure responses were representative of the delivery of medical care by their hospital rather than their practice alone.

4.3.3 Interview questions

The interview questions were designed to assess whether or not breast cancer services at the time of the survey were in accord with the Principles of Multidisciplinary Care. The survey questions are in Appendix III.

The questions sought information about:

- The way in which core services, such as chemotherapy, radiotherapy and supportive care, were provided with response options including the degree to which the service was available on-site or through referral to another hospital or clinic with or without a visiting specialist.

- How specialty services, including genetic counselling, psychiatric care, management for lymphoedema, reconstructive surgery and participation in clinical trials, were provided. Response options included whether the service was available on-site, through established referral links to another clinic or hospital, or individual clinicians or general practitioner organised referral.

- The method of communication between clinicians in the development of a treatment plan, including whether multidisciplinary meetings were held, regularly or irregularly,
and if so, who attended and how were cases selected; and if no meetings were held whether clinicians communicated on an individual basis or if there was little discussion between clinicians.

- The way the treatment plan was communicated to the woman and her general practitioner, in particular whether the plan was discussed or provided in written form.

- Systems used to maintain and support quality assurance in best practice, including the existence and comprehensiveness of protocols, whether protocols were written as well as the audit and review of data.

Respondents were also asked how important they felt five aspects of MDC were for the effective provision of MDC and to select from response options of ‘essential’, ‘preferable’, ‘sometimes necessary’ or ‘not necessary’ (see Table 4.4).

4.4 Results

4.4.1 Consent rate and sample

To achieve the required sample size (n = 60), a total of 73 hospitals from all states and territories of Australia were invited to participate. The consent rate was 82%. The majority of respondents were surgeons (40%), followed by medical oncologists (25%), nurses (18%), breast care nurses (10%) and radiation oncologists (7%). A list of the consenting hospitals is given in Appendix IV.

4.4.2 Provision of services

Table 4.1 illustrates the organization of ‘core’ services, such as radiotherapy, chemotherapy and supportive care, by caseload. The majority of high caseload hospitals had core services available on site, while low caseload hospitals tended to have referral links to other hospitals, occasionally with the services of a visiting specialist. Among the low caseload hospitals, 10% administered chemotherapy locally with no visiting specialist and 25% had neither a staff member responsible for providing information and supportive care for women with breast cancer, nor links with a hospital that could provide such a service.

The provision of specialty services, such as psychiatric care, reconstructive surgery and specialised lymphoedema treatment, is shown by hospital caseload in Table 4.2. In most low caseload hospitals, specialty care services tended to be provided through referral to another clinic or hospital with which there were established links. However, 21% of the low caseload
hospitals had no established links for the provision of reconstructive surgery or psychiatric services.

The organisation of participation in clinical trials, if appropriate, also varied considerably by caseload (see Table 4.2). High caseload hospitals either had provision for participation in trials on site or established referral links to another clinic or hospital, while 42% of low caseload hospitals had no established referral links, with a further 10.5% indicating that women were not invited to participate in clinical trials. Similar results were observed for medium caseload hospitals, with 10% indicating that women treated at their hospital were not invited to participate in clinical trials.

4.4.3 Communication between clinicians to develop a treatment plan

Figure 4.1 shows the proportion of hospitals that held regular multidisciplinary meetings for the purposes of treatment planning. While 70% of high caseload hospitals had regular multidisciplinary meetings, only 50% considered all women with breast cancer. Within the medium caseload hospitals, 55% held regular multidisciplinary treatment planning meetings however only 35% considered all cases. Only one hospital in the low caseload category had regular multidisciplinary meetings and individual clinicians brought cases to the meeting for discussion as required. In 15% of the low caseload hospitals it was reported that there was little or no communication between clinicians.

In total, 33 hospitals (55%) had multidisciplinary meetings for treatment planning, either regularly or irregularly. The attendance by ‘core’ team members at these meetings is shown in Table 4.3 by discipline. Responses reported attendance by general practitioners to occur almost never, while attendance by surgeons was universal (100%), with other professions somewhere between (eg, 76% for radiologists and 79% for supportive care professionals).

4.4.4 Communication of treatment plan to the woman and her general practitioner

Of those hospitals where multidisciplinary treatment planning meetings were held (n = 33), 12% (all low or medium caseload hospitals) did not have a protocol for communicating the outcome of the meeting to the woman or to the woman’s general practitioner.
4.4.5 Maintaining and supporting quality assurance in best practice

Most hospitals had agreed protocols covering at least some aspects of care for women with breast cancer. However, written protocols covering multiple aspects of care were only reported in 45% of high, 30% of medium and 20% of low caseload hospitals. In 40% of low, 25% of medium and 15% of high caseload hospitals no protocols for the management of women with breast cancer existed.

All high caseload hospitals had some form of data collection either by individual clinicians or through a central hospital system. However, 60% of the high caseload hospitals had no process for review of these data. Forty percent of low caseload hospitals and 20% of medium caseload hospitals had no data collection system.

4.4.6 Attitudes to multidisciplinary care

Table 4.4 shows clinicians’ views about the key components of MDC. The majority of clinicians indicated that all the listed components were either essential or preferable for MDC, with the exception of ‘the establishment of a team of clinicians with an interest and expertise in breast cancer’. Sixteen percent of clinicians from low caseload hospitals and 5% from medium caseload hospitals indicated that this team component was not necessary.

4.5 Discussion

This study provides an insight into the MDC practices of hospitals that provide care for different caseloads of women with breast cancer in Australia. It is clear that there is acceptance of the concept of MDC. The majority of clinicians considered the key components, based on the Principles of Multidisciplinary Care, to be either essential or preferable for the provision of MDC.

Irrespective of caseload, most hospitals in the sample had implemented at least some aspects of MDC. It was not surprising to find that the provision of MDC services was generally lower in hospitals with low caseloads. However, some low caseload hospitals appeared to provide MDC in accord with at least some of the Principles.

Even in the high caseload hospitals, there were opportunities for improvement. Thirty percent of hospitals with high breast cancer caseloads did not have regular multidisciplinary meetings. A further 20% of high caseload hospitals had regular MDC meetings which did not consider all cases. None of the multidisciplinary treatment planning meetings involved general practitioners.
Only 45% of high caseload hospitals had written protocols based on best practice guidelines covering multiple aspects of care. While all high caseload hospitals had some form of data collection about the management of women with breast cancer, only 40% had a process for the review of the data. Given that these high caseload hospitals each treat at least one hundred women with breast cancer per year, their procedures have a significant impact on the care of women with breast cancer in Australia.

The study indicated a disparity between attitudes towards and the actual implementation of MDC within Australia. For instance, all respondents agreed that it was either essential or preferable that women with breast cancer have access to all relevant treatment and support services. However, 15% of the hospitals did not have established referral links for reconstructive surgery or psychiatric care, 12% did not provide ‘core’ supportive care services and 27% had no protocols for the management of women with breast cancer. Similarly, 95% of respondents agreed that it was essential for clinicians involved in the management of a woman with breast cancer to communicate with one another about her care. However, 30% of high caseload hospitals did not have regular multidisciplinary treatment planning meetings and even fewer were held in the medium and low caseload hospitals.

The National Profile Study of Multidisciplinary Care confirms that at the outset of the Demonstration Project there was scope for enhancing the practice of MDC across the spectrum of hospitals across Australia and that hospitals are receptive to the concept of MDC. This background provides important information for the implementation of the results of the National Multidisciplinary Care Demonstration Project in the broader context.
Table 4.1 Provision of ‘core’ services at hospitals by caseload

<table>
<thead>
<tr>
<th>Service</th>
<th>Available on-site</th>
<th>Referral to another hospital and visiting specialist</th>
<th>Referral to another hospital and no visiting specialist</th>
<th>Administered locally and visiting specialist</th>
<th>Administered locally and no visiting specialist</th>
<th>No provision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>(n)</td>
<td>%</td>
<td>(n)</td>
<td>%</td>
<td>(n)</td>
</tr>
<tr>
<td><strong>Radiotherapy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>0%</td>
<td>(0)</td>
<td>20%</td>
<td>(4)</td>
<td>80%</td>
<td>(16)</td>
</tr>
<tr>
<td>Medium</td>
<td>20%</td>
<td>(4)</td>
<td>55%</td>
<td>(11)</td>
<td>25%</td>
<td>(5)</td>
</tr>
<tr>
<td>High</td>
<td>85%</td>
<td>(17)</td>
<td>15%</td>
<td>(3)</td>
<td>0%</td>
<td>(0)</td>
</tr>
<tr>
<td><strong>Chemotherapy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>30%</td>
<td>(6)</td>
<td>10%</td>
<td>(2)</td>
<td>25%</td>
<td>(5)</td>
</tr>
<tr>
<td>Medium</td>
<td>75%</td>
<td>(15)</td>
<td>5%</td>
<td>(1)</td>
<td>0%</td>
<td>(0)</td>
</tr>
<tr>
<td>High</td>
<td>100%</td>
<td>(20)</td>
<td>0%</td>
<td>(0)</td>
<td>0%</td>
<td>(0)</td>
</tr>
<tr>
<td><strong>Supportive care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>60%</td>
<td>(12)</td>
<td>15%</td>
<td>(3)</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>85%</td>
<td>(17)</td>
<td>10%</td>
<td>(2)</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Highb</td>
<td>84%</td>
<td>(16)</td>
<td>11%</td>
<td>(2)</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

* note: for supportive care response option 3 = "no provision of information or support services"; b note: n = 19 due to one non-response to this question; NA = not applicable
### Table 4.2 Provision of specialty care services at hospitals by caseload

<table>
<thead>
<tr>
<th>Service</th>
<th>Available on-site</th>
<th>Referral to another hospital or clinic with which there are established links</th>
<th>No established referral links - individual clinicians organise referral</th>
<th>Patients not invited to participate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>(n)</td>
<td>%</td>
<td>(n)</td>
</tr>
<tr>
<td><strong>Genetic counselling</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowa</td>
<td>0%</td>
<td>0</td>
<td>84%</td>
<td>16</td>
</tr>
<tr>
<td>Medium</td>
<td>25%</td>
<td>5</td>
<td>60%</td>
<td>12</td>
</tr>
<tr>
<td>High</td>
<td>50%</td>
<td>10</td>
<td>40%</td>
<td>8</td>
</tr>
<tr>
<td><strong>Psychiatric care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowa</td>
<td>26%</td>
<td>5</td>
<td>53%</td>
<td>10</td>
</tr>
<tr>
<td>Medium</td>
<td>55%</td>
<td>11</td>
<td>35%</td>
<td>7</td>
</tr>
<tr>
<td>High</td>
<td>55%</td>
<td>11</td>
<td>35%</td>
<td>7</td>
</tr>
<tr>
<td><strong>Specialised lymphoedema care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowa</td>
<td>58%</td>
<td>11</td>
<td>37%</td>
<td>7</td>
</tr>
<tr>
<td>Medium</td>
<td>60%</td>
<td>12</td>
<td>35%</td>
<td>7</td>
</tr>
<tr>
<td>High</td>
<td>85%</td>
<td>17</td>
<td>15%</td>
<td>3</td>
</tr>
<tr>
<td><strong>Reconstructive surgery</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowa</td>
<td>32%</td>
<td>6</td>
<td>47%</td>
<td>9</td>
</tr>
<tr>
<td>Medium</td>
<td>50%</td>
<td>10</td>
<td>40%</td>
<td>8</td>
</tr>
<tr>
<td>High</td>
<td>90%</td>
<td>18</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td><strong>Clinical trials</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowa</td>
<td>11%</td>
<td>2</td>
<td>37%</td>
<td>7</td>
</tr>
<tr>
<td>Medium</td>
<td>45%</td>
<td>9</td>
<td>30%</td>
<td>6</td>
</tr>
<tr>
<td>High</td>
<td>85%</td>
<td>17</td>
<td>15%</td>
<td>3</td>
</tr>
</tbody>
</table>

*a note: n = 19 due to one non-response to this question; NA = not applicable*
### Table 4.3  Attendance by ‘core team’ at multidisciplinary meetings (n = 33)

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Always/usually attends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeon</td>
<td>100%</td>
</tr>
<tr>
<td>Pathologist</td>
<td>88%</td>
</tr>
<tr>
<td>Radiologist</td>
<td>76%</td>
</tr>
<tr>
<td>Medical oncologist</td>
<td>82%</td>
</tr>
<tr>
<td>Radiation oncologist</td>
<td>79%</td>
</tr>
<tr>
<td>Supportive care professional</td>
<td>79%</td>
</tr>
<tr>
<td>General practitioner</td>
<td>0%</td>
</tr>
</tbody>
</table>
Table 4.4 Proportion of clinicians who agree with the key components of multidisciplinary care

<table>
<thead>
<tr>
<th>Component</th>
<th>Essential % (n)</th>
<th>Preferable % (n)</th>
<th>Sometimes necessary % (n)</th>
<th>Not necessary % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The establishment of a team of clinicians with an interest and expertise in breast cancer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low*</td>
<td>42% (8)</td>
<td>42% (8)</td>
<td>0% (0)</td>
<td>16% (3)</td>
</tr>
<tr>
<td>Medium</td>
<td>70% (14)</td>
<td>25% (5)</td>
<td>0% (0)</td>
<td>5% (1)</td>
</tr>
<tr>
<td>High</td>
<td>85% (17)</td>
<td>15% (3)</td>
<td>0% (0)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>Clinicians involved in the management of a woman with breast cancer communicate about her care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low*</td>
<td>95% (18)</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td>5% (1)</td>
</tr>
<tr>
<td>Medium</td>
<td>95% (19)</td>
<td>5% (1)</td>
<td>0% (0)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>High</td>
<td>95% (19)</td>
<td>5% (1)</td>
<td>0% (0)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>Women with breast cancer have access to all relevant treatment and support services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low*</td>
<td>79% (15)</td>
<td>21% (4)</td>
<td>0% (0)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>Medium</td>
<td>85% (17)</td>
<td>15% (3)</td>
<td>0% (0)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>High</td>
<td>85% (17)</td>
<td>15% (3)</td>
<td>0% (0)</td>
<td>0% (0)</td>
</tr>
</tbody>
</table>
Table 4.4 Proportion of clinicians who agree with the key components of multidisciplinary care (cont’d)

<table>
<thead>
<tr>
<th>Component</th>
<th>Essential</th>
<th>Preferable</th>
<th>Sometimes necessary</th>
<th>Not necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (n)</td>
<td>% (n)</td>
<td>% (n)</td>
<td>% (n)</td>
</tr>
<tr>
<td>Women with breast cancer are managed in accord with best practice guidelines, which are reflected in the development of local protocols</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low(^a)</td>
<td>58% 11</td>
<td>42% 8</td>
<td>0% 0</td>
<td>0% 0</td>
</tr>
<tr>
<td>Medium</td>
<td>50% 10</td>
<td>50% 10</td>
<td>0% 0</td>
<td>0% 0</td>
</tr>
<tr>
<td>High</td>
<td>65% 13</td>
<td>35% 7</td>
<td>0% 0</td>
<td>0% 0</td>
</tr>
<tr>
<td>Women with breast cancer have available information and support on which to base their treatment decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low(^a)</td>
<td>79% 15</td>
<td>16% 3</td>
<td>5% 1</td>
<td>0% 0</td>
</tr>
<tr>
<td>Medium</td>
<td>80% 16</td>
<td>20% 4</td>
<td>0% 0</td>
<td>0% 0</td>
</tr>
<tr>
<td>High</td>
<td>90% 18</td>
<td>10% 2</td>
<td>0% 0</td>
<td>0% 0</td>
</tr>
</tbody>
</table>

\(^a\) n = 19 due to one non-response to this question
Figure 4.1 Proportion of hospitals with regular multidisciplinary meetings for treatment planning, where all cases are considered versus where selected cases are considered, by hospital caseload.
5. Evaluating the implementation of multidisciplinary care strategies – an overview

5.1 Aims

The aims of the National Multidisciplinary Care Demonstration Project were to evaluate the implementation of MDC strategies in terms of:

- describing the process of implementing MDC
- impact on local patterns of clinical and supportive care
- acceptability to clinicians and consumers
- cost.

An examination of the impact of the implementation of MDC strategies on general practice involvement in the treatment of women with breast cancer was also undertaken.

This chapter provides an overview of the methods used to evaluate the implementation of MDC strategies. Each of the evaluation methods used is described in more detail in Chapters 8–13.

5.2 Methodology overview

5.2.1 Design

This Project was undertaken to determine the impact, acceptability and cost of the implementation of multidisciplinary strategies by three groups of hospitals (referred to as ‘collaborations’) and to describe the process of implementation. This primarily involved a pre–post design with measurement of each aspect of the evaluation before and after the implementation of the strategies. However, clinician acceptability measurements were only completed post-implementation (see Table 5.1). This design was selected as appropriate for a Demonstration Project considering change over time. This evaluation design, while
comprehensive, does not enable the attribution of subsequent changes in practice to this Project exclusively.

During the Project set-up phase, the evaluation design was finalised and the evaluation tools were developed.

Three phases of the Project were evaluated, as outlined below.

**Collaboration start-up phase (June 2000 – January 2001)**

- **Intervention:** During this phase the collaborations commenced implementation of their nominated strategies. Each collaboration was given $87,000 to fund the Project by the National Breast Cancer Centre. Strategies nominated were intended to improve MDC in accord with the *Principles of Multidisciplinary Care*. Each collaboration had nominated a series of strategies during the initial site selection process for participation in the Demonstration Project.

- **Evaluation:** A pre-implementation evaluation to determine the current status of breast cancer care was conducted. A baseline cost analysis was also conducted. A log of multidisciplinary activities by the collaborations was commenced and maintained throughout all three phases.

**Implementation phase (February 2001 – August 2001)**

- **Intervention:** During this phase the collaborations implemented their strategies for improving MDC in accord with the *Principles of Multidisciplinary Care*.

- **Evaluation:** Women diagnosed with breast cancer were identified by the collaborations to form the samples for the consumer survey and clinical audit conducted in the post-implementation phase. Activity logs were maintained.

**Post-implementation phase (September 2001 – February 2002)**

- **Intervention:** During this phase, the collaborations maintained their strategies for improving MDC in accord with the *Principles of Multidisciplinary Care*.

- **Evaluation:** The consumer survey, clinical audit and survey of clinicians were conducted. Acceptability of the implementation process to clinicians was investigated. Activity logs were maintained.
5.2.2 Participants

Two main groups of participants were involved in this Project: women receiving treatment for early breast cancer, and the clinicians involved in their treatment.

Women with early breast cancer

There were two independent cohorts of women.

Start-up phase cohort: The pre-implementation cohort consisted of women who had been newly diagnosed with early breast cancer between six and 18 months prior to the commencement of the start-up phase, and who were treated at one of the collaborations. It was anticipated that these women would have completed their course of treatment prior to the implementation of any strategies associated with this Project.

Post-implementation cohort: The post-implementation cohort consisted of women newly diagnosed with early breast cancer during the first six months of the implementation phase of the study (ie, February–July 2001) and who were treated at the collaborations. It was anticipated that these women would have completed their course of treatment during the implementation and post-implementation phases of the Project.

These cohorts were used to obtain consenting women for the consumer survey and the clinical audit.

Only women diagnosed with early breast cancer were considered eligible for inclusion in the Project. This decision was made because the numbers of women with advanced breast cancer or ductal carcinoma in situ treated by the collaborations during the course of the Project would be insufficient to allow for meaningful analysis. Women diagnosed with early breast cancer at each participating site within each collaboration were identified by the Local Evaluation Coordinator (LEC) and recorded on log sheets provided. These sheets were forwarded to the Project Coordinator on a monthly basis.

Clinicians

Clinicians involved in the management of women with breast cancer, and representing the specialties of surgery, radiology, radiation oncology, medical oncology, pathology, and supportive care, were nominated by each collaboration to take part in the Project. Supportive care staff included breast care nurses, oncology nurses, and social workers. These clinicians were interviewed both pre- and post-implementation.
5.2.3 Local evaluation coordinators

Each participating site in each collaboration was required to nominate at least one LEC who received information and instruction about the evaluation process, including:

- evaluation tools and processes, including:
  - identification of women for participation in the consumer survey and clinical audit, and gain their consent
  - completion of clinical audit forms and activity log sheets
  - gaining consent from clinicians to participate in the clinician survey
  - organisational aspects of conducting the survey

- reporting requirements of the Project.

Throughout the Project, the National Breast Cancer Centre’s Project Coordinator liaised with LECs on a regular basis to provide assistance and ensure that each collaboration completed the evaluation activities on schedule. Monthly teleconferences were held between the National Breast Cancer Centre’s Project Team and the collaboration representatives for much of the Project’s duration.

5.3 Evaluation tools

5.3.1 Measuring impact on patterns of care

The coordination, process and patterns of care were evaluated using the *Principles of Multidisciplinary Care* as criteria (see Table 5.2).

Four different evaluation tools were used: clinician survey, consumer survey; clinical audit; activity logs (See Appendices IV–VII). The relevant methodologies for each of the evaluation tools are detailed in Chapters 8–13.
### Table 5.1 Project timeline

<table>
<thead>
<tr>
<th>Phases</th>
<th>Start-up phase</th>
<th>Implementation phase</th>
<th>Post-implementation phase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
<td>2001</td>
<td>2002</td>
</tr>
<tr>
<td>Task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort of women</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer survey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical audit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log book</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinician survey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceptability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost analysis#</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis and report</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Cost analysis conducted in conjunction with the clinical audit, log book and clinician survey, and telephone interviews and site visits during start-up and post-implementation phases

- Cohort of women defined by date of diagnosis to be subjects for the consumer survey and clinical audit
- Post-test data collection
- Pre-test data collection
- Ongoing processes
Table 5.2 Evaluation tools used to assess impact on patterns of care in reference to the Principles of Multidisciplinary Care

<table>
<thead>
<tr>
<th>Principle of care</th>
<th>Evaluation tool</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consumer survey</td>
</tr>
<tr>
<td><strong>Team</strong></td>
<td></td>
</tr>
<tr>
<td>1. The disciplines represented by the 'core' team should minimally include surgery, oncology (radiation and medical oncology), pathology, radiology and supportive care. The individual woman’s general practitioner will be part of her team.</td>
<td>✓</td>
</tr>
<tr>
<td>2. In order to ensure that the woman has access to the full range of therapeutic options, the ‘core team’ may be expanded or contracted to include services (may be off site), such as genetics, psychiatry, physiotherapy and nuclear medicine.</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
</tr>
<tr>
<td>3. A communications framework should be established which supports and ensures interactive participation from all relevant team members at regular and dedicated case conference meetings.</td>
<td>✓</td>
</tr>
<tr>
<td>4. Multidisciplinary input should be considered for all women with breast cancer, however, not all cases may ultimately necessitate team discussion.</td>
<td></td>
</tr>
<tr>
<td><strong>Full therapeutic range</strong></td>
<td></td>
</tr>
<tr>
<td>5. Geographical remoteness and/or small size of the institution delivering care should not be impediments to the delivery of multidisciplinary care for women with breast cancer.</td>
<td>✓</td>
</tr>
<tr>
<td>6. The members of the team should support the multidisciplinary approach to care by establishing collaborative working links.</td>
<td>✓</td>
</tr>
</tbody>
</table>
Table 5.2 Evaluation tools used to assess impact on patterns of care in reference to the Principles of Multidisciplinary Care (cont’d)

<table>
<thead>
<tr>
<th>Principle of care</th>
<th>Evaluation tool</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consumer survey</td>
</tr>
<tr>
<td><strong>Standards of care</strong></td>
<td></td>
</tr>
<tr>
<td>7. All clinicians involved in the management of women with breast cancer should practice in accord with guideline recommendations.</td>
<td>✔</td>
</tr>
<tr>
<td>8. The treatment plan for a woman should consider individual patient circumstances and wishes.</td>
<td>✔</td>
</tr>
<tr>
<td>9. Discussion and decisions about treatment options should only be considered when all relevant patient results and information are available.</td>
<td></td>
</tr>
<tr>
<td>10. In areas where the number of new cancers is small, formal collaborative links with larger units/centres should give support and foster expertise in the smaller unit.</td>
<td></td>
</tr>
<tr>
<td>11. Maintenance of standards of best practice is supported by a number of activities which promote professional development.</td>
<td></td>
</tr>
<tr>
<td><strong>Involvement of the woman</strong></td>
<td></td>
</tr>
<tr>
<td>12. Women with breast cancer should be encouraged to participate as a member of the multidisciplinary team in treatment planning.</td>
<td>✔</td>
</tr>
</tbody>
</table>
6. **Site selection**

6.1 **Site Selection Subcommittee**

The Steering Committee appointed a Site Selection Subcommittee to recommend the collaborations for participation in the Demonstration Project. Chaired by Emeritus Professor Tom Reeve, the members of the Subcommittee included Mr Peter Malycha (breast surgeon), Ms Lyn Swinburne (consumer representative), Mr Andrew Benson (Commonwealth representative), Ms Sandra Gagalowicz (Commonwealth representative) and Professor Tom Anderson (visiting pathology fellow from Scotland and international member of the Site Selection Subcommittee).

6.1.1 **Terms of reference**

The Subcommittee terms of reference were to review applications for collaborations and make recommendations to the Steering Committee, specifically to:

1. review and rank expressions of interest in terms of the agreed selection criteria
2. rank collaborations and shortlist candidates for interview
3. conduct telephone interviews with representative(s) of short-listed collaborations
4. reach agreement about the probable collaborations to be recommended for selection
5. conduct site visits to probable collaborations
6. provide detailed report to Steering Committee documenting the strengths and weakness of applicant collaborations
7. recommend selected collaborations to Steering Committee.
6.2 Criteria

Instructions to the Site Selection Subcommittee (Appendix V) included information on the objectives of the process, schedule and process components, detailed explanation of the eligibility and competitive selection criteria, overview of the evaluation requirements and a selection criteria scoring form.

The three collaborations were to reflect the diversity within Australian practice, including adequate representation of rural sites across the Project as a whole. The process of site selection was conducted so as to facilitate a positive relationship between the National Breast Cancer Centre and applicants.

6.3 Tender process

Prior to the call for expressions of interest for collaborations to participate in the Project, the Project Team developed 'Information for Applicants', detailing Project objectives, background, defining 'collaborations', evaluation aims and commitments, administration requirements, the site selection process and applicant selection criteria (Appendix VI). Clear summarised instructions outlining the necessary components of an expression of interest were also developed for applicants.

An advertisement seeking expressions of interest was placed in the national newspaper *The Australian* on Saturday 2 October 1999, in the October issue of the National Breast Cancer Centre's newsletter *Breastfax* and posted on the National Breast Cancer Centre's website (Appendix VII). All individuals and organisations previously expressing interest were automatically forwarded the information for applicants. Over 70 inquiries and 10 applications were received. Applications were typically from multi-site collaborations and a mixture of public and private sector facilities, most with a rural component.
6.4  Site selection process

The site selection process consisted of three stages: short-listing, interview and site visits.

6.4.1  Short-listing

All Subcommittee members individually reviewed the applications against the eligibility and competitive criteria. Members then met as a group to short-list applications. The eight short-listed applicants were notified of their success in the first stage of selection and of their scheduled telephone interview time.

6.4.2  Interviews

Multi-site collaborations were interviewed for 30 minutes each. At the end of the interview, the Subcommittee members recommended three preferred collaborations to receive a site visit by members of the Subcommittee, and one reserve collaboration per preferred site. The three preferred collaborations were notified immediately of the visits to take place in the following 2–3 weeks.

6.4.3  Site visits

A full-day site visit was made to each of the three preferred collaborations by two members of the Site Selection Subcommittee, accompanied by a member of the Secretariat.

6.5  Final selection

Following completion of the site visits, the Site Selection Subcommittee met to discuss the recommendation to be made to the Project Steering Committee. On Monday 20 December 1999, the Steering Committee of the National Multidisciplinary Care Demonstration Project endorsed the Subcommittee’s recommendation of three collaborations from New South Wales, Queensland and Victoria for participation in the Project. For the remainder of the report, these collaborations will be referred to as Collaborations 1, 2 and 3, not necessarily in that order.
6.6 Additional sites

The site selection process resulted in the recommendation of three reserve collaborations from South Queensland, South Australia, and Victoria. At the suggestion of the Steering Committee, the appropriate State Departments of Health were contacted to seek funding to allow these collaborations to participate in the Demonstration Project. Funding from the Victorian Department of Human Services enabled a fourth collaboration to participate in the Demonstration Project. Collaboration 4 joined the Project on 14 December 2000.
7. Implementing multidisciplinary care – the collaborations

This chapter summarises the operation of MDC in each of the collaborations. The information has been compiled from:

- original Project applications provided by each collaboration
- initial site visit reports by members of the Site Selection Subcommittee
- written reports by the collaborations using a standard reporting proforma at regular intervals during the Project
- minutes of monthly teleconference meetings held with Chief Clinical Collaborators and LECs
- final report provided by each collaboration.

The data presented in this section are, therefore, predominantly self-reported and qualitative. They describe the implementation of MDC strategies and should be interpreted in conjunction with the quantitative data reported in the following chapters.

The principal conclusions to be drawn from the qualitative data are that the presence of a breast care nurse in a multidisciplinary team is beneficial both for women with breast cancer and their clinicians. In this Project, breast care nurses enhanced continuity of care and therapeutic communication as well as the recognition of the need for psychosocial support and referral.

It is also evident that, if multidisciplinary strategies are to succeed, all team members must be supportive of the concept of MDC or at least willing to trial new approaches. In addition, clinicians have busy working schedules and additional meetings are unwelcome unless there is clear evidence of benefit to themselves or their patients. Existing links and referral patterns are also critical in that, if they are perceived to be effective from the clinician's perspective, there will be little incentive to adopt different approaches. The difficulty of changing long-
established practice patterns should not be under-estimated. Not surprisingly, it is easier to modify an existing meeting than to try to establish a new one. It is important to have at least one champion for the initiatives at each participating site, and provision of considerable administrative and organisational assistance is required to initiate and maintain meeting programs.

7.1 Collaboration 1

7.1.1 Collaboration 1: The sites

Collaboration 1 encompassed an urban area and the surrounding rural areas extending to a state border and including three main rural towns. The four sites included in Collaboration 1 were:

- Site a: Urban area, population ~198,000
- Site b: Large rural town, population ~ 30,000
- Site c: Rural town, population ~9,000
- Site d: Rural town, population ~10,000

Organisations involved in the collaboration included one public and two private hospitals in the urban area, three rural district hospitals, an urban radiology clinic, a pathology company, the state cancer council and state breast screening program.

7.1.2 Collaboration 1: Multidisciplinary care at baseline

Collaboration 1 had been established in 1996, several years before the commencement of the National Multidisciplinary Care Demonstration Project. One of its key goals was to facilitate and develop, in accordance with evidence-based guidelines, MDC for women with breast disease within the urban hospitals and the region. A coordinated and interdisciplinary approach had been established in relation to the screening, assessment and diagnosis of women with breast cancer.
However, the initial assessment of women with early breast cancer remained the domain of individual surgeons and general practitioners. There were no established multidisciplinary treatment planning meetings, with most women receiving serial referrals to medical oncology or radiation therapy often after their primary surgery. The one exception to this was in Site b (a large rural town), where a medical oncologist had been seeking multidisciplinary input in relation to the management of women with breast cancer for some time. Specialist breast care nurses were employed throughout the region, however in the urban area, this aspect of care was often fractured with three or more breast care nurses potentially involved with the management of one woman at different times during her treatment pathway.

**Services for the treatment of breast cancer available in the region included:**

- pathology services in each area were adequate and review of assessment centre data was done in some locations where geography, clinical services and assessment centres transect each other

- a multidisciplinary approach to the diagnosis of asymptomatic breast cancer through screening was well developed, but the assessment of both benign and malignant breast disease in symptomatic women required further development as did support for general practitioners

- the urban area had two linear accelerators and was at the time of the study the only site in the state, outside the state capital, to have radiotherapy technology

- radiation oncologists visited Site b on a regular schedule

- chemotherapy was available in both Site b and Site c

- psychosocial support was primarily provided through psychological medicine facilities within the regional health service and was inadequate.
7.1.3 Collaboration 1: Multidisciplinary care strategies

Three key strategies to improve MDC were proposed by Collaboration 1.

Strategy 1

- Continued development of the breast clinic in Site a (urban area) to provide a forum and focus to take MDC beyond the point of diagnosis.

Strategy 2

- Development of a multidisciplinary clinic at Site b (rural town), together with enhanced communications, with a view to extending such activity to the remainder of the region in the longer term.

- Investigation and development of case conferencing throughout the region, using existing information technology and the potential networking of individual practitioners’ personal computers.

Strategy 3

- Co-ordination of breast care nursing and removal of institutional barriers to enhance uniformity and continuity of care and support.

7.1.4 Collaboration 1: Implementation of multidisciplinary care strategies

Strategy 1 – strengthening multidisciplinary care in Site a

Start-up phase

At commencement of the Project a weekly diagnostic multidisciplinary meeting associated with BreastScreen was being held in the urban area. Meetings primarily involved a clinico-pathological review of cases and discussion about screening issues. These meetings did not include any discussion in relation to treatment planning. It was envisaged that this diagnostic multidisciplinary team meeting would be extended to involve all team members, to discuss treatment as well as the on-going clinical and psychosocial care of women with breast cancer.
During the start-up phase of the Project, meetings were held to plan commencement of the multidisciplinary team meetings and to reinforce the idea of case presentation with all clinicians. The first multidisciplinary case presentation meeting was scheduled for early in the implementation phase.

**Implementation phase**

Some unexpected barriers were encountered in relation to the establishment of regular multidisciplinary case presentation meetings, and after an initial two case presentation meetings the meetings ceased. A variety of issues impeded the meetings, including the venue being too small, difficulties in moving pathology viewing equipment, the presentation of public and private patients in the same venue, time constraints and lack of support from some surgeons in relation to the discussion of psychosocial issues at the meeting.

Two members of the Project Steering Committee visited the collaboration in June 2001 to assess progress.

Meetings were recommenced and occurred on a weekly basis with a total of 14 meetings being held during the implementation phase. Meetings were arranged in a larger venue within the private sector, pathology viewing equipment was brought to each meeting and they were held at a suitable time for most surgeons. Personal approaches to both the public and private sector surgeons secured their support. Meetings were attended regularly by surgeons, pathologists, radiologists, general practitioners, medical oncologists, radiation oncologists, breast care nurses and social workers. These meetings were reported as successful.

Plans to expand the multidisciplinary approach beyond case presentation meetings and to establish a ‘one-stop’ multidisciplinary breast clinic in Site a were not completed within the Project timeframe. However, a regular hospital-based multidisciplinary clinic for women diagnosed with breast cancer was being planned.

A Family Cancer Clinic was established during the implementation phase in Site a and nine women concerned about familial breast cancer seen in two clinics. Clinics were planned at 2-month intervals, with outreach to some regional sites.
Strategy 2 – developing multidisciplinary care in Site b and other regional sites

Start-up phase

In Site b, the local haematologist and breast care nurse were keen to establish multidisciplinary case presentation meetings. However, due to workload pressures following the resignation of one of the three surgeons in town, the remaining surgeons had indicated they would not be able to attend the case presentation meetings. This was a major barrier to the implementation of this aspect of Strategy 2 and at the end of the start-up phase there were no plans to commence multidisciplinary case presentation meetings in Site b. Consideration was given to other potential rural sites within the collaboration.

In contrast, in Site c there was strong local support for multidisciplinary case presentation meetings. Following the launch of the Project and meetings to discuss MDC, regular multidisciplinary case presentation meetings had commenced. These meetings involved the local pathologist, radiologists, surgeons, physicians, general practitioners and the breast care case manager, with links with Site a for radiation oncology and medical oncology. The multidisciplinary team in Site c intended to continue to meet fortnightly to monthly and viewed the meetings as a positive development.

Within the other regional sites there was little interest in providing MDC. Indeed, the Chief Clinical Collaborators indicated that the inclusion of some sites in the Project could jeopardise success in the remainder of the region. To overcome these problems, Collaboration 1 planned to run eight region wide meetings per year to consider the management of ductal carcinoma in situ (DCIS) including discussion of new cases and follow-up of existing cases. DCIS was selected because it was not yet subject to entrenched patterns of care and there was a general willingness to centralise care. It was anticipated that these meetings would lead to the introduction of regional management of breast cancer overall.

Most hospitals had teleconference facilities and some had videoconference equipment. A conference telephone was purchased to enable Site a to communicate with other sites and individual clinicians who might not be able to attend multidisciplinary meetings. It was envisaged that telephone and videoconference links would commence following the establishment of multidisciplinary case presentation meetings in Site a.
Implementation phase

The shortage of surgeons in Site b continued to be a barrier to the establishment of local multidisciplinary case presentation meetings. Following a dinner meeting with the local surgeons, support was gained for a videoconference link between the Site b team and the Site a case presentation meetings. However, technical issues related to the videoconference link between Site a and the existing rural hospitals network as well as a reticence on behalf of the Site a surgeons to present cases at meetings held in the public sector meant that barriers to the implementation of the strategy still existed. Efforts to implement this strategy were expected to continue beyond the Project timeframe.

In Site c, the multidisciplinary team with representatives from all disciplines continued to meet on a weekly basis during the implementation phase. While discussion of psychosocial issues at the meetings had been limited initially, the collaboration reported a steady increase during the implementation phase. The multidisciplinary team in Site c were keen to develop a ‘one-stop shop’ for women with a breast symptom and were pursuing this option with BreastScreen. The clinicians had also indicated interest in being involved with a videoconference link to the Site a multidisciplinary case presentation meetings, once established.

Strategy 3 – enhancing the provision of care by breast care nurses in the region

Start-up phase

During the start-up phase, a number of forums were held across the region with breast care nurses, nursing managers and others involved in working with breast care nurses. Key issues discussed at the forums included the current role of the breast care nurses, the difficulties involved in the role and possible strategies to improve continuity of care and information provision for women with breast cancer. Strategies identified included a multidisciplinary clinical pathway to enhance continuity of care, increased support and education for breast care nurses and a personal record for women with breast cancer. A seminar to discuss the development of multidisciplinary clinical pathways was planned. Additionally, breast care nurses in the region were surveyed.

Implementation phase

Through the forums and survey of breast care nurses, Site a and Site d were identified as two regional sites where breast care nurses were perceived as providing a good standard of care,
especially with regard to the continuity of care for individual women. However, no other regions had shown any improvements in relation to communication or continuity of care in surveys conducted. During the implementation phase, Collaboration 1 obtained funding through a breast cancer program funded by the state health department to appoint a regional breast care nurse for 12 months to provide education and support for the breast care nurses in the region. It was anticipated that the regional breast care nurse would help to address the issues of variation in breast care nurses’ practice and access for women across the region covered by the collaboration. The regional breast care nurse was appointed shortly after completion of the implementation phase of the Project.

7.1.5 **Collaboration 1: Key achievements and challenges**

Collaboration 1 reported significant achievements in relation to the implementation of the multidisciplinary strategies. In Site a, where previously no multidisciplinary meetings were held, regular case presentation meetings were implemented. By the end of the Project, multidisciplinary case presentation meetings in Site a were well established and were being held on a weekly basis with approximately 18 participants representing a range of disciplines including general practitioners. Similarly, a multidisciplinary team had formed in Site c, with the team meeting on a weekly basis for case presentation. Other achievements within the collaboration included: the establishment of familial cancer clinics; a survey of nurses regarding the identification of psychosocial concerns for women with breast cancer; and the appointment of a regional breast care nurse (funding through the state health department) to help coordinate the provision of care by breast care nurses from across the region.

While Collaboration 1 implemented a number of multidisciplinary strategies over the course of the Project, some major challenges were encountered during this time. Perhaps the greatest barrier to the implementation of the multidisciplinary strategies reported by the collaboration was initial resistance to change from some team members. Other reported challenges included: opposition to the establishment of MDC meetings; technical issues related to establishing videoconferencing links; lack of recognition of the importance of psychosocial issues in multidisciplinary discussion; and lack of understanding of the role of breast care nurses.
7.1.6 **Collaboration 1: Impact of the implementation of the multidisciplinary strategies**

Implementation of the multidisciplinary strategies by Collaboration 1 appeared to have an impact both for women with breast cancer and the clinicians involved in their care. Treatment planning for women with breast cancer in Sites a and c now involved multidisciplinary input with a perceived increase in treatment options due to the involvement of medical and radiation oncologists at the treatment planning meetings. Moreover, the breast care nurses were now considered part of the team. At the meetings, discussion of issues by members of the team who were aware of the woman’s circumstances and wishes had encouraged the development of individualised treatment plans. The collaboration reported a shift away from talking about ‘cases’ to discussing the woman. Team meetings were thought to be encouraging practice in accordance with clinical practice guidelines and the discussion of new research findings. The Chief Clinical Collaborators indicated that clinicians appeared to gain peer support from the meetings, in particular finding it reassuring to be able to discuss complex cases with the team. At a broader level, networks across the region had been improved through meetings to discuss the implementation of the MDC strategies during the Project.

7.2 **Collaboration 2**

7.2.1 **Collaboration 2: The sites**

Collaboration 2 comprised five sites distributed over a large geographical area of one state:

- Site a: Urban area, population ~94,000
- Site b: Urban area, population ~119,000
- Site c: Urban area, population ~77,000
- Site d: Rural town, population ~10,500
- Site e: Rural town, population ~20,500
Centred in one urban area (Site a), Collaboration 2 aimed to develop a multidisciplinary network across the several sites, including two further urban areas (Sites b and c), a rural town affiliated with Site b (Site d), and a rural town remote from all other sites (Site e). The facilities, organisations and individuals involved in Collaboration 2 were public and private surgeons in all five sites, a regional oncology service, public and private radiologists, pathologists, a regional clinical school, a university school of medicine, hospital-based and community nursing services, the state breast screening program, urban and rural divisions of general practice, and a regional rural health training unit.

### 7.2.2 Collaboration 2: Multidisciplinary care at baseline

Collaboration 2 indicated that all the clinical elements for providing MDC were available at Site a prior to commencement of the Project. Other sites within the collaboration had some local elements and relied on Site a or other more distant facilities, such as those in the state capital, for the other services. In applying to participate in the Project, the collaboration claimed that multidisciplinary management of women with breast cancer had been occurring in the region since 1995. However, the collaboration acknowledged that multidisciplinary links within the region were partial and poorly coordinated. Since January 2000, six months prior to commencement of the Project, multidisciplinary meetings for post-surgical review had been held at Site a on a monthly basis. No other multidisciplinary meetings were reported aside from diagnostic meetings held by BreastScreen. However, all clinicians, in both the public and private sector, indicated strong support for improving multidisciplinary links within the region.

**Services for the treatment of breast cancer available in Collaboration 2 included:**

- pathology services in Sites a, b and c were well established and serviced the rest of the Zone
- radiation oncology services were based at Site a with lodge facilities available for women travelling away from home for treatment
- radiation oncologists visited Sites b, c and e
- Site a had the only medical oncology unit within the region, while Site b was visited on a monthly basis by a medical oncologist from the state capital
limited psychosocial support was available within the sites, with most support provided through the state cancer council.

### 7.2.3 Collaboration 2: Multidisciplinary care strategies

Collaboration 2 nominated over 40 strategies to foster MDC for women with breast cancer within their region. Some of the nominated strategies were quite specific, for instance developing team letterhead, while others were quite general, for example strengthening current links within the region. For ease of reporting, the strategies have been summarised into four key groups:

**Strategy 1**

- Development of an identifiable multidisciplinary team and strengthening of links between the team members by:
  - developing a team letterhead and other identifiers
  - producing a clinical management pathway to provide an overview of the interdisciplinary interaction between team members
  - holding group meetings and team sessions to address issues such as perceived concerns about loss of clinical independence.

- Enhancing the provision of ‘non-core’ services through the standardisation of referral forms and recording outcomes of referrals on the patient management register.

**Strategy 2**

- Establishment of regular case conference team meetings, with distant sites linked via videoconference facilities.

**Strategy 3**

- Establishment of collaborative links and strengthening of existing links across the region including:
  - an assessment of current gaps in service provision
  - development of a directory of off-site services
7 Implementing multidisciplinary care – the collaborations

7.2.4 Collaboration 2: Implementation of multidisciplinary care strategies

Strategy 1 – development of an identifiable multidisciplinary team and strengthening links between the team members

Start-up phase

Several different steps were undertaken to raise awareness of and encourage a multidisciplinary team approach. A logo was developed specifically for the collaboration, with the associated letterhead distributed to all relevant facilities in the region. Diagrammatic representations of clinical management pathways were developed for each of the participating sites. Throughout the start-up phase, posters summarising the clinical management pathways were in preparation. It was planned that these posters would be displayed at each facility, to raise awareness among hospital staff and patients of the multidisciplinary approach. Education sessions were held with clinical staff to promote the use of clinical pathway management systems.

Collaboration 2 anticipated that some clinicians might fear that the multidisciplinary team approach would lead to a loss of clinical independence. To address this issue, a meeting of all clinicians from across the collaboration was held early in the start-up phase. The meeting was well attended, with representatives from all disciplines and all sites. At the meeting, the importance of contributions from each discipline was emphasised and the benefits of a multidisciplinary approach were presented. It was anticipated that similar meetings would be held at six-monthly intervals.

Implementation phase

The letterhead and logo developed for the collaboration were reported to be used regularly during the implementation phase of the Project. Posters summarising clinical pathways, including photographs of the local team members, were developed for each facility and

Strategy 4

- Improvement of psychosocial support for women with breast cancer by establishing local protocols to ensure all newly diagnosed women consult with a supportive care team member before treatment decisions are made.
displayed in appropriate waiting areas. Compliance with clinical management pathways was reported as variable, with the need for flexibility and consultation emphasised.

During this phase, an attempt was made to develop a standard referral form for ‘non-core’ specialty services. The standardised form was not implemented, with individuals preferring to use their own methods of referral. No further collaboration-wide meetings were held during the implementation phase; instead issues and concerns were considered as part of the regular case conferencing meetings.

**Strategy 2 – establishment of regular case conference team meetings, with distant sites linked via videoconference facilities**

**Start-up phase**

Weekly multidisciplinary case conference meetings commenced during the start-up phase in Sites a, b and c. Attendees varied from site to site but included surgeons, radiologists, pathologists, breast physicians, radiation oncologists, medical oncologists, nurses as well as haematologists, clinical geneticists and plastic surgeons. One of the major reported challenges in establishing the meetings was ensuring all relevant specialists attended on a regular basis. Key clinicians at the local level helped to encourage attendance and participation. Specialists from ‘non-core’ areas, such as palliative care, genetics and psychiatry, and general practitioners were invited to attend the meetings. However, there was a lack of involvement or attendance by the local general practitioners. In an attempt to increase attendance by general practitioners, a chief clinical collaborator wrote to all general practitioners in the region, informing them of the Project and that their patients would be discussed at the multidisciplinary meetings. Another issue identified was the need to develop an appropriate method for informing those surgeons who did not attend about the outcome and recommendations of the meeting.

Links between Sites a and e were established during the start-up phase of the Project, with multidisciplinary case review meetings occurring on a weekly basis via videoconference. Clinical details and pathology reports of the cases to be discussed were exchanged by facsimile prior to the meeting. Nonetheless, in the remote sites, some delays in receiving pathology results remained. While support for the link was reported as strong, the surgeon from Site e was not regularly in attendance at the meetings due to clinical commitments. In order to facilitate the surgeon’s participation in the meetings, options regarding the increased use of the rural senior registrar were being considered. Other reported challenges related to the videoconference link between Sites a and e and were primarily associated with technical
problems with the videoconferencing equipment and the need for staff to adjust to meeting via videoconference.

It was expected that multidisciplinary meetings would also be conducted by videoconference link between Site b and d. However, this did not occur during the start-up phase of the Project. As an interim measure, new breast cancer cases from Site d were discussed at the Site b meetings, with the surgeon from Site d attending the meetings in person as part of his regular visits to Site b. It was expected that a teleconference link would be established with Site d to allow other clinical and support staff to be involved in case discussion.

Implementation phase

Multidisciplinary case conference meetings continued to occur on a weekly basis in Sites a, b and c throughout the implementation phase of the Project. Moreover, the multidisciplinary meetings became part of usual clinical practice and team members expected the meetings to take place. In Sites b and c, all new cases of early breast cancer were presented at the meetings. However, at Site a, some selection of cases occurred and the collaboration reported that they were trying to ensure that the number of cases presented at this site increased.

Conflicting commitments of visiting specialists and staff specialists as well as changes to private pathology and radiology practices caused some difficulties in relation to attendance at the multidisciplinary meetings at Sites a and b. By the end of the implementation phase, a regular time that was suitable to the majority of ‘core’ team members had been established. Attendance at the multidisciplinary meetings was perceived as very good, with most core disciplines represented in person or by telephone at each site.

Non-core specialists, including psychiatrists, plastic surgeons and genetic counsellors, were reported as attending and participating in the multidisciplinary meetings on an ‘as-needs’ basis. The inclusion of ‘non-core’ issues as part of the regular case discussions had reportedly increased awareness among the team of these issues and had increased referral to such services. For instance, the involvement of a plastic surgeon at the Site b multidisciplinary meetings appeared to have increased the number of women considering the option of having a breast reconstruction locally, rather than travelling to the state capital for such surgery. In Site d, it was reported that the first breast reconstruction occurred in the public sector during the implementation phase. Consideration of the possible suitability of individual women for inclusion in a clinical trial was also reported as a regular component of the multidisciplinary meetings.
The lack of attendance by general practitioners at the multidisciplinary meetings was an ongoing issue throughout the implementation phase. While breast physicians were attending the multidisciplinary meetings in Sites a, b and c, local general practitioners generally did not attend. The collaboration ensured general practitioners were kept informed of treatment decisions, with the treatment plan communicated to the general practitioner by the surgeon, breast physician and local coordinators following the multidisciplinary meeting. Anecdotal reports from general practitioners to the collaboration suggested there was support among the local general practitioners for the multidisciplinary approach and that the information received from the meetings was greatly appreciated. Some barriers to general practitioners’ attendance at the multidisciplinary meetings included the timing of meetings, busy practice schedules, difficulties obtaining teleconference facilities for meeting venues and the perception that there was little individual benefit to be gained through attendance.

The Site e team participated in the Site a multidisciplinary meetings via videoconference as cases arose. During this phase of the Project, the general hospital at Site a was in the process of being relocated to a new site. The relocation meant there was some interruption to the videoconferencing link between Sites a and e. When videoconferencing was not possible, the sites linked via teleconference. It was anticipated that the new hospital at Site a would have upgraded facilities for videoconferencing. The surgeon from Site d continued to attend the weekly multidisciplinary meetings held at Site b.

**Strategy 3 – establishment of collaborative links and strengthening of existing links across the region**

**Start-up phase**

Before attempting to establish new collaborative links across the region, Collaboration 2 examined the gaps in each local setting that could potentially be filled by off-site services. Information regarding gaps in service provision was sought from each of the core team members. It was planned that this investigation would be extended to include non-core team members, who would also be asked to give details of services that they provide. Another method for identifying service gaps was initiated later in the start-up phase, with the service needs of sites being discussed as part of the regular multidisciplinary meetings.

Compilation of information for a directory of off-site services commenced during the start-up phase. The diversity of health service practices in the collaboration region meant that collating the information for the directory was more difficult than originally anticipated.
Implementation phase

The needs of individual sites continued to be assessed throughout the implementation phase. Changes to staff often required the links, particularly with distant sites, to be reforged. Further strategies to maintain communication and services to the distant sites were being considered but were not implemented within the Project timeframe.

Development of a directory of off-site services continued during the implementation phase, however, its content was under constant review due to the changing availability of outreach services. Staff developing the directory indicated that the resignation or appointment of a single specialist could have a substantial influence upon the provision of such services.

Strategy 4 – improvement of psychosocial support for women with breast cancer

Start-up phase

As an initial step towards strengthening psychosocial support for women with breast cancer, each site within Collaboration 2 identified existing nursing and allied health staff, including indigenous coordinators, who were available to provide support for women newly diagnosed with breast cancer. Development of a directory of available support services was planned. In addition, a system to ensure that women newly diagnosed with breast cancer were identified to clinic staff was being implemented across the collaboration. A room was made available within the regional oncology service for women and families to discuss treatment options and other issues with nursing staff following their consultation at the clinic. The main reported challenge in relation to providing appropriate psychosocial support was a lack of suitably trained clinical staff.

Implementation phase

During the implementation phase, Collaboration 2 sought funding from that state health department for dedicated part-time breast care nursing staff in Site a, b and c. It was anticipated that as well as providing psychosocial support and counselling to women with breast cancer within these sites, the breast care nurses would undergo training in remote area communication so that support services could be provided to women living in remote areas in the region. Funding for the three part-time breast care nurse positions was granted shortly after completion of the implementation phase.
Progress in relation to the other planned strategies to strengthen psychosocial support was varied. While the development of the directory of support services had commenced, ongoing changes to available services had meant that the directory was in a constant state of modification. Counselling rooms were established in the private and public hospitals at Site b to allow women and their support person to discuss treatment options with a nurse counsellor. At the multidisciplinary meetings, a small number of patients with psychiatric conditions were identified. The input of mental health staff in relation to these women was perceived as invaluable by the breast team particularly when planning treatment.

A consequence of the multidisciplinary meetings, not originally identified as a specific strategy, was that a number of women reported reassurance from the fact that their case was discussed at the multidisciplinary meeting. All women with breast cancer were advised following their initial diagnosis that, with their permission, their case would be discussed at the weekly multidisciplinary meeting. The women were informed of the purpose of the meeting and who was usually in attendance. They were also given the opportunity to express their own preferences in relation to treatment – for instance, if they were particularly keen to preserve their breast, if possible, then this was noted for discussion at the meeting.

7.2.5 Collaboration 2: Key achievements and challenges

Collaboration 2 implemented a range of strategies to increase and encourage MDC for women with breast cancer in their region. The principal achievements were the establishment of regular case presentation multidisciplinary meetings in the three main sites. By the end of the Project, multidisciplinary breast cancer meetings were incorporated into routine clinical practice in Sites a, b and c, with participants from all core disciplines regularly attending the meetings. Health care professionals from other specialty areas, such as plastic surgery, psychiatry and genetic counselling, were also involved in the meetings. Links with distant Sites d and e were well established, with clinical staff from these sites attending the multidisciplinary meetings either in person or via a videoconference link. Other achievements reported within the collaboration included: the development and utilisation of team identifiers, the promotion of interdisciplinary clinical management pathways, attainment of funds to appoint three part-time breast care nurses, and the establishment of suitable rooms for counselling women with breast cancer following their initial diagnosis.

Collaboration 2 reported a number of challenges during the course of the Project. One challenge that was particularly pertinent to this collaboration related to the large geographical
area it encompassed. While initially it had been envisaged that a region-wide multidisciplinary team would be established, it was soon recognised that such an approach was not feasible. Instead, teams were established within the three main sites (Sites a, b and c), and functioned independently of each other. Additional attempts to overcome the barrier of distance through the use of videoconferencing had mixed success, with one remote site regularly participating in the meetings through this method, another not linked by videoconference but with a surgeon attending the meetings in person. Some technical issues related to the videoconference link between Site a and e were also reported and meant that on occasion these links were not able to occur. Other challenges indicated by the collaboration included: the lack of suitably qualified staff across the region, with two resident medical oncology positions unfilled for most of the Project; the redevelopment of the three major public hospitals during the Project timeframe, which caused disruption to meeting venues and availability of videoconferencing facilities; and lack of attendance by general practitioners at the MDC meetings.

7.2.6 Collaboration 2: Impact of the implementation of the multidisciplinary strategies

Collaboration 2 reported that the implementation of multidisciplinary strategies had a positive impact within the collaboration. Women with early and advanced breast cancer were reported to have benefited from a more streamlined and efficient management pathway, improved communication between all disciplines and an increased awareness among team members of the availability of ‘non-core’ services. The multidisciplinary meetings were believed to have facilitated and strengthened lines of communication between all those involved in caring for women with breast cancer in the region, within both the public and private sectors. Some sites reported a ‘revolutionary change’ in the level of communication both between and within disciplines. Other outcomes associated with the multidisciplinary meetings were raised awareness of the importance of considering patients’ suitability for clinical trials and new insights into the various diagnostic and therapeutic modalities for breast cancer. In addition, team members felt they had enhanced intellectual and practical support. The multidisciplinary meetings were reported to be of educational value to trainee specialists, particularly surgical registrars, who presented cases at the meetings, participated in discussions, interpreted diagnostic images and gained an appreciation of the multidisciplinary model of care.

The experience of being part of a multidisciplinary team and the perceived benefits of the regular multidisciplinary meetings had inspired some members of Collaboration 2 and other
groups within the participating sites to adopt a similar approach for other diseases. By the completion of the Project, additional multidisciplinary meetings had been established in various facilities located within the collaboration region for colorectal cancer, melanoma and respiratory medicine.

### 7.3 Collaboration 3

#### 7.3.1 Collaboration 3: The sites

Collaboration 3 involved facilities from various regions within one state, including a major metropolitan city and two large rural centres. The three sites included in the collaboration were:

- **Site a:** Region of a metropolitan city, population ~180,000
- **Site b:** Rural centre, population ~37,000
- **Site c:** Rural centre, population ~17,500

The facilities involved in Collaboration 3 included two public hospitals and one private hospital from one region in the city and two hospitals in the rural centres.

#### 7.3.2 Collaboration 3: Multidisciplinary care at baseline

Several aspects of MDC were in operation within Collaboration 3 prior to commencement of the Demonstration Project. A multidisciplinary breast cancer clinic, incorporating outpatient and inpatient services for both the public hospitals in the city (Site a), was already established within a women’s breast centre. Multidisciplinary treatment planning meetings were held at the clinic on a weekly basis and were attended by specialist breast cancer surgeons, plastic/reconstructive surgeons, radiation oncologists, medical oncologists, diagnostic radiologists, a breast pathologist, a clinical geneticist, a clinical research nurse, a dedicated breast cancer database manager, a social worker, registrars in training, and students. Treatment protocols in accord with the *NHMRC Clinical Practice Guidelines for the Management of Early Breast Cancer* had been developed and were in use. Several linked data collection systems had been
in use within the breast cancer clinic since 1995, including a database of all women referred to
the clinic with a diagnosis of breast cancer. In addition, multidisciplinary cancer clinics were
held weekly in rural Site b and fortnightly in rural Site c, with established links between
oncologists at one of the urban public hospitals within the collaboration and surgeons from
the rural centres.

Services for the treatment of breast cancer available in Collaboration 3 included:

- pathology services in each area were well established and pathologists provided
  synoptic reports

- a multidisciplinary approach to the treatment of women with breast cancer was
  established within the women’s breast centre at Site a but required further
  development particularly with regard to the coordination of services, integration of the
  management of women from the private sector, consideration of psychosocial issues,
  involvement of women in treatment decision-making, and strengthening of links with
  the rural centres

- chemotherapy was delivered on-site at Sites b and c with regular visits by medical
  oncologists from the urban site

- radiotherapy services were not available locally in Sites b and c – links with radiation
  oncology services at Site a existed

- at Site a, psychosocial support was provided through the women’s breast centre, with
  a clinical psychologist available for consultations if needed

- psychosocial support in Site b was coordinated by the local nurse counsellor with
  services provided by the community health centre

- other services available through the women’s breast centre at Site a included a
  hereditary cancer clinic and a lymphoedema clinic.
7.3.3 Collaboration 3: Multidisciplinary care strategies

While Collaboration 3 nominated a number of strategies to improve MDC, these could be summarised into three principal groups:

**Strategy 1**

- The expansion of the MDC through the appointment of a breast care nurse who would:
  - be a member of the multidisciplinary team and be involved in the multidisciplinary meetings
  - coordinate the seamless passage of women with early breast cancer through the phases of diagnosis, surgery and adjuvant therapy
  - identify and facilitate referral for women requiring counselling for hereditary or psychosocial issues
  - collaborate with senior nursing personnel across all relevant disciplines to ensure patients receive relevant referrals and information about clinical trials
  - be present for collaborative treatment planning with the woman and provide supportive care if required
  - provide feedback to patients about the outcomes of multidisciplinary meetings
  - establish and strengthen links with Sites b and c by attending satellite clinics, participating in relevant case conferences, formalising links with relevant nursing staff.

**Strategy 2**

- Strengthening communication within the multidisciplinary team by ensuring that all new ‘cases’ are discussed, including patients from rural centres.

**Strategy 3**

- Establishment of videoconferencing or teleconferencing links with rural centres in Sites b and c to enable participation in multidisciplinary meetings.
7.3.4 Collaboration 3: Implementation of multidisciplinary care strategies

Strategy 1 – integrating multidisciplinary care across the collaboration through the appointment of a breast care nurse

Start-up phase

A specialist breast care nurse was appointed during the start-up phase of the Project. The breast care nurse attended the weekly breast clinic, diagnostic clinics and multidisciplinary meetings. While the breast care nurse was a recognised member of the multidisciplinary team, expectations of the role differed between the facilities and further clarification of the breast care nurse’s role within the team was required. Nevertheless, strong links were observed to develop between the breast care nurse, the social worker and a breast psychologist who was also appointed during this time.

The breast care nurse implemented a number of new systems or services for women with breast cancer during the start-up phase of the Project. These included: i) consultation or telephone contact with each patient within 24 hours of the multidisciplinary meeting to discuss the outcome of the meeting and proposed individualised treatment plan; ii) establishment of two breast cancer support groups; iii) initial steps to streamline the organisation of genetic counselling for rural patients if needed. In addition, the breast care nurse made contact with relevant staff at the rural centres, and alternate monthly visits to Sites b and c to attend satellite clinics were planned.

Implementation phase

The breast care nurse’s position within the multidisciplinary team at Collaboration 3 consolidated reports that the breast care nurse was contributing more to discussions at the multidisciplinary team meetings and ensuring that the psychosocial aspects of care were considered. In addition to attending consultations with women with breast cancer in the breast clinic, the breast care nurse was also often asked to attend the woman’s initial consultation with a medical or radiation oncologist. The breast care nurse was continuing to provide follow-up after the consultations, to ensure each woman had a good understanding of her treatment options. The breast care nurse would assist in the discussion of relevant clinical trials with the woman, address any questions or concerns she might have, and raise concerns regarding participation with the Clinical Trials team. The level of support and continuity of communication provided by the breast care nurse appeared to reduce psychosocial distress.
among the women and their families. The general perception among team members was that the breast care nurse had changed the care of women with breast cancer for the better, particularly within the breast centre. Provisions were being made by the collaboration to ensure the breast care nurse position was maintained after completion of the Project. The main difficulty encountered related to the increasing demands on the breast care nurse’s time, especially given the number of new women with breast cancer being seen each week in addition to the time spent with each woman throughout her treatment pathway.

In addition to the breast care nurse’s impact on the clinics and multidisciplinary meetings, she had developed links with senior nursing personnel from relevant disciplines. These links were reported to be helping to improve awareness of the impact of different treatment modalities in relation to the management of women with breast cancer. The breast care nurse held professional development sessions for the nursing staff including in-service sessions and a breast cancer forum.

Early in the implementation phase of the Project, the breast care nurse had attended a clinic at each of the rural centres. However, as the clinics were not dedicated to breast cancer, it was considered that the breast care nurse’s attendance at these clinics was not the most effective use of her time. Instead of attending the satellite clinics regularly, the breast care nurse was to concentrate on improving communication links with the rural centres, in particular in terms of easing the transition for women coming to the city for treatment, developing information packages for women in the rural centres and providing education for rural centre staff. To help facilitate these links, the breast care nurse visited each of the rural centres on several occasions during the implementation phase. Links with Site c were established, such that the local staff were in direct liaison with the breast care nurse about any women who were travelling to the urban site for treatment. It was reported however that many women with breast cancer from Site b were actually being seen by surgeons in another rural town outside the collaboration and did not come under the care of the clinic at Site c nor subsequently benefit from the multidisciplinary links with the breast care nurse at Site a. Greater difficulties were encountered in relation to developing the links between the breast care nurse and Site b. The local oncology clinic nursing staff at Site b had expressed a preference for continuing their existing involvement in the referral of patients to Site a, as this had been their role for many years, rather than involving the new breast care nurse. There was also little support for change from the medical staff. By the conclusion of the implementation phase, the breast care nurse was only liaising with Site b upon request by the local team.
Strategy 2 – strengthening communication by ensuring all new ‘cases’ of breast cancer are discussed at multidisciplinary meetings

Start-up phase

While new ‘cases’ of women with breast cancer were reported as being routinely presented and discussed at the weekly multidisciplinary team meeting during the start-up phase of the Project, the Chief Clinical Collaborators believed that some rural cases were not being presented. A Chief Clinical Collaborator planned to obtain further details regarding how many women are not discussed. The main barrier to the presentation of all new ‘cases’ appeared to be when the treating surgeon was unable to attend the meeting or omitted presenting the case. Regular reminders were made to all contributing clinicians to ensure all cases were presented.

Implementation phase

During the implementation phase, it was reported that all women newly diagnosed with breast cancer at any of the participating urban collaboration facilities or at the rural centre Site c were routinely discussed at the breast centre’s weekly multidisciplinary meetings. However, the discussion of women seen in Site b was fragmented. Only those women from Site b seen by the visiting medical oncologist were presented at the multidisciplinary meetings. The main reported barrier in Site b appeared to be failure of one specialist to present cases at the meeting. While some ‘cases’ from the rural centres were being discussed at the multidisciplinary meetings, the surgeons from the relevant rural centres were often not involved in the discussion. This lack of involvement of rural surgeons appeared to be due to problems with forward planning in relation to the multidisciplinary meetings. It was reported that the chairperson of the meetings would often not be informed in advance that a rural patient was going to be presented and as a consequence teleconferences with the local surgeons could not be planned.

Strategy 3 – developing videoconferencing or teleconferencing links with rural centres to enable participation in multidisciplinary meetings

Start-up phase

Surgeons from the rural centres appeared to be supportive of the establishment of teleconferencing links with the breast centre to enable their participation in multidisciplinary meetings. Teleconferencing had not commenced during the start-up phase of the Project, with the main barrier being that the rural surgeons were not available at the times when their cases were being discussed. It was anticipated that the multidisciplinary meetings would be moving
to a new venue within the women’s breast centre during the implementation phase of the Project and the aim was to incorporate videoconferencing at the new site.

Implementation phase

The anticipated videoconferencing facilities were not established in the breast centre, due to the withdrawal of funding for technical infrastructure. As a result no progress was made in establishing videoconferencing links with the rural centres. Teleconferencing had also been limited due to the small number of rural patients and irregularity of presentation. The collaboration considered holding a teleconference every 4–6 weeks so that all parties would have adequate warning, however this did not eventuate within the implementation phase of the Project.

7.3.5 Collaboration 3: Key achievements and challenges

The key achievements reported by Collaboration 3 were primarily associated with the improved coordination and continuity of care provided by the breast care nurse. Previously in the city site, women with breast cancer may have been treated in several facilities with little integration of services. The breast care nurse provided an important focal point for all involved in the management of women with breast cancer and appeared to foster a cohesive approach among the multidisciplinary team members. The collaboration reported that the continuity of care and psychosocial support provided to women with breast cancer within the collaboration was enhanced by the breast care nurse’s involvement in the pathway from diagnosis to treatment and then to follow-up. Other reported achievements associated with the breast care nurse joining the multidisciplinary team included: the development of more individualised treatment plans, due to a greater awareness of psychosocial issues; an increase in the involvement of women in making treatment decisions through their enhanced understanding of breast cancer, its treatment and their options; greater consideration of eligibility of women for clinical trials; the establishment of breast cancer support groups; the strengthening of links between the urban Site a and one of the rural centres, particularly with regard to assisting those women required to travel to the urban site for treatment.

The main challenges reported by Collaboration 3 tended to be associated with attempts to establish stronger links with the rural centres. The collaboration was unable to establish a direct link between the breast care nurse and Site b, primarily because of a reluctance to change long-established care pathways and a lack of support for the Project by some of the clinical staff. Linking surgeons from the rural centres to the multidisciplinary team meetings via video
or teleconferencing was not implemented during the Project. Reported challenges encountered in relation to the establishment of the video and/or teleconferencing links included the withdrawal of funding for technical infrastructure, the small number of breast cancer cases from rural centres, and the irregularity and unpredictability of presentation of rural cases by some clinicians. The latter of these issues similarly impacted on ensuring that all cases of breast cancer diagnosed within the collaboration were discussed at the multidisciplinary treatment planning meetings.

7.3.6 Collaboration 3: Impact of the implementation of the multidisciplinary strategies

The implementation of at least one of the key multidisciplinary strategies had, according to the collaboration’s reports, impacted on the provision of care for women with breast cancer. For the women themselves, there appeared to have been improvements in relation to the continuity of care, the provision of information regarding treatment, psychosocial support, involvement in the decision-making process, access to specialty care services if required and, for those women from rural centres, improved transition of care for those requiring treatment in the urban site.

Perceived outcomes for women with breast cancer

The collaboration reported:

- Improved continuity of care of women with early stage breast cancer
- Better informed women with a better understanding of their treatment options
- Women have an increased opportunity to participate in the process of decision-making in their treatment options ie,
  Surgeon (initial discussion) ⇒ BCN (clarification) ⇒ Surgeon.
  This process also applies for discussion regarding adjuvant radiotherapy and systemic therapy.
- Improved access to psychosocial support and intervention
- Improved access to genetic counselling
• Improved transition of care and access for support services for women from Site c requiring further treatment at Site a

• Overall better service for rural patients (outside the specific Project referral area) requiring treatment at Site a

• To date 223 women with breast cancer (greater than 90% with early stage disease) have been seen during the Project by the breast care nurse. More than 60 patients have been referred for psychosocial support to the dedicated breast psychologist, either for individual counselling, or to the breast cancer support groups.

**Perceived outcomes for clinicians**

The collaboration reported:

• Women with early stage disease are better informed, and have an improved understanding of their treatment options, through reinforcement and further discussion with the breast care nurse. This applies to both surgical treatment, and the necessity (or otherwise) for adjuvant treatment, including radiation and systemic therapy.

• Improved organisation of surgical procedures, such as coordination with nuclear medicine for sentinel lymph node immunoscintigraphy

• Joint consultations with the breast care nurse in attendance, ensuring that the patient knows at least one familiar ‘face’ with whom to relate (with the breast care nurse able to provide further follow-up to both the patient and the clinician)

• Knowledge that the referral pattern for potential psychosocial (and other) issues is in place

**Perceived outcomes for the institution/s**

The collaboration reported:

• Realization of the difficulties of running a breast cancer service across three hospitals within urban site
• Importance of a central link (the breast care nurse) to coordinate and maintain communication links between involved hospitals and clinicians

• Transfer of (public) breast cancer surgery and subsequent post-operative care at the urban site to one hospital within site

• For Site c, the development of a defined pathway/pattern of referral for women from that area requiring further breast cancer treatment in the urban site. The developed link between the Site a breast care nurse, the clinical nurse consultant and social worker at Site c has ensured an improved transition of care, including psychosocial and financial issues, for women coming to Site a for treatment. An off-shoot of this link has been an evolving improvement in local breast cancer support services with input from local nursing involvement.

**Unexpected benefits of Project participation**

The collaboration reported:

• Improved access to Site a breast cancer services for women referred from outside the Project defined rural areas, due to a recognised central link (viz. the breast care nurse)

• Establishment of a local database, maintained by the breast care nurse, providing details of individual patient access and usage of support and specialty services, and the flagging of potential psychosocial issues

• Close collaboration between the breast care nurse and the breast cancer psychologist with subsequent identification of sexuality issues in premenopausal women as an area of concern.
7.4 **Collaboration 4**

7.4.1 **Collaboration 4: Background**

As described in Chapter 6 (section 6.6), funding from the Victorian Department of Human Services enabled the reserve site from Victoria to be invited to participate in the Demonstration Project. This fourth collaboration included two public hospitals in a metropolitan city (Sites a and b) and a public hospital in a rural city (Site c). This collaboration joined the Project in December 2000 and was on a staggered timeline relative to the original three collaborations.

The original application and selection site visits to Collaboration 4 indicated that there was strong support among clinicians to establish multidisciplinary links between the participating sites. However, despite a range of efforts one of the main multidisciplinary strategies was not implemented and after 11 months the Chief Clinical Collaborators indicated that it was not feasible to complete the Project. The grant to Collaboration 4 was terminated 13 months after its commencement and all unexpended funds were returned. While this collaboration did not participate for the full Project timeline, the efforts undertaken by the collaboration are reported here as they provide important information about some of the issues that can impede the implementation of MDC strategies.

7.4.2 **Collaboration 4: Multidisciplinary care strategies**

The main multidisciplinary strategy nominated by Collaboration 4 was the establishment of collaboration-wide multidisciplinary meetings with the participation of relevant clinicians and health care providers from each of the three key sites. It was intended that these collaboration-wide meetings would be preceded by the development of multidisciplinary clinics at sites within the collaboration if they did not already exist. Once the multidisciplinary clinics were established, it was planned that videoconference links between Sites a and c would commence, with the introduction of the second urban site (Site b) to follow.
7.4.3 **Collaboration 4: Efforts to implement the multidisciplinary care strategies**

It should be noted that Collaboration 4 did achieve an expansion of existing meetings and the establishment of multidisciplinary treatment meetings at Sites a and b. Prior to commencement of the Project, a regular BreastScreen meeting was being held to review new cases of breast disease from Site a. These meetings were attended by surgeons, a radiologist, a pathologist, a breast care nurse, medical oncologists and a radiation oncologist. Individual clinicians determined which cases were presented. During the start-up phase of the Project, this meeting was expanded to include the review of all women treated for breast disease at Site a. Others invited to attend these meetings included the clinical trials data manager, genetics nurse, tissue bank coordinator and junior medical staff. Upon cessation of the Project, it was reported that these meetings were continuing to occur in this modified format.

In addition, a monthly multidisciplinary meeting was established at Site b. While some initial barriers to sustaining this meeting were encountered and continual reminders to clinical staff were necessary, the meeting gradually developed into a forum for review of all women with breast cancer treated by the regional service encompassing Site b. By the end of the 13-month period of involvement in the Project, the meetings were well established and were being attended by breast surgeons, radiation oncologists, medical oncologists, a breast care nurse, radiologists, pathologists and junior medical staff.

Site c already had two monthly multidisciplinary meetings being held at the outset of the Project – one held by BreastScreen and another focussing primarily on the management of women diagnosed outside the BreastScreen system. The same clinicians attended both meetings. The planned videoconference links between meetings held at Sites a and c were not commenced during the Project. One of the main issues reported by the collaboration was that a number of clinicians at Site c did not see any benefit in adding what they perceived to be ‘another meeting’ to already functioning meetings. Other issues appeared to relate to confidentiality and privilege, with some clinicians expressing concern about the potential legal implications within their state of discussing patients in an open forum such as a multidisciplinary meeting.

Despite the best efforts of the Chief Clinical Collaborators at each site, the link between Sites a and c could not be established. Prior to cessation of the grant, a member of the Project Steering Committee, a clinician of national eminence, contacted the relevant surgeons to
determine whether or not the issues could be resolved. It was apparent that the issues would not be resolved within the Project timeframe and as a result, implementation of key strategies nominated by Collaboration 4 was unrealisable during the Project.

### 7.4.4 Collaboration 4: Lessons learnt

Two key factors appeared to have contributed to the collaboration being unable to implement all the nominated, new MDC strategies for the management of women with breast cancer. First, and perhaps most importantly, it was apparent that despite verbal and written assurance of support for the Project throughout the collaboration, some clinicians were not fully supportive of the undertaking. Clearly, for the implementation of multidisciplinary strategies to succeed, it is essential that all team members are supportive of the concept of MDC or are at least willing to trial new approaches.

Second, in the regional town Site c, where there were only a few clinicians active in the breast cancer field, linking into meetings at other sites was considered an unnecessary undertaking in an already busy working week. The clinicians could not perceive any further benefits either for themselves or for their patients. While there was a historical link between Sites a and c for medical training purposes, few women with breast cancer were referred to Site a from Site c. Indeed, it was reported that the local facilities at Site c were able to provide most services for women with breast cancer, with those women who required radiotherapy tending to go to another city outside the collaboration region for treatment. The lesson to be learnt from this aspect of the Project is that for urban and rural multidisciplinary links to work the potential benefit of such links to clinicians and to patients needs to be apparent from the outset.

Other lessons learnt from Collaboration 4, which were also evident from the experiences of the original three collaborations, included: the difficulty of trying to change long-established practice patterns; the importance of having at least one champion for the initiatives at each participating site; that it was easier to modify an existing meeting than to try to establish a new one; and that the establishment of new meetings required considerable organisational assistance.
8. Consumer survey

8.1 Aims

The aims of the consumer survey were:

- to compare pre- and post-implementation responses of women with early breast cancer to questions about key aspects of their care including:
  - information about all aspects of their treatment and support
  - emotional and practical support provided to women and their families
  - involvement of the women in decision making
  - opportunity to participate in clinical trials

- to compare pre- and post-implementation perceptions of women with early breast cancer about continuity and coordination of care and communication within their treatment team.

8.2 Methods

8.2.1 Sample

With approval from the relevant research ethics committee, each of the collaborations identified all women diagnosed with early breast cancer within the collaboration during two specified time frames. The pre-implementation cohort was women diagnosed with early breast cancer between January 1999 and February 2000. The post-implementation cohort was women diagnosed with early breast cancer between February 2001 and November 2001. For the purposes of the study, early breast cancer was defined as ‘an operable tumour less than 5 cm diameter, with either no regional lymph node metastasis or metastasis to movable ipsilateral axillary lymph nodes, and with no evidence of distant metastases’. This corresponds to tumours that are T1–2, N0–1, M0 as defined by the UICC. Women with in situ disease only were not included.
Women were identified using a number of sources, including patient registers, medical records, or admission books. Primary treating clinicians were contacted by the Local Evaluation Coordinators (LECs) from the collaboration and asked to indicate patient eligibility. Women were classified as ineligible if they were too emotionally disturbed, too ill, had poor English, had not been diagnosed with early breast cancer according to the study definition or had died. All eligible women were invited to take part in the survey. To ensure that respondents would have completed all or most of their initial treatment at the time of the survey, women were not asked to participate until at least 6 months after their initial diagnosis. Women were sent a letter of invitation from the collaboration and the LECs followed up non-respondents by telephone.

8.2.2 Interviews

Participants completed a computer-assisted telephone interview 6–36 months after diagnosis (see Appendix VIII for full questionnaire). Interviews were conducted by an independent research agency and took approximately 45–60 minutes to complete. The survey consisted of two key components.

- The first component aimed to assess whether the information, support and other psychosocial care provided to women with early breast cancer was in accord with published clinical practice guidelines. Questions matched those used previously in a population-based consumer audit of breast cancer care in Australia, in which test–retest reliability for a sub-sample of questions was at least 85%.

- The second component included questions developed specifically for the Demonstration Project, which aimed to assess women’s perceptions of continuity and coordination of care, and communication between team members. Pilot testing of these questions among ten women with early breast cancer indicated a high face validity, as respondents could articulate a ‘correct’ interpretation of what the question was asking and found the response options clear and unambiguous.
8.2.3 Analysis

Basic frequencies were calculated for each of the demographic variables for both the pre- and post-implementation cohorts, overall and across the three collaborations. Chi-square statistics were used to identify any significant differences between the cohorts.

For the two main components of the consumer survey, response options were dichotomised based on clinical and expert opinion according to whether or not they represented care in accord with the guideline recommendations or a team approach to care. Once dichotomised, frequencies were calculated for each question and Chi-square analysis undertaken to compare pre- and post-implementation responses.

The Mantel-Haenszel Common Odds Ratio test was used to determine whether data from the three collaborations could be combined. Where trends were the same for all three collaborations, data were collapsed and Chi-square analyses undertaken to compare the responses of all women from the pre- and post-implementation cohorts. Where trends differed between collaborations, data could not be combined and individual collaboration results are discussed. All 2 x 2 Chi-square statistics were corrected for continuity. To correct for multiple comparisons, differences were considered significant when p < 0.01.

8.3 Results

8.3.1 Response and participation rates

Table 8.1 summarises information about the sample. In total, during pre-implementation, 415 women diagnosed with early breast cancer were invited to take part. Of these, 320 women responded or were able to be contacted by telephone, and 249 women who could be contacted completed a full interview.

During post-implementation, records from the ‘All new cases of breast cancer’ log sheet (see Chapter 12) listed a total of 479 women diagnosed with early breast cancer. Of these, 134 were classified as ineligible by their primary clinician. Letters of invitation were sent to the remaining 345 women, 303 of whom returned a response or were contacted by telephone. Of the 303 women who could be contacted, 249 completed a full interview.
8.3.2 Characteristics of the sample

Demographic and treatment characteristics for the two cohorts are shown in Table 8.2. No significant differences were apparent between the overall and collaboration cohorts in terms of age, marital status, education level, type of surgery and other treatments received for their breast cancer. No consistent bias in the sample was apparent on comparison with data from the national consumer audit of breast cancer care.³⁴

8.3.3 Care in accord with the guidelines

Table 8.3 shows the proportion of women from the pre- and post-implementation cohorts whose answers suggested that they were receiving treatment in accord with each guideline recommendation. Results are presented by collaboration and, where appropriate, a combined result across the three collaborations is given. (Some findings described below do not appear in Table 8.3).

Diagnosis should be given by a senior doctor

The majority of women (90–100%) at both pre- and post-implementation for each of the collaborations reported that they were told of their diagnosis by their general practitioner or a senior doctor. A non-significant increase in this variable was seen between pre- and post-implementation for each of the collaborations.

Diagnosis should be given face-to-face

The majority of women (96–100%) at both pre- and post-implementation reported being told their diagnosis face-to-face or indicated that they were told by telephone and were happy with this approach. A non-significant increase in this variable was seen between pre- and post-implementation for Collaborations 2 and 3.
**Diagnosis should be given in an open manner**

Almost all women in both the pre- and post-implementation cohorts felt that the style used to tell them their diagnosis was clear and accurate (98% and 100%, respectively). No significant change in this variable was seen between pre- and post-implementation in any of the collaborations. The remaining 2% in the pre-implementation group felt that the way they had been told was complicated or unclear.

**Women should be encouraged to have a second person present when being given a diagnosis**

Of those women who were told of their diagnosis face-to-face, 35–49% at pre-implementation and 30–48% at post-implementation were encouraged to have a family member or friend with them when the diagnosis was given. No significant difference in this variable was seen for any of the three collaborations between pre- and post-implementation. However, the frequencies were lower for Collaboration 3 than for the other collaborations.

**Women should be reassured that there is no reason to believe that waiting a week or two to decide on treatment will make a difference**

At least 50% of women at each of the collaborations during both pre- and post-implementation reported that they were given some time to think about treatment decisions, with no significant difference seen between cohorts. The remaining women were given the impression that they had to decide about treatment straight away. Only 11% (pre-implementation) and 8% (post-implementation) of women indicated they did not feel comfortable with the amount of time they were given to make their decision, regardless of how long they were given to decide.

**Treatment decisions should be made by the woman after discussion with her doctor and any others she may care to consult**

At both pre- and post-implementation, most women (88–91%) reported being as involved as they wanted to be in treatment decisions, with no significant difference between the two cohorts for any of the three collaborations.
**Women should be given adequate information on which to base treatment decisions**

Women were asked whether they had received as much information as they felt they needed about the various types of treatment and associated issues in order to make treatment decisions. Table 8.3 presents data relating to information regarding surgery. Across each of the three collaborations, the proportion of women who reported receiving as much information as needed regarding surgery increased between pre- and post-implementation. This difference was statistically significant in Collaboration 3 (p = 0.003), which started at a lower baseline than the other two collaborations.

Other questions examined the availability of adequate information for women who had received radiotherapy, chemotherapy and breast reconstruction, and where relevant, assessed the availability of information regarding prognosis, lymphoedema, breast prostheses, long-term effects of therapy, and follow-up care. While the proportion of women reporting that they received as much information as needed tended to increase between pre- and post-implementation, no significant changes were seen for any of these questions (chemotherapy 86% vs 88%; radiotherapy 85% vs 86%; breast reconstruction 77% vs 83%; breast prostheses 83% vs 91%; prognosis 80% vs 87%; lymphoedema 73% vs 83% [borderline significance: p = 0.015]; long-term effects 66% vs 72%; follow-up care 84% vs 88%).

Women were asked whether they were offered one of the two key resources available for women with early breast cancer at the time of the survey.31,35 An increase in the number of women being offered a consumer guide was seen between pre- and post-implementation for all three collaborations. However, the difference was only statistically significant for Collaboration 3 (55% vs 79%; p = 0.005).

**Women need information about the psychosocial impact of breast cancer**

The proportion of women who reported receiving enough information about where to get support or counselling ranged from 76–93%. While there was a tendency for the proportion of women reporting that they received enough information about where to get support or counselling to increase from pre-implementation to post-implementation, the differences were not significant.

Other questions related to information about issues associated with the psychosocial impact of breast cancer. Combined data reveal no significant differences between pre- and post-
implementation for any of these questions (information about treatment costs 84% vs 82%; information about the amount of time involved 91% vs 96%; information about resources for partners 81% vs 76%; information about resources for children 73% vs 63%).

**Appropriate counselling has the potential to improve quality of life**

There was no difference between pre- and post-implementation in the proportion of women who reported receiving enough support, with 82–91% of women at pre-implementation and 82–93% of women at post-implementation reporting that they received enough support (results being consistently highest for Collaboration 1). Similarly, little change was seen in terms of reported support for women’s family members with 71% of the pre-implementation women and 72% of the post-implementation women stating that their family received enough support.

**Women should be encouraged to consider taking part in appropriate clinical trials**

The proportion of women who reported being informed about clinical trials was higher during both pre- and post-implementation at Collaborations 1 and 3 than at Collaboration 2. The largest increase between pre- and post-implementation was seen at Collaboration 1 (33% vs 43%). However, the increase was not statistically significant for the combined data or for any of the individual collaborations.

**Women should be given the opportunity to consider breast reconstruction**

A total of 199 women surveyed during the study had a mastectomy. Information about whether breast reconstruction was discussed either before or after surgery is available for 185 of these women. At Collaborations 1 and 2, the total number of women who were informed about the option of breast reconstruction decreased between pre- and post-implementation, whereas at Collaboration 3, an increase was seen (from 39% to 61%). None of the changes seen was statistically significant.
Clinicians should provide women with a written follow-up plan

The proportion of women receiving a written follow-up plan increased for all three collaborations between pre- and post-implementation, with the greatest increase seen at Collaboration 1 (from 19% at pre-implementation to 37% post-implementation). This difference reached only borderline significance (p = 0.022), and no significant difference in relation to this variable was seen for Collaborations 2 and 3.

8.3.4 A team approach to care

The proportion of women reporting aspects of care that represented a multidisciplinary team approach is presented in Table 8.4.

Women should be aware that there is one key person or group of people coordinating her care

The proportion of women who reported awareness that either one person or a regular group of people were coordinating their care increased between pre- and post-implementation at Collaboration 1 (from 57% to 65%) and Collaboration 3 (from 46% to 60%), but decreased at Collaboration 2 (from 57% to 51). None of these differences was significant. The remaining women at each of the collaborations reported that different people seemed to be in charge of their care at different times or that no-one seemed to be coordinating their care.

Each specialist should be aware of what has been happening for an individual woman during her diagnosis and treatment

Approximately 76–82% of women at pre-implementation and 75–87% of women at post-implementation reported that the specialist they had seen knew what had been happening in relation to their individual diagnosis and treatment, with little difference within each of the collaborations between cohorts. The remaining women indicated either that the specialist mostly knew what had been happening or they had needed to tell each specialist what had been happening.
The woman’s general practitioner should be aware of what has been happening for the women during her diagnosis and treatment

At Collaborations 1 and 2, the proportion of women reporting that their general practitioner was aware of what had been happening during their diagnosis and treatment increased between pre- and post-implementation (from 68–69% at pre-implementation to 75–84% at post-implementation). Neither increase was significant. At Collaboration 3, no change was seen between pre- and post-implementation (64% at both phases).

Women should perceive that the people involved in providing their treatment are working as a well-coordinated team

The proportion of women who felt the people who provided their treatment and care during surgery, radiotherapy or chemotherapy worked as a well-coordinated team increased from 89% at pre-implementation to 94% at post-implementation, however the change was not significant. Women who indicated that only one person was involved in their treatment were excluded from the analysis for this question (pre-implementation n = 24, post-implementation n = 26).

Women should perceive that the people involved in providing their treatment are communicating well with each other

The majority of women at both pre- (79%) and post-implementation (84%) who indicated that more than one person was involved in their care perceived that communication between team members was good. A non-significant increase in the proportion of women reporting good team communication was seen between pre-implementation and post-implementation at Collaborations 1 and 3.

Women should receive consistent information about treatment from all involved in their care

At all three collaborations, and at both pre- and post-implementation, more than 86% of women indicated that they had received consistent information from their treatment team all or most of the time. At Collaborations 1 and 3, more women indicated that they had received consistent information at post-implementation compared with pre-implementation. The difference was not significant for Collaboration 1 and was of only borderline significance for Collaboration 3 (p = 0.016). Little change was seen at Collaboration 2.
After treatment, women should know who to contact if they have problems or concerns

At least 85% of women at all three collaborations at both pre- and post-implementation indicated that they knew all or most of the time who to contact about problems or concerns related to treatment once they had returned home. At Collaborations 1 and 3, more women indicated that they knew who to contact at post-implementation compared with pre-implementation, although neither increase was significant.

8.3.5 When care was not coordinated

Findings from several questions illustrate some of the factors that may influence a woman’s view of her treatment team. Due to small numbers, pre–post comparisons were not undertaken. Data are presented for illustrative purposes and are combined across the three collaborations and two time cohorts.

The majority of women surveyed perceived that the people involved in providing their treatment were working as a well-coordinated team (combined: n = 390, 78%). Some women indicated that only one person provided their treatment (combined: n = 50, 10%). In the complete cohort, 37 women (7%) felt that the people involved in providing their treatment were not working as a team and were acting independently. Women were asked to select from a list what factors contributed to their perception that care was not coordinated. Of the 34 women who responded, 53% selected no rapport between those involved in their care, 62% said that individuals did not seem to know what others were doing, 41% stated that their care did not seem well-managed or organised, and 47% felt there were gaps in the treatment and care they had received. The highest level of agreement (68%) related to the perception that the people involved in their care did not seem to know what others had been told.

Women who reported instances when the people involved in their treatment had not communicated (n = 89 across both phases of the Project) were prompted to describe what happened on these occasions. The key themes to emerge from the women’s responses are presented in Table 8.5, which lists a sample response and the proportion of women whose responses matched each theme. The most common issue related to conflicting information from different specialists. Another key theme was a lack of awareness of some specialists about the woman’s treatment or decisions that had already been made regarding her treatment. Some women reported specific clinical incidents that reflected a lack of communication among team members, or described occasions when reports were not sent to other specialists or health care
professionals. For some women the lack of communication was related to an issue within the hospital system or administration, such as test results being lost.

### 8.4 Discussion

#### 8.4.1 Findings

The consumer survey revealed that provision of care at each of the collaborations was generally in accordance with clinical practice guidelines, with little significant change between pre- and post-implementation. There was a general tendency for more women at post-implementation to report care that was indicative of a team approach, although again many of the changes were not significant. Some statistically significant changes were seen between pre-and post-implementation and these could be linked to the strategies that had been implemented.

At Collaboration 1, a key strategy was the establishment of multidisciplinary treatment planning meetings. Non-significant changes suggested a change in women’s perceptions of how their treatment was being managed, with increases in the proportion of women who perceived that their care was being coordinated by a team, and in those who perceived good team communication. Regular attendance by general practitioners at Collaboration 1 meetings was reflected in the fact that more women at post-implementation reported that their general practitioner was aware of their diagnosis and treatment compared with pre-implementation (not significant).

At Collaboration 2, collaboration-specific changes in awareness that care was being managed using a team approach were also anticipated. However, in general, little change was seen between the two cohorts.

Changes for Collaboration 3 seemed to be related to the addition of a breast care nurse to the multidisciplinary team. The proportion of women who reported being seen by a breast care nurse at Collaboration 3 increased significantly between pre- and post-implementation (30% vs 78%; p < 0.001). Significant improvements were also seen in the proportion of women who reported receiving enough information about surgery prior to treatment (p = 0.003) and those who reported being offered consumer information (p = 0.005). Non-significant increases were seen in the proportion of women who reported that they knew who to contact if they had concerns after treatment and in those reporting that they were informed about breast reconstruction.
It is likely that, as it took some time for the MDC strategies to become fully established, their effects would not be detected in full during the Project timeframe. Where regular treatment planning meetings were newly established, it is possible that the impact of meetings held during the early stages of the Project on the care of women treated for breast cancer may have been less than during later stages. As all women treated for early breast cancer during the implementation phase were eligible to be included in the post-implementation cohort for the consumer survey, the impact of strategies on their care is likely to have varied.

The limited number of significant changes between pre- and post-implementation may also have been influenced by the study sample size. Within-collaboration differences between pre- and post-implementation needed to be approximately 22%, and overall differences needed to be approximately 12% in order to reach statistical significance. A change of this magnitude may have been unlikely for some items during the study period or simply unlikely to increase from the already high baseline.

Overall, the majority of women surveyed perceived that their care was being coordinated by a team. For the 7% of women who did not perceive that care was coordinated, qualitative data obtained via the consumer survey provides a useful insight into those factors that influence women’s views of their treatment team. In particular, the responses highlighted the importance of clinicians knowing what other people involved in the care of a woman with breast cancer have told the woman about her disease or its treatment. Conflicting information from different specialists or a lack of awareness of other specialists’ decisions were also raised as issues. These findings suggest that improving communication among multidisciplinary team members may be one of the most important factors in order to ensure that women feel that they are receiving care from a coordinated team.

### 8.4.2 Methodological considerations

As the consumer survey investigated changes in the management of women with breast cancer before and after the implementation of MDC strategies, it was important that a similar set of women were surveyed at pre- and post-implementation. Two methodological factors had the potential to introduce bias between the two cohorts, namely the methods used to identify the women, and the recruitment process. The LECs from the collaborations determined the most suitable way of identifying all potentially eligible women at each site within their collaboration. While the method of identification may have varied between the collaborations, it is assumed that the same methods were employed within the collaborations for both cohorts, thereby
minimising any potential bias. In addition, it is worth noting that each of the collaborations had some difficulty gaining the required numbers of women and that every effort was made by the collaborations to ensure that all potentially eligible women were identified to meet the sample target.

During the recruitment process, clinicians had to agree that their patients were eligible and could participate in the survey. The exclusion of women by their clinicians may have introduced some sampling bias. While it is possible that any effect due to this sampling bias during the recruitment process may have been similar for both the pre- and post-implementation cohorts, it is also possible that changes in attitudes by clinicians over the study period may have altered their perceptions regarding patient eligibility.

However, the fact that there were no significant differences between the pre- and post-implementation cohorts in terms of their demographic characteristics lends support to the view that the cohorts involved similar sets of women. A comparison of the demographic characteristics of the study sample and those of the women who took part in the national consumer audit of breast cancer also revealed no significant differences. This finding indicates that the sample of women involved in the consumer survey was generally representative of women who have been diagnosed with early breast cancer and agree to participate in surveys.

### 8.4.3 Summary

- Some changes in the provision of care in accord with clinical practice guidelines were seen between pre- and post-implementation, although in general, treatment appeared to be in accord with the guidelines at baseline.

- There was a general, although mostly statistically insignificant, trend for more women in the post-implementation cohort to report care that represented a team approach.

- Significant anticipated collaboration-specific changes based on the employment of a breast care nurse were seen at Collaboration 3.

- Qualitative data obtained via the consumer survey suggests that improved communication among multidisciplinary team members may enhance women’s perceptions of their care.
To conclude, results from the consumer survey indicate that a high proportion of women were receiving care in accordance with the guidelines and believed that a team approach was taken to their care before the implementation of MDC strategies. Improvements were seen between pre- and post-implementation, although few changes were statistically significant. It may be that the impact of MDC strategies needs to be assessed over a longer timeframe in order for the structural and procedural changes implemented to have an observable impact on consumers.
Table 8.1  Number of letters of invitation to participate sent, responses received and completed interviews for the pre-implementation and post-implementation cohorts of women by collaboration

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<th>Letters sent</th>
<th>Responses received (response rate*)</th>
<th>Completed interviews (participation rate**)</th>
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<td><strong>Pre-implementation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration 1</td>
<td>151</td>
<td>102 (68%)</td>
<td>82 (80%)</td>
</tr>
<tr>
<td>Collaboration 2</td>
<td>130</td>
<td>114 (88%)</td>
<td>93 (82%)</td>
</tr>
<tr>
<td>Collaboration 3</td>
<td>134</td>
<td>104 (78%)</td>
<td>74 (71%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>415</td>
<td>320 (77%)</td>
<td>249 (78%)</td>
</tr>
<tr>
<td><strong>Post-implementation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration 1</td>
<td>122</td>
<td>108 (89%)</td>
<td>81 (75%)</td>
</tr>
<tr>
<td>Collaboration 2</td>
<td>114</td>
<td>92 (81%)</td>
<td>80 (87%)</td>
</tr>
<tr>
<td>Collaboration 3</td>
<td>109</td>
<td>103 (94%)</td>
<td>88 (85%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>345</td>
<td>303 (88%)</td>
<td>249 (82%)</td>
</tr>
</tbody>
</table>

*As a percentage of letters sent
**As a percentage of responses received
<table>
<thead>
<tr>
<th></th>
<th>Pre-implementation</th>
<th>Post-implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;40 years</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>40–49 years</td>
<td>20%</td>
<td>22%</td>
</tr>
<tr>
<td>50–69 years</td>
<td>57%</td>
<td>50%</td>
</tr>
<tr>
<td>70+ years</td>
<td>19%</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Married/defacto</td>
<td>69%</td>
<td>65%</td>
</tr>
<tr>
<td>Separated/divorced/widowed</td>
<td>25%</td>
<td>29%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary only</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>Secondary</td>
<td>53%</td>
<td>52%</td>
</tr>
<tr>
<td>Completed secondary</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>Post-school qualifications</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Surgery</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast conserving</td>
<td>59%</td>
<td>61%</td>
</tr>
<tr>
<td>Mastectomy</td>
<td>41%</td>
<td>39%</td>
</tr>
<tr>
<td><strong>Other treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>67%</td>
<td>65%</td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>46%</td>
<td>39%</td>
</tr>
</tbody>
</table>

*a total proportion may be greater than 100% due to women having more than one type of treatment*
Table 8.3 Proportion of women being treated in accord with selected recommendations from the NHMRC Clinical practice guidelines for the management of early breast cancer, before and after the implementation of multidisciplinary care strategies within the collaborations (denominator in brackets)

<table>
<thead>
<tr>
<th>Recommendation from the guidelines</th>
<th>Combined Pre %</th>
<th>Combined Post %</th>
<th>Collaboration 1 Pre %</th>
<th>Collaboration 1 Post %</th>
<th>Collaboration 2 Pre %</th>
<th>Collaboration 2 Post %</th>
<th>Collaboration 3 Pre %</th>
<th>Collaboration 3 Post %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis should be given by a senior doctor</td>
<td>–</td>
<td>–</td>
<td>98% (81)</td>
<td>99% (81)</td>
<td>92% (92)</td>
<td>100% (78)</td>
<td>90% (73)</td>
<td>97% (88)</td>
</tr>
<tr>
<td>Diagnosis should be given to the woman face-to-face (or by telephone if acceptable to the woman)</td>
<td>97% (248)</td>
<td>100% (246)</td>
<td>99% (81)</td>
<td>100% (81)</td>
<td>96% (93)</td>
<td>100% (80)</td>
<td>97% (74)</td>
<td>100% (85)</td>
</tr>
<tr>
<td>Diagnosis should be given in an open manner</td>
<td>98% (243)</td>
<td>100% (238)</td>
<td>100% (78)</td>
<td>100% (79)</td>
<td>97% (92)</td>
<td>100% (74)</td>
<td>96% (73)</td>
<td>99% (85)</td>
</tr>
<tr>
<td>Women should be encouraged to have a second person present when being given a diagnosis</td>
<td>–</td>
<td>–</td>
<td>49% (71)</td>
<td>48% (71)</td>
<td>44% (78)</td>
<td>48% (71)</td>
<td>35% (65)</td>
<td>30% (73)</td>
</tr>
<tr>
<td>Women should be reassured that there is no reason to believe that waiting a week or two to decide on treatment will make any difference</td>
<td>–</td>
<td>–</td>
<td>59% (78)</td>
<td>61% (74)</td>
<td>54% (92)</td>
<td>50% (70)</td>
<td>57% (70)</td>
<td>54% (86)</td>
</tr>
<tr>
<td>Treatment decisions should be made by the woman after discussing with her doctor and any others she may care to consult</td>
<td>–</td>
<td>–</td>
<td>91% (79)</td>
<td>92% (77)</td>
<td>91% (87)</td>
<td>88% (73)</td>
<td>91% (68)</td>
<td>89% (79)</td>
</tr>
<tr>
<td>Women are entitled to make their own decisions about treatments or procedures and should be given adequate information on which to base those decisions</td>
<td>–</td>
<td>–</td>
<td>86% (81)</td>
<td>94% (79)</td>
<td>81% (90)</td>
<td>90% (80)</td>
<td>73% (74)</td>
<td>92% (86)</td>
</tr>
<tr>
<td>While information about the disease and its treatment is critical, women also need information about the psychosocial impact of breast cancer and the material and practical resources required to adjust and cope with the disease</td>
<td>–</td>
<td>–</td>
<td>85% (57)</td>
<td>92% (66)</td>
<td>89% (66)</td>
<td>93% (67)</td>
<td>76% (42)</td>
<td>86% (68)</td>
</tr>
</tbody>
</table>
Table 8.3 Proportion of women being treated in accord with selected recommendations from the NHMRC Clinical practice guidelines for the management of early breast cancer, before and after the implementation of multidisciplinary care strategies within the collaborations (denominator in brackets) (cont’d)

<table>
<thead>
<tr>
<th>Recommendation from the guidelines</th>
<th>Combined</th>
<th></th>
<th>Collaboration 1</th>
<th></th>
<th>Collaboration 2</th>
<th></th>
<th>Collaboration 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td></td>
<td>%  (n)</td>
<td>%  (n)</td>
<td>%  (n)</td>
<td>%  (n)</td>
<td>%  (n)</td>
<td>%  (n)</td>
<td>%  (n)</td>
<td>%  (n)</td>
</tr>
<tr>
<td>Appropriate counselling has the potential to improve quality of life</td>
<td>–</td>
<td>–</td>
<td>91% (71)</td>
<td>93% (74)</td>
<td>82% (75)</td>
<td>85% (66)</td>
<td>85% (62)</td>
<td>82% (72)</td>
</tr>
<tr>
<td>Doctors should encourage women with breast cancer to consider participating in appropriate clinical trials for which they are eligible</td>
<td>23% (235)</td>
<td>29% (230)</td>
<td>33% (76)</td>
<td>43% (74)</td>
<td>9% (89)</td>
<td>10% (73)</td>
<td>31% (70)</td>
<td>33% (83)</td>
</tr>
<tr>
<td>Women should be given the opportunity to consider breast reconstruction, so they can balance the advantages and disadvantages of reconstruction after mastectomy</td>
<td>–</td>
<td>–</td>
<td>52% (25)</td>
<td>49% (26)</td>
<td>58% (46)</td>
<td>42% (32)</td>
<td>39% (21)</td>
<td>61% (35)</td>
</tr>
<tr>
<td>Clinicians should provide women with a written management plan and follow-up plan</td>
<td>–</td>
<td>–</td>
<td>19% (68)</td>
<td>37% (59)</td>
<td>32% (88)</td>
<td>39% (70)</td>
<td>20% (64)</td>
<td>26% (69)</td>
</tr>
</tbody>
</table>

– indicates that for this variable data could not be collapsed as per the outcome of the Mantel-Haenszel Common Odds Ratio test

* among women who were told of their diagnosis face-to-face

*b among women who had a mastectomy

* indicates significant difference between pre- and post-implementation at p < 0.01
Table 8.4 Proportion of women who reported aspects of care that represented a multidisciplinary team approach, before and after the implementation of multidisciplinary care strategies within the collaborations (denominator in brackets)

<table>
<thead>
<tr>
<th>Evidence of a multidisciplinary team approach</th>
<th>Combined</th>
<th>Collaboration 1</th>
<th>Collaboration 2</th>
<th>Collaboration 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td></td>
<td>% (n)</td>
<td>% (n)</td>
<td>% (n)</td>
<td>% (n)</td>
</tr>
<tr>
<td>Women should be aware that there is one key person or group of people coordinating her care</td>
<td>–</td>
<td>57% (82)</td>
<td>65% (77)</td>
<td>57% (91)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>51% (76)</td>
<td></td>
<td>46% (72)</td>
</tr>
<tr>
<td>Each specialist should be aware of what has been happening for an individual woman during her diagnosis and treatment</td>
<td>–</td>
<td>82% (82)</td>
<td>87% (77)</td>
<td>82% (92)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>79% (79)</td>
<td></td>
<td>76% (74)</td>
</tr>
<tr>
<td>The woman's general practitioner should be aware of what has been happening for the woman during her diagnosis and treatment</td>
<td>68% (212)</td>
<td>94% (182)</td>
<td>69% (72)</td>
<td>84% (55)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>84% (55)</td>
<td></td>
<td>81% (68)</td>
</tr>
<tr>
<td>Women should perceive that the people involved in providing her treatment are working as a well coordinated team</td>
<td>89% (219)</td>
<td>94% (208)</td>
<td>93% (69)</td>
<td>94% (61)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>93% (62)</td>
<td></td>
<td>84% (53)</td>
</tr>
<tr>
<td>Women should perceive that the people involved in providing her treatment are communicating well with each other</td>
<td>79% (194)</td>
<td>84% (206)</td>
<td>82% (66)</td>
<td>86% (68)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>83% (65)</td>
<td></td>
<td>74% (55)</td>
</tr>
<tr>
<td>Women should receive consistent information about treatment from all involved in her care</td>
<td>–</td>
<td>88% (82)</td>
<td>96% (78)</td>
<td>90% (92)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>91% (76)</td>
<td>86% (80)</td>
</tr>
<tr>
<td>After treatment, women should know who to contact if she has problems or concerns</td>
<td>87% (247)</td>
<td>91% (246)</td>
<td>90% (81)</td>
<td>95% (80)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>85% (93)</td>
<td>86% (80)</td>
</tr>
</tbody>
</table>

– indicates that for this variable data could not be collapsed as per the outcome of the Mantel-Haenszel Common Odds Ratio test

a among women who saw a general practitioner following diagnosis or treatment

b among women who had more than one person involved in her treatment (pre-implementation n = 219, post-implementation n = 208)

* indicates significant difference between pre- and post-implementation at p < 0.01

** indicates significant difference between pre- and post-implementation at p < 0.001
Table 8.5  Key themes to emerge when women were asked to describe what had occurred when the people involved in their treatment had not communicated (n = 89)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sample response</th>
<th>%a</th>
</tr>
</thead>
</table>
| Woman told conflicting information by different specialists          | “The oncologist said I would not lose my breast and the next day the surgeon said that I would. It seems that they had a complete lack of communication.”  
“Three different professionals gave three different outcomes regarding prognosis which was very confusing. I didn't know who to believe.” | 15% |
| Specialists were not aware of decisions made by others, had not read file notes or were not aware of what the woman had been told | “When you were with one medical person or another they did not know what the others had been doing.”  
“At times it seemed that either the people didn't have time to read the file notes or that they hadn’t read the reports.” | 11% |
| Specific clinical incident involving poor communication among treatment team | “There was some confusion over one of my doses of chemotherapy, they were not sure if I had an injection beforehand.”  
“I had a drain in my wound and had to have it drained. I went to the hospital and no-one seemed to know what to do.” | 10% |
| Reports or other relevant information not provided to team members    | “There were no reports sent to my GP until I requested that he be informed.”  
“On the first visit to the oncologist the notes had not arrived so I had to fill her in.” | 10% |
Table 8.5  Key themes to emerge when women were asked to describe what had occurred when the people involved in her treatment had not communicated (n = 89) (cont’d)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sample response</th>
<th>%a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particular hospital system or administrative issue</td>
<td>‘My blood test results were not found. Needed to be repeated.’</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>“One of my radiotherapy appointments was not booked in and I had to wait a week for my next one.”</td>
<td></td>
</tr>
<tr>
<td>Lack of communication between team or with the woman regarding follow-up care or further treatment</td>
<td>“Radiotherapy was completed. I was given no instructions regarding follow-up care. I had no idea what I should do.”</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>“I had no idea when I was going to the city for radiotherapy after the chemotherapy.”</td>
<td></td>
</tr>
<tr>
<td>Specialist had poor interactional skills</td>
<td>“I did not feel comfortable or at ease with the oncologist.”</td>
<td>7%</td>
</tr>
<tr>
<td>General impression of lack of communication between team or specialists</td>
<td>“There was a lack of communication between my GP and surgeon.”</td>
<td>5%</td>
</tr>
</tbody>
</table>

*a note: the total proportion is less than 100%, as other responses were not commonly reported*
9. Clinical audit

9.1 Introduction and aims

Incorporation of mechanisms which ensured that women treated in the MDC team environment were managed in accord with best practice recommendations was an important outcome for the National Multidisciplinary Care Demonstration Project. The extent to which this occurred in the participating collaborations was assessed through interviews and surveys of participating clinicians and women. However, collection of relevant patient management data was required to allow a more objective analysis of practice during the pre- and post-implementation time periods.

The aim of the clinical audit was to examine changes in thirteen key clinical outcomes in the diagnosis and clinical management of women with early breast cancer before and after the implementation of strategies to improve MDC. These clinical outcomes, supported by guideline recommendations and identified by the Steering Committee for the National Multidisciplinary Care Demonstration Project, represented areas where a multidisciplinary team approach might reasonably be expected to impact on practice.

9.2 Method

9.2.1 Development of clinical audit tool

The clinical audit tool (see Appendix IX) was developed by the National Breast Cancer Centre in consultation with the Royal Australasian College of Surgeons (RACS). It was a paper-based modified version of the RACS National Breast Surgical Audit. The RACS National Breast Surgical Audit is a quality improvement tool that provides surgeons with feedback on their performance both individually and in comparison with the pooled data of their colleagues, and also assists surgeons in the preparation of reports. Results from the RACS national audit provide up-to-date data about practice in breast cancer management by participating surgeons.

A detailed data dictionary and instruction manual was developed to assist the collaborations in completing the clinical audit forms. Prior to its use in this Project, the clinical audit tool was
triailed for ease of use and clarity by three breast surgeons who had no involvement with this Project.

9.2.2 Data collection

The Local Evaluation Coordinator (LEC) in Collaborations 1 and 2 and a senior clinician in Collaboration 3 were responsible for identifying appropriate cases, gaining written consent from the women and providing the clinical audit data to the National Breast Cancer Centre. De-identified data for each patient were recorded onto a separate paper-based clinical audit form. The forms were completed by either the primary treating clinician or their nominee.

Where possible, RACS National Breast Surgical Audit data for the time period February to July 2002, which was also the post-implementation data collection period, were used for comparison with data collected by the clinical audit. The de-identified, pooled RACS data were made available to the National Breast Cancer Centre through the Australian Safety and Efficacy Register of New Intervventional Procedures – Surgical (ASERNIP-S).

9.2.3 Sample

The pre-implementation clinical audit was conducted on the medical records of all consenting women who were newly diagnosed with early breast cancer and underwent their initial treatment at one of the multi-site collaborations between six and twelve months prior to the commencement of the pre-implementation phase of the study \((n = 252)\). The post-implementation cohort was consenting women who were diagnosed with early breast cancer and underwent treatment during the implementation and early post-implementation phase of the Project \((n = 256)\). For the purposes of the study, early breast cancer was defined as ‘an operable tumour less than 5 cm diameter, with either no regional lymph node metastasis or metastasis to movable ipsilateral axillary lymph nodes, and with no evidence of distant metastases’. This corresponds to tumours that are T1–2, N0–1, M0 as defined by the UICC. Women with in situ disease only were not included.

Women were identified using a number of sources, including patient registers, medical records, or admission books. Written consent from the women was sought by the Collaborations before the audits were performed. To ensure that respondents would have completed all or most of their initial treatment at the time of the survey, women were not asked to participate until at least six months after their initial diagnosis.
9.2.4 Analysis

Frequencies were calculated for each outcome at both pre- and post-implementation audits for each of the three multi-site collaborations. Responses to all questionnaires were numerically coded and input to a database for analysis using a standard statistical package (SPSS® Version 10 for Windows).

Data were collected as binary, categorical (more than 2 responses) and ordinal variables. Differences in binary and nominal data between pre- and post-implementation were analysed using Chi-square tests (group sizes permitting, Cochran’s relaxed rule). All 2 x 2 Chi-square statistics were corrected for continuity. To correct for multiple comparisons, differences were considered significant when \( p < 0.01 \). Where data items are missing, they have not been included in the analysis.

9.3 Results

As both the numerator and the denominator varied for each question and for each of the collaborations, results are presented as percentages indicating the proportion of women at each of the collaborations to whom the outcome applied. The denominator for each of the questions is listed in the accompanying tables.

**Proportion of women who had a pre-operative diagnosis of cancer achieved without an open biopsy**

The rates of open biopsy performed at each of the collaborations at pre- and post-implementation are shown in Table 9.1. No significant change was seen between pre- and post-implementation at Collaboration 1. However, a significant decrease in the percentage of open biopsies performed to achieve a diagnosis was seen at Collaboration 2 (\( p = 0.011 \)) and a decrease of borderline significance was noted at Collaboration 3 (\( p = 0.027 \)) at post-implementation compared with pre-implementation.

**Proportion of women who underwent mastectomy**

The number of women who underwent mastectomy at pre- and post-implementation is shown in Table 9.2. The rates of mastectomy ranged between 38% and 49% and no significant change was seen over time for any collaboration. The rates are in line with national data from the 1995 National Surgical Audit\(^1\) in which 47% of women with early breast cancer underwent...
mastectomy, and the 2002 National Breast Surgical Audit, in which 37% of women underwent mastectomy.

**Proportion of women who underwent breast reconstruction after mastectomy**

Overall, the number of women who had breast reconstruction at the three collaborations was very small; in total, only 9 women at pre-implementation and 11 women at post-implementation, received reconstructive surgery after their mastectomy (Table 9.3). Although the numbers were too small for statistical analysis the percentage figures for each of the collaborations were in line with the data from the National Breast Surgical Audit for the time period February to July 2002, which showed that 9.9% of all cases had mastectomy and breast reconstruction.

**Proportion of women who underwent radiotherapy after breast conserving surgery**

In total, 170 women at pre-implementation and 173 women at post-implementation received breast conserving surgery. The proportion of these women who received radiotherapy ranged from 82%–90% at pre-implementation and from 77%–81% at post-implementation. The collaborations were asked to record the site of radiotherapy. At pre-implementation, the proportion of women for whom radiation to the conserved breast was recorded was 82%, 69% and 66% at Collaborations 1, 2 and 3, respectively. A significant decrease in the proportion of women receiving radiotherapy to the conserved breast after breast conserving surgery (or complete local excision) was detected for all three collaborations at post-implementation compared with pre-implementation: 74%, 52% and 53% at Collaborations 1, 2 and 3, respectively (p < 0.0001) (Table 9.4).

**Proportion of women who were referred to a radiation oncologist prior to undergoing breast conserving surgery**

Table 9.5 shows the proportion of women who were referred to a radiation oncologist prior to breast conserving surgery. While the proportion of women referred to a radiation oncologist after CLE ranged from 77% to 90%, the proportion of women referred before CLE was less than 8% in all three collaborations. Statistical analysis was not possible due to the small numbers involved.
Proportion of women who underwent both axillary surgery and axillary radiotherapy

Of the 508 women whose clinical audits were completed at pre- and post-implementation, 494 women (97%) underwent axillary surgery. As the proportion of these women who subsequently underwent axillary radiotherapy was very small (<5%), statistical analysis of the results from individual collaborations was not possible.

Proportion of women with positive axillary nodes who were referred to a medical oncologist

A total of 184 women (36%) were recorded as having positive axillary nodes at pre- or post-implementation. Information on whether a referral to a medical oncologist had been made was available for 176 of these women. The proportion of these women with positive nodes who were referred to a medical oncologist at Collaborations 1, 2 and 3 was 53%, 57% and 46%, respectively at pre-implementation, and 47%, 43% and 54%, respectively at post-implementation (see Table 9.6). No significant difference was seen for any of the collaborations between pre- and post-implementation. Although there was no question in the National Surgical Breast Audit that allowed direct comparison with these data, between 62% and 72% women were referred for chemotherapy or hormonal therapy in the period February to July 2002.

Proportion of women with positive axillary nodes who received chemotherapy

Information on whether chemotherapy was received was available for 182 of the 184 women who had positive axillary nodes at pre- or post-implementation. The proportion of these women with positive nodes who received chemotherapy ranged from 37% to 63% (Table 9.7), but no significant difference was seen for any of the individual collaborations between pre- and post-implementation. Results from the 2002 National Breast Surgical Audit showed that 72% women with positive nodes were referred to chemotherapy. Although the proportion of these women who actually received chemotherapy was not available from this audit, it may be presumed that not all women who were referred were suitable for, or accepted chemotherapy treatment.

Proportion of women whose hormone receptor status was not reported

Of the 508 audits performed at pre- and post-implementation, oestrogen receptor status was reported as missing or unknown in only 1.8% of women and progesterone receptor status was reported as missing or unknown in 9.3% of women. The numbers not reported at any
individual collaboration were very small (range = 0–4) and therefore no statistical analysis could be performed between pre- and post-implementation in any of the three collaborations. However, these results compare very favourably with the 1995 National Surgical Audit, which indicated that 15% of women with early breast cancer did not have their hormone receptor status reported, and the 2002 National Breast Surgical Audit, which indicated that 23% cases did not have receptor status reported.

**Proportion of women with oestrogen receptor positive tumours who received hormone therapy**

Seventy four percent (n = 378) of the 508 women with early breast cancer whose records were audited had oestrogen receptor positive tumours. Table 9.8 shows that a high proportion of these women received hormone therapy at both pre-implementation (89%, 91% and 89%), and at post-implementation (89%, 93% and 91%) at Collaborations 1, 2 and 3 respectively. No statistically significant change was seen in the proportion of women receiving hormone therapy in any of the three collaborations over the two time periods.

**Proportion of women who were referred to a medical oncologist prior to commencement of adjuvant systemic or hormonal therapy**

A high proportion of women who received adjuvant systemic or hormonal therapy were referred to a medical oncologist prior to the start of treatment in Collaborations 1 and 3 at pre-implementation (93% and 98%, respectively) and at post-implementation (92% and 100% respectively) (Table 9.9). Accordingly, no significant change was noted at either of these collaborations. In Collaboration 2, the proportion of women referred to a medical oncologist was lower at pre-implementation (54%) than at the other two collaborations and increased to 74% at post-implementation; this increase achieved borderline significance (p = 0.061).

**Proportion of women who participated in a clinical trial for which they were eligible**

A total of 37 women audited were entered into a clinical trial for which they were eligible. Because of the small numbers involved, it was not possible to perform a statistical analysis on the results. It is noteworthy that in all three collaborations, the number of women participating in a clinical trial increased between pre- and post-implementation: 4 to 10, 5 to 9 and 1 to 8 in Collaborations 1, 2 and 3 respectively (Table 9.10).
Proportion of women who received sentinel node biopsy

Sentinel node biopsy was performed in only one woman at pre-implementation at Collaboration 3. However, at post-implementation, the number of women receiving sentinel node biopsy had increased significantly to 21 women (p < 0.001) and 26 women (p < 0.001) in Collaborations 1 and 3, respectively. An increase to 10 women was seen in Collaboration 2, although this was not statistically significant. See Table 9.11.

9.4 Discussion

The clinical audit tool was developed to gain objective data about the clinical care provided to women in the three participating collaborations during the pre- and post-implementation phases of the National Multidisciplinary Care Demonstration Project. However, it was acknowledged from the outset that few, if any, significant changes were likely to be observed, given the already high standard of practice at baseline (a national patterns of care treatment survey of 1995 identified a high standard of practice in most aspects of care for women with breast cancer15), the relatively small numbers of participating women, particularly in some subsets of treatment, and the short implementation time of the Project. While the design and short duration of the Project were not appropriate to demonstrate clinical outcomes for women with breast cancer, surrogate measures can provide some evidence of change in practice which can reasonably be expected to translate into improved outcomes in the longer term.

The clinical audit indicated that practice during the pre-implementation phase of the National Multidisciplinary Care Demonstration Project was largely in accord with guideline recommendations and that there was little room for improvement. Therefore for most outcomes measured, changes were not seen during the post-implementation phase or were too small to reach statistical significance. This was seen across all three collaborations in the proportion of women who underwent mastectomy, the proportion of women who were referred to a radiation oncologist prior to breast conserving surgery, the proportion of women with positive nodes who received chemotherapy, the proportion of women whose hormone receptor status was reported and the proportion of women with oestrogen receptor positive tumours who received hormone therapy.

There were some outcomes that did show improvement, but because of the small numbers involved, statistical analysis could not be performed or only borderline significance was achieved. This was particularly noteworthy in the proportion of women who were entered into a clinical trial in all three collaborations, the proportion of women who had breast...
reconstructive surgery after mastectomy at Collaboration 3, the proportion of women who were referred to a medical oncologist prior to commencement of adjuvant systemic or hormone therapy at Collaboration 2 and the proportion of women who received sentinel node biopsy at Collaboration 2.

There were some outcome measures for which a significant improvement was seen between pre- and post-implementation phases. A statistically significant increase in the proportion of women who had a preoperative diagnosis of cancer achieved without open biopsy was seen at Collaboration 2 and an increase of borderline significance was seen at Collaboration 3. This implies a greater use of the triple test approach to diagnosis, correlating the results of clinical examination, breast imaging and fine needle or core biopsy to reach a preoperative diagnosis. In this way, management options can be discussed with the woman prior to her surgery and a one-stage surgical procedure can be performed in the majority of cases. In addition, there was a significant increase in the proportion of women who received sentinel node biopsy at Collaborations 1 and 3. This result reflects an increase in the number of surgeons performing sentinel node biopsy, and was likely to be due to the introduction of the RACS Sentinel Node Axillary Clearance (SNAC) Trial. Both these results indicate significant improvements in practice in line with best practice.

There was one outcome, however, that was unexpected. The proportion of women who underwent radiotherapy after breast conserving surgery decreased significantly across all 3 collaborations between the pre- and post-implementation phases. Discussions with the key clinicians at the three collaborations were conducted to explore the likely reason for this result. Collaborations all agreed that, although a timeframe of six or more months after initial diagnosis was used for all eligible women included in the audit at both the pre- and post-implementation phases, the subsequent data collection period was shorter at post-implementation. Using the experience of the pre-implementation phase, sites were able to identify women at post-implementation more readily than at pre-implementation. The clinical audit only captured information regarding treatment that had commenced or was complete; it did not capture all planned treatments. The differences between pre- and post-implementation may be accounted for by the fact that women were receiving adjuvant chemotherapy before radiotherapy and that the post-implementation audit period may have been too short for many women to have reached the point of receiving radiotherapy as part of their recommended treatment plan. It is acknowledged that, although the timeframe for sampling was planned so that respondents had completed all or most of their treatment at the time of the audit, it is possible that the six-month timeframe was not adequate to capture some treatments received by the women, such as radiotherapy.
9.4.1 Summary

Results from the clinical audit indicate that, in general, diagnosis and clinical management of women diagnosed and treated for early breast cancer at the three collaborations during the study period was in accord with guideline recommendations and was in line with findings from the 2002 National Breast Surgical Audit findings for the same time period.

Key changes between pre- and post-implementation were:

- a statistically significant increase in the proportion of women who had a diagnosis of early breast cancer without the need for an open biopsy at Collaboration 2 and an increase of borderline significance at Collaboration 3

- an increase in the number of women who were entered into a clinical trial for which they were eligible at all three collaborations

- an increase in the proportion of women who had breast reconstructive surgery after mastectomy at Collaboration 3

- an increase in the proportion of women referred to a medical oncologist prior to commencement of adjuvant systemic chemotherapy or hormone therapy, and an increase in the number of women who received sentinel node biopsy at Collaboration 2.

An unexpected and significant decrease in the proportion of women who received radiotherapy to the conserved breast after breast conserving surgery was detected but may have been a result of the sampling period for the post-implementation cohort.
Table 9.1 Proportion of women who had a pre-operative diagnosis of cancer achieved without an open biopsy (n = 508)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre % (n)</th>
<th>Post % (n)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>88.0% (75)</td>
<td>84.3% (89)</td>
<td>NS</td>
</tr>
<tr>
<td>2</td>
<td>74.7% (87)</td>
<td>91.5% (71)</td>
<td>p = 0.011</td>
</tr>
<tr>
<td>3</td>
<td>88.9% (90)</td>
<td>97.9% (96)</td>
<td>p = 0.027</td>
</tr>
</tbody>
</table>

NS – not significant

Table 9.2 Proportion of women who underwent mastectomy (n = 507)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre % (n)</th>
<th>Post % (n)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>37.8% (74)</td>
<td>38.2% (89)</td>
<td>NS</td>
</tr>
<tr>
<td>2</td>
<td>46.0% (87)</td>
<td>42% (71)</td>
<td>NS</td>
</tr>
<tr>
<td>3</td>
<td>38% (90)</td>
<td>49% (96)</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – not significant

Table 9.3 Proportion of women who underwent breast reconstruction after mastectomy (n = 213)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre % (n)</th>
<th>Post % (n)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7.1% (28)</td>
<td>0% (34)</td>
<td>Cannot perform statistical analysis</td>
</tr>
<tr>
<td>2</td>
<td>7.5% (40)</td>
<td>6.7% (30)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>11.7% (34)</td>
<td>19.1% (47)</td>
<td></td>
</tr>
</tbody>
</table>
Table 9.4 Proportion of women who underwent radiotherapy after breast conserving surgery (n = 343)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre %</th>
<th>Post %</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n)</td>
<td>(n)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>82.4%</td>
<td>74.2%</td>
<td>p &lt; 0.0001</td>
</tr>
<tr>
<td></td>
<td>(51)</td>
<td>(62)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>68.6%</td>
<td>52.0%</td>
<td>p &lt; 0.0001</td>
</tr>
<tr>
<td></td>
<td>(51)</td>
<td>(50)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>66.2%</td>
<td>52.5%</td>
<td>p &lt; 0.0001</td>
</tr>
<tr>
<td></td>
<td>(68)</td>
<td>(61)</td>
<td></td>
</tr>
</tbody>
</table>

Table 9.5 Proportion of women who were referred to a radiation oncologist prior to undergoing breast conserving surgery (n = 441)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre %</th>
<th>Post %</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n)</td>
<td>(n)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2.0%</td>
<td>No data</td>
<td>Cannot perform statistical analysis</td>
</tr>
<tr>
<td></td>
<td>49</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5.9%</td>
<td>7.1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>87</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3.0%</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>89</td>
<td>91</td>
<td></td>
</tr>
</tbody>
</table>

Table 9.6 Proportion of women with positive axillary nodes who were referred to a medical oncologist (n = 176)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre %</th>
<th>Post %</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n)</td>
<td>(n)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>53.1%</td>
<td>46.9%</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>(23)</td>
<td>(24)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>56.8%</td>
<td>43.2%</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>(28)</td>
<td>(17)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>46.3%</td>
<td>53.7%</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>(36)</td>
<td>(48)</td>
<td></td>
</tr>
</tbody>
</table>

NS – not significant
Table 9.7 Proportion of women with positive axillary nodes who received chemotherapy (n = 182)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre % (n)</th>
<th>Post % (n)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.1% (23)</td>
<td>45.9% (26)</td>
<td>NS</td>
</tr>
<tr>
<td>2</td>
<td>62.9% (27)</td>
<td>37.1% (17)</td>
<td>NS</td>
</tr>
<tr>
<td>3</td>
<td>45.6% (37)</td>
<td>54.4% (52)</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – not significant

Table 9.8 Proportion of women with oestrogen receptor positive tumours who received hormone therapy (n = 378)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre % (n)</th>
<th>Post % (n)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>88.6% (44)</td>
<td>88.9% (72)</td>
<td>NS</td>
</tr>
<tr>
<td>2</td>
<td>90.6% (64)</td>
<td>92.9% (56)</td>
<td>NS</td>
</tr>
<tr>
<td>3</td>
<td>89.2% (65)</td>
<td>90.9% (77)</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – not significant

Table 9.9 Proportion of women who were referred to a medical oncologist prior to commencement of adjuvant systemic or hormonal therapy (n = 321)

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre % (n)</th>
<th>Post % (n)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>92.7% (41)</td>
<td>91.8% (49)</td>
<td>NS</td>
</tr>
<tr>
<td>2</td>
<td>53.7% (54)</td>
<td>73.5% (49)</td>
<td>p = 0.061</td>
</tr>
<tr>
<td>3</td>
<td>98.4% (64)</td>
<td>100% (64)</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – not significant
### Table 9.10  Number of women who participated in a clinical trial for which they were eligible

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Pre</th>
<th>Post</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>n = 4</td>
<td>n = 10</td>
<td>Cannot perform statistical analysis</td>
</tr>
<tr>
<td>2</td>
<td>n = 5</td>
<td>n = 9</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>n = 1</td>
<td>n = 8</td>
<td></td>
</tr>
</tbody>
</table>

### Table 9.11  Proportion of women who received sentinel node biopsy (n = 508)

<table>
<thead>
<tr>
<th>Collaborations</th>
<th>Pre</th>
<th>Post</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0%</td>
<td>23.6%</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>(75)</td>
<td>(89)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0%</td>
<td>9.9%</td>
<td>Cannot analyse</td>
</tr>
<tr>
<td></td>
<td>(87)</td>
<td>(71)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1.1%</td>
<td>27.1%</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>(90)</td>
<td>(96)</td>
<td></td>
</tr>
</tbody>
</table>
10. **Survey of clinicians from the collaborations**

10.1 **Aim**

The survey of clinicians was intended to identify their perceptions of changes in a number of care-related areas before and after new MDC strategies were implemented. Areas investigated included:

- clinician communication during treatment planning and treatment
- involvement of women diagnosed with breast cancer in the treatment planning process
- referral and access to specialist services
- supportive care for women diagnosed with breast cancer
- adherence to best practice guidelines
- professional development activities.

10.2 **Method**

10.2.1 **Sample**

The sample for the clinician survey was key clinicians involved in the management of women with breast cancer nominated by the collaborations as being involved in the *National Multidisciplinary Care Demonstration Project*. The sample comprised the specialties of surgery (n = 12), radiology (n = 7), radiation oncology (n = 5), medical oncology (n = 5), pathology (n = 8) and supportive care (n = 7). Supportive care staff included breast care nurses, oncology nurses and social workers. Following the nomination of clinicians by the collaborations, the individual...
clinicians were contacted about participating in the survey. The consent rate for participation was 100%.

The sample included clinicians from each site within each collaboration. Only where the same clinicians were available for interview at both pre- and post-implementation were they included in the sample for analysis. The sample for the survey of clinicians at each time of surveying was n = 44 (comprising of Collaboration 1 (n = 13), Collaboration 2 (n = 14) and Collaboration 3 (n = 17).

10.2.2 Survey

The clinician survey was developed by the National Breast Cancer Centre for this Project as a structured questionnaire (see Appendix X). It focused on participation in multidisciplinary activities and adherence to guidelines about diagnosis, treatment and supportive care for women with breast cancer. The survey was based on a tool developed previously for the Hospital Quality Improvement Kit Project, which had been successfully tested for validity and reliability.

The survey consisted of 67 closed questions, with option to comment for clarification if appropriate. The majority of questions were asked of all participants. However, 24 questions were asked of only some specialists, as the questions pertained to their specialty area only or were questions relating to rural issues that were only answered by clinicians from rural sites. The survey, which took approximately 1 hour to complete, was administered either face-to-face or over the telephone by a trained, independent interviewer. The data provided to the National Breast Cancer Centre were de-identified to ensure the anonymity of all participants.

The survey was conducted at the commencement of the start-up phase (referred to here as ‘pre-implementation’), with respondents asked to focus on usual practice prior to the implementation of MDC strategies associated with the Project. The survey was repeated during the post-implementation phase (17 months later), with respondents asked to focus on practice during and since the implementation of MDC strategies.

10.2.3 Analysis

Matched data from 44 clinicians were recorded at pre- and post-implementation as the same clinicians responded in each phase. Responses on all questionnaires were numerically coded and input to a database for analysis using a standard statistical package (SPSS® Version 10 for
For many of the categorical variables, responses have been collapsed down into binary variables. The range of responses to each question was dichotomized; a positive score was achieved if the response was in accord with breast cancer best practice recommendations\textsuperscript{4,35,39} and the Principles of Multidisciplinary Care.\textsuperscript{14} These binary responses were analysed in a pair-wise fashion for pre- and post-implementation differences. Small sample sizes limited the statistical analysis on these data. Trends over time have been analysed for the whole group and, where sample sizes permitted, for each of the collaborations using the Binomial test. Where the trend was consistent over time, an overall significance is presented in the tables. Ordinal or ranked variables were analysed using Wilcoxon’s matched pairs signed ranks tests. Differences were considered statistically significant when $p < 0.05$.

### 10.3 Results

#### Core staff usually involved in the management of women with breast cancer

At both pre- and post-implementation, the majority of the 44 respondents considered the surgeon, medical oncologist, radiation oncologist, pathologist and radiologist as key staff involved in the management of women with breast cancer (Table 10.1). More respondents recognised the role of oncologists at post-implementation, a finding that tended towards significance ($p = 0.07$). Overall, a significant increase was seen in the perception that the specialist breast care nurse was involved in the management of women with breast cancer (from 15/44 to 25/44, $p = 0.006$), with the highest increase seen in Collaboration 3 (from 1/17 to 10/17 respondents, $p = 0.004$). There was a decreasing tendency to recognise the role of other supportive care staff, such as the physiotherapist ($p = 0.07$). Respondents were more likely to consider four or more staff as being involved in the management of women with breast cancer at post-implementation (41/44) than at pre-implementation (38/44) (Table 10.2), although numbers were high in both phases.

#### Linkage to other specialist services (either on- or off-site)

An increase in the number of respondents reporting links to a broad range of specialist services for the management of women with breast cancer was seen over the study period (Table 10.3). There was a greater tendency in the post- than in the pre-implementation period to report links to genetic counselling (from 22/29 to 27/29, $p = 0.06$) and occupational therapy services for lymphoedema (from 20/29 to 26/29, $p = 0.07$), and a significant decrease in the nomination of links to ‘other’ services (from 11/29 to 2/29, $p = 0.02$).
Referral to other specialist services

There was an increase of borderline significance in the number of respondents reporting referral of women for genetic counselling over the study period (from 18/29 to 25/29, \( p = 0.039 \)) (Table 10.4). There was a decrease in the number of respondents reporting referral to a range of other services, such as psychiatry and pain clinic, although this did not reach significance.

Rural/remote or small sites – service linkage and referral

Overall, 22 respondents were from rural, remote or small sites. Little change occurred between pre- and post-implementation in the number of respondents reporting service linkage or referral to another facility for the provision of core services not available locally, with the exception of a tendency towards a decrease in reported supportive care links (from 14/22 to 8/22, \( p = 0.07 \)) (Table 10.5).

Multidisciplinary team meetings

Of the respondents who indicated that any type of multidisciplinary meeting was held at their facility, a highly significant increase was reported in the conduct of regular, weekly multidisciplinary meetings dedicated to the planning of treatment for women with breast cancer between the pre- and post-implementation phases (from 10/28 to 27/36, \( p = 0.008 \)) (Table 10.6). This finding reflects the fact that a number of sites within the collaborations were already holding multidisciplinary meetings at the outset of the Project. However, the meetings were not necessarily regular, or attended by all core team members. There was a significant increase over the course of the study in the perceived number of ‘core’ team members (ie, surgeon, medical oncologist, radiation oncologist, pathologist, radiologist and supportive care representative) attending the multidisciplinary meetings (\( p = 0.004 \); Table 10.7).

Involvement of the general practitioner in multidisciplinary meetings

At post-implementation only, the surgical and oncology respondents were asked about the involvement of general practitioners in the treatment planning meetings. These questions had a very low response rate. It is, however, of interest to note some collaboration-specific changes. At Collaboration 1, four out of six respondents to these questions indicated that general practitioners were ‘always’ to ‘sometimes’ encouraged to be involved in treatment planning meetings, ‘always’ attended, and ‘always’ to ‘sometimes’ participated in treatment planning decisions. Respondents from the other collaborations indicated that general practitioners were
rarely or never involved in multidisciplinary meetings (Collaboration 2: 4/5 and Collaboration 3: 9/9).

**Attendance of ‘non-core’ members at multidisciplinary meetings**

The respondents perceived an increase in the attendance of representatives of all other non-core services at multidisciplinary treatment planning meetings between the pre- and post-implementation period, with a significant increase in representatives of genetic testing, genetic counselling, sentinel node biopsy, lymphoedema service and specialist surgery and oncology for advanced disease (see Table 10.8).

**Communication with the general practitioner**

The surgical and oncology respondents indicated that they ‘always’ or ‘almost always’ communicated diagnosis and treatment decisions to general practitioners in both the pre- and post-implementation phases (20/21 and 21/21, respectively). More responding surgeons indicated that general practitioners were informed of a woman’s diagnosis within one day at post-implementation (5/10) than at pre-implementation (0/10).

**Collaboration with team members outside multidisciplinary meetings**

There was no change throughout the study in the reported level of collaboration between team members outside of multidisciplinary treatment planning meetings (Table 10.9). Of the 44 respondents in each phase, 13 indicated that they collaborated at least monthly in the pre-implementation period and 11 in the post-implementation period. There was little change in the type of collaborative non-treatment planning activities undertaken. An increase in ‘other research’ was reported; however, statistical significance could not be demonstrated.

**Professional development activities**

Between the pre- and post-implementation period, there was a non-significant increase in the reported attendance by staff at multidisciplinary professional education sessions within their facility (from 15/44 to 19/44). There was no change in the reported attendance by staff at external professional education activities.

**Awareness of relevant clinical practice guidelines**

Between the pre- and post-implementation period, there was a non-significant increase in the number of respondents who reported they had read the *Clinical practice guidelines for the*
management of early breast cancer (from 35/44 to 39/44) and the Psychosocial clinical practice guidelines: providing information, support and counselling for women with breast cancer (from 21/44 to 25/44) (Table 10.10). Of 19 surgical and pathology respondents, 13 reported reading the Pathology reporting of breast cancer recommendations at pre-implementation and 16 at post-implementation. The majority of respondents in each case reported that they believed practice within their facility to be 'mostly consistent' with the respective guidelines and no change in this perception was apparent over the course of the study.

Informing women about their diagnosis and treatment options

At both the pre- and post-implementation phases, the majority of respondents reported that women were informed of their diagnosis by either a surgeon or general practitioner, with no significant change occurring between study phases (Table 10.11). The respondents indicated in both phases that women were never told their diagnosis by a junior clinician or a nurse.

There was a non-significant increase between the study phases in the number of respondents indicating that women were routinely offered the option of a second consultation for further discussion after being informed of their diagnosis (from 19/44 to 27/44). Change was not evident between study phases in: offering to women literature about treatment issues to aid decision making (most respondents indicated ‘all’ women were offered); offering women an audio-tape recording of the consultation about treatment options (most respondents indicated that this happened ‘rarely’ or ‘never’); and agreement about a strategy to ensure that women diagnosed with early breast cancer received the National Breast Cancer Centre’s consumer guide All about early breast cancer (most respondents indicated that there was no strategy or that they didn’t know about a strategy).

While there was an increase between study phases in the number of respondents acknowledging that their service had an agreed protocol for accessing interpreters (from 21/44 to 29/44), the majority of respondents indicated that the services of an appropriate professional interpreter in discussing diagnosis and treatment options was ‘not usually needed’ (26/44 and 31/44, respectively).

Supportive care for women diagnosed with breast cancer

No significant change was found between the study phases in responses to the question about the nominated team member to provide supportive care for women, with ‘no-one nominated’ or the specialist breast nurse being the main responses (Table 10.12). Responses from staff at
Collaboration 3 were the main contributors to the increase in reporting the specialist breast nurse as the nominee and Collaboration 2 were the main contributors to the response of ‘no-one nominated’, with no change between phases.

More respondents indicated post-implementation that there was routine provision of supportive care to women undergoing surgery for breast cancer, with a tendency towards significance for the increase in routine support for women at diagnosis (from 9/44 to 16/44, p = 0.07) and at six to ten weeks after surgery (from 5/44 to 12/44, p = 0.07) (Table 10.13).

A highly significant increase was found between study phases in reporting that women undergoing radiotherapy or chemotherapy receive routine supportive care at diagnosis (from 1/44 to 15/44, p < 0.0001) and an increase of borderline significance at six to ten weeks post therapy was also reported (Table 10.14). Most of the increase in responses to these questions between study phases was attributable to Collaboration 3.

Between pre- and post-implementation, there was a non-significant increase in the number of respondents who reported that there was an agreed strategy in place for providing women with information about and access to supportive care services (from 12/44 to 17/44). There was no apparent change, however, in whether staff discussed psychosocial issues with women when discussing their proposed management plan (reported in both phases as occurring 'always' to 'almost always').

When asked whether there were agreed strategies in place for detecting and assessing women who may have been experiencing severe anxiety and/or depression, most respondents indicated that they relied on the judgement of the individual clinician or that they did not know whether a strategy existed (Table 10.15). There was a non-significant decrease in reliance on the judgement of individual clinicians from pre- to post-implementation (from 33/44 to 25/44).

Between pre- and post-implementation, there was a significant decrease in the number of respondents who indicated that they themselves managed women experiencing severe anxiety and/or depression (from 15/44 to 7/44, p = 0.021) as well as a significant decrease in the number of respondents who did not know how women were managed (from 13/44 to 0/44, p = 0.016) (Table 10.16). There was a significant increase in the number of respondents who indicated that women with severe anxiety and/or depression were referred to a psychiatrist (from 11/44 to 21/44, p = 0.016).
**Treatment planning and involvement of the women diagnosed with breast cancer**

At pre-implementation, the majority of the 29 respondents involved in the treatment of women with breast cancer indicated that women were ‘rarely’ or ‘never’ given written treatment plans. A non-significant decrease was seen at the post-implementation for both women with early breast cancer (from 20/29 to 16/29) and advanced breast cancer (from 19/29 to 14/29) (indicating an increase in the provision of written treatment plans). There was no change between the study phases in the perceived level of encouragement given to women to provide input into their treatment plan nor whether the woman was asked if the plan was acceptable to her (each of these items where mainly reported as occurring ‘always’ to ‘mostly’).

The 12 surgical respondents indicated in both phases that they discussed breast reconstruction before surgery with ‘all’ or ‘almost all’ women about to undergo mastectomy.

**Clinical trials and audit**

There was no change in clinical trial participation reported by the surgeons and medical oncologists between the pre- and post-implementation phases of the study (both phases 8/17). A non-significant decrease was found in the number of surgeons and oncologists reporting the conduct of regular clinical audit of their own practice between the study phases (from 11/29 to 7/29).

**Follow-up**

In both the pre- and post-implementation phases, most respondents either reported that follow-up of women with early breast cancer was primarily managed in accord with NHMRC guidelines (12/44 and 15/44) or that they did not know whether there was a protocol for follow-up (11/44 and 14/44) (Table 10.17). Surgeons and oncologists were asked to detail their follow-up schedules for women treated for early breast cancer and to nominate which tests were routinely undertaken during follow-up post-breast conserving surgery and post-mastectomy. All responses during both the pre- and post-implementation phases were in accord with the relevant NHMRC clinical practice guidelines.

In both study phases, respondents either indicated that the breast surgeon was considered the lead clinician in charge of follow-up (both phases 20/44) or that the lead clinician varied with time, with no agreed protocol between the core specialists (12/44 and 15/44 for pre- and post-respectively) (Table 10.18). The majority of respondents indicated that women were ‘never’
routinely given written follow-up plans, with little change found during the study (from 22/29 to 21/29).

10.4 Discussion

The survey of clinicians indicates that clinical staff perceived significant change in a number of key areas over the course of the study.

Sample limitations that should be considered when interpreting the results of this survey include: the limited sample frame (n = 44 in each study phase – some staff did change between study phases, however, only staff who could be interviewed in both phases were included in the sample); the collaboration sites nominated the relevant ‘key’ clinicians involved in the Demonstration Project; and not all questions were asked of all respondents, due to the types of questions asked, further limiting the sample for selected questions.

Responses from clinicians from all three collaborations suggest improved care in accord with the Principles of Multidisciplinary Care for women with breast cancer (see Chapter 3). Improvements in a team approach to care and communication between clinicians were indicated by increases in the perception that the specialist breast nurse was a member of the team involved in managing women with breast cancer and in reported links and referrals to specialist services (eg, genetic counselling). Multidisciplinary treatment planning meetings were held in some of the participating sites within collaborations prior to the Project commencing. One of the key findings of the survey of clinicians was a highly significant increase in reported regular, weekly multidisciplinary meetings dedicated to the planning of treatment for women with breast cancer. Over the course of the study, there was a significant increase not only in the perceived number of ‘core’ team members attending multidisciplinary meetings but also in the attendance of ‘non-core’ team representatives (eg, genetic testing, specialist surgery). Improved communication with general practitioners was evident in an increase in the number of surgeons reporting that they informed general practitioners of a women’s diagnosis within one day.

Awareness of relevant clinical practice guidelines amongst respondent clinicians increased during the study. Responses to scenarios about follow-up regimes for women treated for breast cancer suggest that care was in accord with guideline recommendations during both study phases. The clinicians reported an increase in attendance at ‘in-house’ multidisciplinary professional development activities.
Further improvements in accord with the *Principles of Multidisciplinary Care* were increased support for women being treated for breast cancer and assistance for women with decision making. There was an increase in the number of clinicians who reported that they routinely offered the option of a second consultation to women diagnosed with breast cancer, as well as in the recognition that there was an agreed service protocol for accessing interpreters. Over the course of the study, there was an increase in the reported routine provision of supportive care to women at the time of diagnosis, irrespective of whether surgery, radiotherapy or chemotherapy was the planned treatment mode. There was also an increase in the reported awareness by clinicians of an agreed strategy for providing women with information about and access to supportive care services. At the end of the study, clinicians seemed to be less reliant on their own judgement to detect, assess and manage women experiencing severe anxiety and/or depression and more inclined towards referring such women to a psychiatrist.

While the overall findings relate to all three collaborations participating in the Project, it is worth noting some areas where increases were higher in one of the collaborations than in others concordant with nominated strategies. Both Collaborations 1 and 2 aimed to improve the involvement of general practitioners in MDC planning meetings. At post-implementation, only clinicians from Collaboration 1 indicated that general practitioners always attended meetings. This finding confirms process reports from these two collaborations – Collaboration 1 reported that general practitioner strategies had been effective, while Collaboration 2 noted a lack of general practitioner attendance despite efforts of collaboration members.

A key strategy for Collaboration 3 was the appointment of a specialist breast care nurse as a team member, to be involved in MDC planning meetings, to coordinate the passage of women from diagnosis through treatment and to help identify and facilitate women for appropriate counselling referral. The appointment of the specialist breast care nurse and recognition of her as a team member is reflected in the responses from the clinicians at this collaboration. Of the collaborations, Collaboration 3 had the highest increases between study phases in the following: increased perception that the specialist breast care nurse was involved in the management of women; increased reporting of the specialist breast care nurse as the nominated team member to provide supportive care for women; and increased provision of supportive care to women at the time of diagnosis.

Little or no change was found between the two study phases in several areas. Rural, remote and small sites within the collaborations reported little change in service linkage or referral to other facilities for the provision of core services not locally available. In a number of collaborations strategies to improve links with rural facilities were reported as being difficult to implement and
not always perceived as effective. Another area where change was not evident was in the level of collaboration reported between team members outside the multidisciplinary treatment planning meetings. The *Principles of Multidisciplinary Care* identify collaborative working links as an important component supporting a multidisciplinary approach. The lack of reported change could indicate that collaboration was already perceived as adequate or that such effects may take time to emerge.

Other areas where little or no change was evident between study phases were those in which standards of care delivery were already high at the outset of the study and remained so at the end of the study. For example, in both study phases clinicians reported that: women were typically informed of their diagnosis by either a surgeon or general practitioner and never by a junior doctor or nurse; women were offered literature about treatment issues to assist decision making; and the surgeon discussed breast reconstruction with women about to undergo mastectomy.

A number of the findings of the survey of clinicians are validated by the survey of women reported in Chapter 8. Both before and after the implementation phase, women tended to report that the people involved in providing treatment were working as a well coordinated team, were communicating well with each other and were keeping the general practitioner informed. The survey of women also indicated an increase in the provision of information about the psychosocial impact of breast cancer and practical information about adjusting and coping with the disease.

The activity logs maintained by the collaborations throughout the Project also confirm a number of the findings of the survey of clinicians, including an increase in the number of multidisciplinary meetings dedicated to the planning of treatment for women with breast cancer and in the number of ‘core’ team members attending multidisciplinary meetings (see Chapter 12).

### 10.4.1 Summary

- The results of the survey of clinicians from the three participating collaborations indicate that many improvements were made in service delivery in line with the *Principles of Multidisciplinary Care* over the course of the Project.
• Key findings, reported by clinicians, include increases in:
  o regular, weekly multidisciplinary meetings dedicated to the planning of treatment for women with breast cancer
  o the number of ‘core’ and ‘non-core’ team members attending multidisciplinary meetings
  o specialist breast care nurses being recognised as a team member involved in managing women with breast cancer
  o provision of routine supportive care to women at diagnosis and after treatment
  o referral of women with severe anxiety and/or depression to a psychiatrist, with fewer clinicians managing such women on their own.

• The findings indicate that one of the key benefits of a multidisciplinary approach in the short term is improvement in the provision of psychosocial support for women with breast cancer.

• While overall improvements were indicated in all three collaborations, some levels of change were greater in one collaboration than in another. Some of these differences could be attributed to differences in strategies implemented to improve MDC (eg, appointment of a specialist breast care nurse).

• There were a number of areas investigated where little or no change was found between the two study phases. Reasons for the lack of change could include lack of impact of planned strategies, the short timeframe of the study not detecting longer term changes, and existing standards of care delivery already being high at the outset of the Project (eg, follow-up regimes for women treated for breast cancer were already reported as being in accord with guideline recommendations).

• A number of the findings of the survey of clinicians can be validated against other evaluation tools used during the Project (eg, survey of women treated at the collaborations and activity logs maintained by the collaborations).
Table 10.1  Professionals perceived as being involved in management of women with breast cancer

<table>
<thead>
<tr>
<th>Staff usually involved in management of women with breast cancer</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Significance – Binomial test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeon</td>
<td>43</td>
<td>44</td>
<td>NS</td>
</tr>
<tr>
<td>Medical oncologist</td>
<td>33</td>
<td>39</td>
<td>0.07</td>
</tr>
<tr>
<td>Radiation oncologist</td>
<td>33</td>
<td>39</td>
<td>0.07</td>
</tr>
<tr>
<td>Pathologist</td>
<td>34</td>
<td>32</td>
<td>NS</td>
</tr>
<tr>
<td>Radiologist</td>
<td>38</td>
<td>38</td>
<td>NS</td>
</tr>
<tr>
<td>Specialist breast care nurse</td>
<td>15</td>
<td>25</td>
<td>0.006*</td>
</tr>
<tr>
<td>Oncology nurse</td>
<td>10</td>
<td>7</td>
<td>NS</td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>14</td>
<td>7</td>
<td>0.07</td>
</tr>
<tr>
<td>Social worker</td>
<td>15</td>
<td>18</td>
<td>NS</td>
</tr>
<tr>
<td>General practitioner</td>
<td>22</td>
<td>17</td>
<td>NS</td>
</tr>
<tr>
<td>Psychologist</td>
<td>6</td>
<td>6</td>
<td>NS</td>
</tr>
<tr>
<td>Other staff</td>
<td>32</td>
<td>28</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS  not significant
* significant
Table 10.2  Number of staff perceived as being involved in management of women with breast cancer

<table>
<thead>
<tr>
<th>Number of staff involved in care</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2.3%</td>
<td>0%</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>11.4%</td>
<td>6.8%</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>13.6%</td>
<td>18.2%</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>20.4%</td>
<td>20.4%</td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>34.1%</td>
<td>36.4%</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>18.2%</td>
<td>18.2%</td>
</tr>
</tbody>
</table>
Table 10.3 Links available to other specialist services involved in the management of women with breast cancer

<table>
<thead>
<tr>
<th>Links</th>
<th>Pre n (n = 29)</th>
<th>Post n (n = 29)</th>
<th>Significance – Binomial test Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetic testing</td>
<td>22</td>
<td>26</td>
<td>NS</td>
</tr>
<tr>
<td>Genetic counselling</td>
<td>22</td>
<td>27</td>
<td>0.06</td>
</tr>
<tr>
<td>Nuclear medicine</td>
<td>26</td>
<td>27</td>
<td>NS</td>
</tr>
<tr>
<td>Sentinel node biopsy investigation</td>
<td>11</td>
<td>26</td>
<td>NS</td>
</tr>
<tr>
<td>Plastic/reconstructive surgery</td>
<td>24</td>
<td>23</td>
<td>NS</td>
</tr>
<tr>
<td>Lymphoedema service</td>
<td>26</td>
<td>29</td>
<td>NS</td>
</tr>
<tr>
<td>Physiotherapy for lymphoedema</td>
<td>25</td>
<td>29</td>
<td>NS</td>
</tr>
<tr>
<td>Occupational therapy for lymphoedema</td>
<td>20</td>
<td>26</td>
<td>0.07</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>23</td>
<td>21</td>
<td>NS</td>
</tr>
<tr>
<td>Dietetics</td>
<td>23</td>
<td>24</td>
<td>NS</td>
</tr>
<tr>
<td>Specialist oncology for advanced disease</td>
<td>27</td>
<td>28</td>
<td>NS</td>
</tr>
<tr>
<td>Specialist surgery for metastatic disease</td>
<td>23</td>
<td>26</td>
<td>NS</td>
</tr>
<tr>
<td>Palliative care service</td>
<td>26</td>
<td>26</td>
<td>NS</td>
</tr>
<tr>
<td>Pain clinic</td>
<td>21</td>
<td>20</td>
<td>NS</td>
</tr>
</tbody>
</table>
| Other links                                | 11             | 2              | 0.02*                                  

NS not significant

* significant
### Table 10.4 Referral to other specialist services involved in the management of women with breast cancer

<table>
<thead>
<tr>
<th>Referrals</th>
<th>Pre n (n = 29)</th>
<th>Post n (n = 29)</th>
<th>Significance – Binomial test Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetic testing</td>
<td>18</td>
<td>24</td>
<td>NS</td>
</tr>
<tr>
<td>Genetic counselling</td>
<td>18</td>
<td>25</td>
<td>0.039</td>
</tr>
<tr>
<td>Nuclear medicine</td>
<td>22</td>
<td>22</td>
<td>NS</td>
</tr>
<tr>
<td>Sentinel node biopsy investigation</td>
<td>4</td>
<td>4</td>
<td>NS</td>
</tr>
<tr>
<td>Plastic/reconstructive surgery</td>
<td>20</td>
<td>18</td>
<td>NS</td>
</tr>
<tr>
<td>Lymphoedema service</td>
<td>22</td>
<td>23</td>
<td>NS</td>
</tr>
<tr>
<td>Physiotherapy for lymphoedema</td>
<td>24</td>
<td>21</td>
<td>NS</td>
</tr>
<tr>
<td>Occupational therapy for lymphoedema</td>
<td>21</td>
<td>17</td>
<td>NS</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>18</td>
<td>13</td>
<td>NS</td>
</tr>
<tr>
<td>Dietetics</td>
<td>18</td>
<td>17</td>
<td>NS</td>
</tr>
<tr>
<td>Specialist oncology for advanced disease</td>
<td>20</td>
<td>21</td>
<td>NS</td>
</tr>
<tr>
<td>Specialist surgery for metastatic disease</td>
<td>23</td>
<td>21</td>
<td>NS</td>
</tr>
<tr>
<td>Palliative care service</td>
<td>26</td>
<td>23</td>
<td>NS</td>
</tr>
<tr>
<td>Pain clinic</td>
<td>21</td>
<td>15</td>
<td>NS</td>
</tr>
<tr>
<td>Other referral</td>
<td>9</td>
<td>3</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS not significant
Table 10.5  **Formal links by rural, remote or small sites to another facility for the provision of core services not available locally**

<table>
<thead>
<tr>
<th>Links with</th>
<th>Pre n (n = 22)</th>
<th>Post n (n = 22)</th>
<th>Significance – Binomial test Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeon</td>
<td>15</td>
<td>16</td>
<td>NS</td>
</tr>
<tr>
<td>Medical oncologist</td>
<td>18</td>
<td>19</td>
<td>NS</td>
</tr>
<tr>
<td>Radiation oncologist</td>
<td>18</td>
<td>14</td>
<td>NS</td>
</tr>
<tr>
<td>Pathologist</td>
<td>19</td>
<td>18</td>
<td>NS</td>
</tr>
<tr>
<td>Radiologist</td>
<td>18</td>
<td>18</td>
<td>NS</td>
</tr>
<tr>
<td>Supportive care</td>
<td>14</td>
<td>8</td>
<td>0.07</td>
</tr>
</tbody>
</table>

NS  not significant
**Table 10.6 Conduct of multidisciplinary team meetings for the planning of treatment of women with breast cancer**

<table>
<thead>
<tr>
<th>Multidisciplinary treatment planning meetings (of the sites holding meetings)</th>
<th>Pre n</th>
<th>Post n</th>
<th>Significance – Binomial test</th>
</tr>
</thead>
<tbody>
<tr>
<td>regular weekly meetings dedicated to treatment planning</td>
<td>10 (n = 28)</td>
<td>27 (n = 36)</td>
<td>0.008**</td>
</tr>
<tr>
<td>protocol established for discussing cases at treatment planning meeting</td>
<td>20 (n = 20)</td>
<td>29 (n = 30)</td>
<td>NS</td>
</tr>
<tr>
<td>desired level of involvement in treatment planning</td>
<td>19 (n = 20)</td>
<td>23 (n = 27)</td>
<td>NS</td>
</tr>
<tr>
<td>satisfied with level of administration assistance for any communication requirements (eg, teleconference)</td>
<td>15 (n = 15)</td>
<td>19 (n = 22)</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS not significant; ** highly significant

**Table 10.7 Number of core team members attending multidisciplinary treatment planning meetings**

<table>
<thead>
<tr>
<th>Number of core team members attending multidisciplinary meetings (of the sites holding meetings)</th>
<th>Pre Median</th>
<th>Post Median</th>
<th>Significance – Wilcoxon Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>24</td>
<td>12</td>
<td>0.004*</td>
</tr>
<tr>
<td>At least 2 members</td>
<td>14</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Full team</td>
<td>6</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

* significant
Table 10.8 Attendance of representatives of other non-core services at multidisciplinary treatment planning meetings

<table>
<thead>
<tr>
<th>Multidisciplinary meeting attendance</th>
<th>Pre n (n = 29)</th>
<th>Post n (n = 29)</th>
<th>Significance – Binomial test Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetic testing</td>
<td>4</td>
<td>12</td>
<td>0.008*</td>
</tr>
<tr>
<td>Genetic counselling</td>
<td>4</td>
<td>12</td>
<td>0.008*</td>
</tr>
<tr>
<td>Nuclear medicine</td>
<td>4</td>
<td>13</td>
<td>0.012</td>
</tr>
<tr>
<td>Sentinel node biopsy investigation</td>
<td>1</td>
<td>11</td>
<td>0.002*</td>
</tr>
<tr>
<td>Plastic/reconstructive surgery</td>
<td>5</td>
<td>13</td>
<td>0.04</td>
</tr>
<tr>
<td>Lymphoedema service</td>
<td>2</td>
<td>11</td>
<td>0.004*</td>
</tr>
<tr>
<td>Physiotherapy for lymphoedema</td>
<td>2</td>
<td>9</td>
<td>0.04</td>
</tr>
<tr>
<td>Occupational therapy for lymphoedema</td>
<td>2</td>
<td>10</td>
<td>0.02</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>2</td>
<td>9</td>
<td>0.04</td>
</tr>
<tr>
<td>Dietetics</td>
<td>1</td>
<td>7</td>
<td>NS</td>
</tr>
<tr>
<td>Specialist oncology for advanced disease</td>
<td>4</td>
<td>20</td>
<td>&lt;0.0001*</td>
</tr>
<tr>
<td>Specialist surgery for metastatic disease</td>
<td>0</td>
<td>11</td>
<td>0.001*</td>
</tr>
<tr>
<td>Palliative care service</td>
<td>3</td>
<td>11</td>
<td>0.02</td>
</tr>
<tr>
<td>Pain clinic</td>
<td>1</td>
<td>8</td>
<td>0.02</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>1</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS  not significant

* significant
Table 10.9 Collaborative activities unrelated to multidisciplinary treatment planning

<table>
<thead>
<tr>
<th>Activity</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialty based meetings</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Exchange programs</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Educational meetings</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Clinical trials activities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other research</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Other collaborative activities</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 10.10 Awareness of breast cancer clinical practice guidelines

<table>
<thead>
<tr>
<th>Number of staff who reported reading</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Significance – Binomial test Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical practice guidelines for the management of early breast cancer*&lt;sup&gt;4&lt;/sup&gt; (n = 44)</td>
<td>35 (80%)</td>
<td>39 (89%)</td>
<td>NS</td>
</tr>
<tr>
<td>Pathology reporting of breast cancer&lt;sup&gt;39&lt;/sup&gt; (n = 19)</td>
<td>13 (68%)</td>
<td>16 (84%)</td>
<td>NS</td>
</tr>
<tr>
<td>Psychosocial clinical practice guidelines&lt;sup&gt;35&lt;/sup&gt; (n = 44)</td>
<td>21 (48%)</td>
<td>25 (57%)</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS not significant
### Table 10.11 Informing women about their diagnosis

<table>
<thead>
<tr>
<th>Women were told their diagnosis by:</th>
<th>Pre ( n = 44 )</th>
<th>Post ( n = 44 )</th>
<th>Significance – Binomial test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeon</td>
<td>35</td>
<td>31</td>
<td>NS</td>
</tr>
<tr>
<td>Medical oncologist</td>
<td>1</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>Radiation oncologist</td>
<td>1</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>Radiologist</td>
<td>2</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>Other specialist</td>
<td>0</td>
<td>2</td>
<td>NS</td>
</tr>
<tr>
<td>Nurse</td>
<td>0</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>Junior clinician</td>
<td>0</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>General practitioner</td>
<td>9</td>
<td>11</td>
<td>NS</td>
</tr>
<tr>
<td>Other person</td>
<td>10</td>
<td>7</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS not significant

### Table 10.12 Nominated person responsible for providing supportive care to women diagnosed with breast cancer

<table>
<thead>
<tr>
<th>Nominated supportive care team member</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre ( n = 44 )</td>
</tr>
<tr>
<td>Specialist breast nurse</td>
<td>10</td>
</tr>
<tr>
<td>Oncology nurse</td>
<td>2</td>
</tr>
<tr>
<td>Social worker</td>
<td>3</td>
</tr>
<tr>
<td>No-one nominated</td>
<td>14</td>
</tr>
<tr>
<td>Don’t know</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
<tr>
<td>Shared between 2 people</td>
<td>1</td>
</tr>
<tr>
<td>Shared between more than 2 people</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 10.13 Routine provision of supportive care by nominated person to women who had surgery for breast cancer

<table>
<thead>
<tr>
<th>Routine provision of supportive care for women undergoing surgery</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Significance – Binomial test</th>
</tr>
</thead>
<tbody>
<tr>
<td>At diagnosis</td>
<td>9</td>
<td>16</td>
<td>0.07</td>
</tr>
<tr>
<td>Pre-operatively</td>
<td>11</td>
<td>14</td>
<td>ns</td>
</tr>
<tr>
<td>Post surgery</td>
<td>15</td>
<td>17</td>
<td>ns</td>
</tr>
<tr>
<td>1–6 weeks</td>
<td>11</td>
<td>14</td>
<td>ns</td>
</tr>
<tr>
<td>6–10 weeks</td>
<td>5</td>
<td>12</td>
<td>0.07</td>
</tr>
</tbody>
</table>

NS not significant

Table 10.14 Routine provision of supportive care by nominated person to women who underwent radiotherapy or chemotherapy for breast cancer

<table>
<thead>
<tr>
<th>Routine provision of supportive care for women undergoing radiotherapy or chemotherapy</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Significance – Binomial test</th>
</tr>
</thead>
<tbody>
<tr>
<td>At diagnosis</td>
<td>1</td>
<td>15</td>
<td>&lt;0.0001**</td>
</tr>
<tr>
<td>Before therapy</td>
<td>8</td>
<td>14</td>
<td>NS</td>
</tr>
<tr>
<td>During therapy</td>
<td>9</td>
<td>8</td>
<td>NS</td>
</tr>
<tr>
<td>1–6 weeks</td>
<td>8</td>
<td>8</td>
<td>NS</td>
</tr>
<tr>
<td>6–10 weeks</td>
<td>3</td>
<td>6</td>
<td>0.06</td>
</tr>
</tbody>
</table>

NS not significant
** highly significant
### Table 10.15 Agreed strategies for detecting and assessing women with severe anxiety and/or depression

<table>
<thead>
<tr>
<th>No strategy</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Routinely ask patients to complete self-report questionnaire</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>3</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rely on judgement of clinician</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33</td>
<td>25</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rely on judgement of nominated supportive care staff</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9</td>
<td>5</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Don’t know</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>11</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>2</td>
<td>NS</td>
</tr>
</tbody>
</table>

### Table 10.16 Agreed strategy for managing women experiencing severe anxiety and/or depression

<table>
<thead>
<tr>
<th>Clinician manages woman themselves</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15</td>
<td>7</td>
<td>0.021*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refer to general practitioner</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17</td>
<td>21</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refer to specialist breast care nurse</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>5</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refer to psychologist</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12</td>
<td>14</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refer to psychiatrist</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11</td>
<td>21</td>
<td>0.013*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refer to breast cancer support network</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refer to non professional support group</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refer to other</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>5</td>
<td>NS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Don’t know</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
<th>Whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13</td>
<td>0</td>
<td>0.016*</td>
</tr>
</tbody>
</table>

NS  not significant; * significant
### Table 10.17 Protocol for managing the follow-up of women with early breast cancer

<table>
<thead>
<tr>
<th>Protocol Type</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locally developed protocol</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>NHMRC guidelines</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>No protocol</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Don’t know</td>
<td>11</td>
<td>14</td>
</tr>
</tbody>
</table>

### Table 10.18 Lead clinician primarily in charge of follow-up

<table>
<thead>
<tr>
<th>Lead Clinician Type</th>
<th>Pre n (n = 44)</th>
<th>Post n (n = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast surgeon</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Medical oncologist</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Radiation oncologist</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>General practitioner</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Varies – agreed schedule</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Varies – disease stage</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Varies – no schedule</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
11. Acceptability questionnaire

11.1 Aim

The aim of the acceptability questionnaire was to investigate the acceptability to clinical staff from the collaborations of the new MDC strategies. Areas investigated included:

- perceived impact of main changes on clinical staff
- acceptability of changes to clinical staff
- influence of strategy implementation on team communication
- perceived barriers to implementing change
- lessons learnt during the implementation process
- flow-on benefits of Project participation for other clinical areas.

11.2 Method

11.2.1 Sample

The sample for the acceptability questionnaire was the same as for the clinician survey during the post-implementation phase (see Chapter 10), i.e., key clinicians nominated by the collaborations as being involved in the National Multidisciplinary Care Demonstration Project.

In total, 56 health professionals, representing the disciplines of surgery, medical oncology, radiation oncology, pathology, radiology and supportive care, completed the acceptability questionnaire. Supportive care staff included breast care nurses, oncology nurses, and social workers. The term ‘clinician’ will be used to refer to the respondents irrespective of discipline.

Those respondents who had not been practising at one of the collaborative sites for the duration of the Project were excluded from the final analysis (n = 13), leaving a total sample of 43 clinicians. Ten sites across the three collaborations were represented with 12 respondents from Collaboration 1, 13 from Collaboration 2 and 18 from Collaboration 3. It should be
noted that, due to missing responses, primarily from clinicians who were not actively involved in the implementation of multidisciplinary strategies in their collaboration, the total sample size for some questions is less than 43.

### 11.2.2 Survey

The acceptability questionnaire, developed by the National Breast Cancer Centre for this Project, focused on staff involvement in implementing multidisciplinary strategies, perceived usefulness of strategies, perceived impact of changes implemented, acceptability of changes to clinical staff, barriers to change and flow-on effects for other health conditions (see Appendix XI). The questionnaire was based on a tool developed previously for the Hospital Quality Improvement Kit Project, which had been tested successfully for validity and reliability.

The questionnaire consisted of 11 closed questions, with option to comment for clarification if appropriate, and six open-ended questions. The questionnaire was administered only during the post-implementation phase, at the same time as the survey of clinicians. The questionnaire took approximately 20 minutes to complete, and was administered either face-to-face or by telephone by a trained, independent interviewer. The data provided to the National Breast Cancer Centre were de-identified to ensure the anonymity of all participants.

### 11.2.3 Analysis

Responses to all questions were numerically coded and input to a database for analysis using a standard statistical package (SPSS® Version 10 for Windows). Small sample sizes limited the statistical analysis on these data. Frequencies were calculated for responses to closed questions. Responses to open-ended questions were grouped according to similar thematic responses and frequencies of themes calculated.
11.3 Results

11.3.1 Respondents

Of the respondents, 94% \((n = 40)\) were aware that their hospital or facility was involved in the National Multidisciplinary Care Demonstration Project. Similarly, 90%, \((n = 38)\) knew that their hospital or facility had been part of a larger collaboration for the purpose of the Project. Nonetheless, three respondents were not aware of their facility’s involvement in the Project and four were unaware of the existence of a larger collaboration.

Of the respondents who were aware of the Project, 55% \((n = 22)\) identified themselves as a member of the multidisciplinary team, 15% \((n = 6)\) were members of the local steering committee for the Project and 8% \((n = 3)\) were chief clinical collaborators. The remaining 22% \((n = 9)\) indicated they were not part of the multidisciplinary team. Of the nine clinicians who did not identify themselves as part of the multidisciplinary team, more than half \((n = 5)\) were from Collaboration 3.

Of those respondents who knew about the Project, a total of 40% \((n = 16)\) were actively involved in the implementation of MDC strategies within their collaboration, with 12 of these respondents indicating they were involved in planning or organisation of the implementation. A further 38% \((n = 15)\) indicated they were not actively involved in the implementation of the strategies, but participated in associated events, such as the multidisciplinary meetings. The remaining 22% \((n = 9)\) reported no direct personal involvement in the Project but rather a knowledge of the strategies implemented.

11.3.2 Links between collaborations

Of the 38 clinicians who reported that they knew their facility was part of a larger collaboration, 32% \((n = 11)\) rated the links between their facility and others within the collaboration during the Project as ‘moderately’ or ‘very’ collaborative, while 29% \((n = 10)\) rated the links as ‘somewhat’ collaborative and 15% \((n = 5)\) rated the links as ‘a little’ collaborative. Twenty-three percent \((n = 8)\) of clinicians rated the links between the facilities within their collaboration as ‘not at all’ collaborative. Of the 26 clinicians who indicated that some collaborative links existed between their facility and others within the collaboration, 24 (92%) thought these links were likely to continue after completion of the Project.
11.3.3  Knowledge of strategies

Most clinicians were aware of the multidisciplinary strategies that were implemented within their collaboration. When asked about these strategies, the responses varied between the three collaborations according to the strategies that had originally been nominated and implemented. The most common strategy highlighted by respondents from Collaboration 3 related to the appointment of the breast care nurse (61%, n = 11). In contrast, the majority of clinicians from Collaboration 2 (77%, n = 10) reported the establishment of the multidisciplinary meetings. Responses for Collaboration 1 varied, with half of the respondents mentioning the establishment of the multidisciplinary meetings (50%, n = 6) and the other half highlighting the coordination of breast care nursing services (50%, n = 6). Other multidisciplinary strategies reported by the clinicians included:

- strategies that were specific to the Demonstration Project, such as the commencement of videoconferencing links between sites
- more general strategies, such as developing a more integrated approach to the care of women with breast cancer
- strategies that were not part of the Demonstration Project, such as receiving a grant for remote counselling.

Overall, 16% (n = 7) of clinicians indicated they were not aware of any multidisciplinary strategies that had been implemented with their facility or collaboration; all of these clinicians were from rural sites.

11.3.4  Perceived impact on care of women

Of 32 respondents, 88% (n = 28) indicated that they believed the implementation of the MDC strategies had improved the care of women with breast cancer within their facility.

Within Collaboration 1, four clinicians suggested that the multidisciplinary meetings would be the most useful strategy in improving care for women with breast cancer. Other strategies mentioned as improving care for women included the empowerment of the local breast care nurses, the increased coordination of care, improved communication networks across the region and ease of referrals.
For Collaboration 2, responses focused on aspects associated with the implementation of the multidisciplinary meetings (n = 10), including greater interaction between clinicians, increased discussion of issues and improved standards of practice.

At Collaboration 3, the appointment of the breast care nurse was strongly supported. All of those clinicians who mentioned the breast care nurse’s appointment as an implemented strategy also indicated that they felt it would be the most useful strategy in improving care for women with breast cancer (n = 9, 100%).

Most clinicians reported that the MDC strategies implemented would be maintained beyond the Project (96%, n = 27 of 28 respondents).

11.3.5 Perceived impact on communication

Most clinicians reported that the implementation of the MDC strategies had a positive impact on communication with others involved in the management of breast cancer. Of 34 respondents:

- 88% percent (n = 28) agreed that the implementation of the strategies had improved communication between team members
- 47% felt that the implementation of the strategies had influenced their communication with others involved in breast cancer care either ‘very much’ (n = 8) or ‘moderately’ (n = 8)
- 18% (n = 6) thought their communication had been influenced ‘somewhat’
- 15% (n = 5) thought that their communication had been influenced ‘a little’
- 21% (n = 7) did not believe that the implementation of the strategies had any impact at all.

When asked to provide further information in response to this question, some clinicians emphasised that their communication with others had always been good. Others nominated ways that their communication had been improved, citing examples such as: the meetings providing a less threatening and more balanced forum for communication, increased familiarity with colleagues, knowing who to see about particular issues, more discussion and
debate of issues, and increased knowledge and respect between team members. Few negative impacts were reported. However, one respondent felt there had been a decrease in communication and another indicated that videoconferencing had produced poorer interaction at the meetings.

### 11.3.6 Changes to facility and personal impact

Improved communication was most commonly cited as the main change to have occurred within a respondent’s facility as a result of the implementation of the MDC strategies. Other perceived facility-level changes of note included improved coordination of services, greater professional awareness and respect, increased interaction between peers, enhanced team functioning, increased enthusiasm among team members, and the perception that women with breast cancer felt they were receiving a better standard of care.

When the clinicians were asked how the multidisciplinary strategies had impacted on them personally, the responses were both positive and negative. The issue most commonly associated with the implementation of the strategies related to further demands placed on the individual’s time (n = 16 of 30 respondents), especially with regard to attendance at the multidisciplinary meetings. Another issue raised by some clinicians was the lack of payment for attendance at the multidisciplinary meetings. In contrast, the positive impact of the strategies encompassed a broader array of issues. The multidisciplinary meetings were perceived to deliver a variety of benefits to the individual clinicians, such as providing: a forum for the discussion of issues or problems; support for treatment decisions; challenges to beliefs and practices; education; an insight into complexity of breast cancer management; increased knowledge; less administration; and greater respect for the role of all team members. Some of the other perceived benefits of the implementation of the multidisciplinary strategies to individual clinicians included: being able to provide better options to women; improved relationships with women with breast cancer; finding their own role more fulfilling; as well as feeling more enthusiastic and less stressed.

In addition, 79% of clinicians agreed that the strategies had made it easier for them to provide women with breast cancer with the appropriate treatment and care (n = 26 of 33 respondents).
11.3.7 Acceptability, challenges and advice to others

Of 31 respondents, all agreed (100%) that the implementation of the MDC strategies was worthwhile within their facility, with 77% (n = 24) in strong agreement. However, it was also acknowledged by 35% of these clinicians (n = 11) that implementation of the strategies had been difficult in their hospital setting. When asked to provide feedback about the challenges encountered, many raised the practical difficulties of establishing the multidisciplinary meetings (n = 12 of 18 respondents), such as locating a suitable venue, finding a time that was convenient to the majority of team members and having access to or acquiring the necessary technical resources. Issues associated with gaining support from all staff for the new strategies were also highlighted as a challenge, in particular the time involved in gaining such support, resistance to change by some individuals and difficulties between colleagues such as perceived professional rivalry and personality clashes. Other reported challenges related to the amount of time involved in implementing the strategies, staffing issues and the dichotomy between the public and private sector.

The clinicians were also asked what advice they would give to other groups wanting to implement such strategies within their facility. The importance of the characteristics of the coordinator or chairperson was one aspect that was acknowledged by many respondents (n = 15 of 36 respondents). Some of the characteristics perceived as being desirable for this leadership role included being: a team player, strong, dedicated, enthusiastic, encouraging, motivated and having good interpersonal skills. Much of the other advice related to team dynamics and implementing change (n = 9 of 36 respondents), such as: getting the whole team involved in the meetings, facilitating ownership of change and ensuring all team members were aware of the structure of the team. It was often emphasised that the implementation of the strategies was best if all team members were enthusiastic and cooperative. Comments that related specifically to the multidisciplinary meetings focused on the timing of the meetings and the importance of getting that right so that the majority of team members could attend. Other meeting-related advice included: considering the option of expanding an existing meeting rather than establishing a new one; ensuring all team members were invited in advance; and providing an incentive for attendees such as food. Additional advice to others ranged from the specific, such as ‘have a breast care nurse’ to the more general, such as ‘be aware of services already in place in rural sites and assess if easier to improve these rather than impose another’. 
11.3.8 Flow-on effects

Clinicians were asked whether they were aware of any flow-on effects of the multidisciplinary strategies to other departments or to the care of patients with other cancers or diseases. Regardless of the strategies implemented within their collaboration, many clinicians (n = 15 of 28 respondents) mentioned that the Project had highlighted the need to utilise a multidisciplinary approach for all cancer patients. Two clinicians indicated that occasionally other cancer cases were being informally discussed at the end of the breast cancer multidisciplinary meetings. Other reported flow-on effects included improvements to pathology reporting for other cancers (n = 3), greater awareness of psychosocial issues for patients with other types of cancer (n = 3), as well as an increased demand for other cancer services, such as genetics clinics.

11.3.9 General comments

Most general comments from the clinicians about the strategies implemented were enthusiastic and positive (n = 14 of 21). However, some issues were raised. Some clinicians emphasised the need to ensure MDC was applied to all cancers (n = 4), while others indicated that there was still much to be done in terms of the implementation of MDC in rural and regional areas (n = 4). Issues in the rural and regional sectors were further highlighted by comments from clinicians from these areas that emphasised the need to use local services where possible and not assume that major centres could provide better quality services (n = 3). The general comments overall were positive, with many clinicians indicating that the implementation of the MDC strategies had exceeded their expectations (n = 8), that they hoped the strategies would continue (n = 4) and that they felt the real benefit of the multidisciplinary approach was ‘yet to come’ (n = 2).

11.4 Discussion

11.4.1 Findings

The implementation of MDC strategies was generally well accepted by the clinicians involved. There were a number of differences between the collaborations, both in terms of the healthcare contexts in which they were functioning and the types of multidisciplinary strategies nominated. Despite these differences, the majority of clinicians across all collaborations believed
the implementation of the multidisciplinary strategies was worthwhile and that it had improved the care of women with breast cancer.

The majority of clinicians were aware that their facility was involved in the National Multidisciplinary Care Demonstration Project and that it had been part of a larger collaboration. Most clinicians indicated that the links between their facility and others had been ‘somewhat’ to ‘very’ collaborative in nature and believed that these links were likely to be maintained after completion of the Project. The majority of clinicians could identify at least one multidisciplinary strategy that had been implemented within their collaboration. It was positive to find that the strategies that were reported as having been ‘successfully’ implemented reflected those that the collaborations had aimed to implement, with the establishment of the multidisciplinary meetings and the appointment of a breast care nurse being most frequently identified.

The one area in which it was perceived that the implementation of the multidisciplinary strategies had not proceeded as planned related to the rural sites. Indeed, a total of seven clinicians from rural sites were not aware of any strategies that had been implemented in their collaboration. However, further examination of the data revealed that five of the seven clinicians who could not identify an implemented strategy were from Collaboration 3. This finding was not unexpected given the difficulties reported by this collaboration with regard to the implementation of strategies in the rural sites. Comments by some of the rural clinicians interviewed provide an important insight into the challenges involved in implementing MDC in such locations. In particular, some suggested that there was a perception that major centres may have been trying to ‘impose’ practices and new models of care on the rural sites, rather than working with the sites to improve care.

In general, clinicians believed that the implementation of the multidisciplinary strategies had been beneficial both in terms of improving care for women with breast cancer and enhancing communication between those involved in providing such care. Across the three collaborations, the majority of clinicians (88%) believed that the implementation of the multidisciplinary strategies had improved the care of women with breast cancer within their facility. Similarly, 88% believed that the multidisciplinary strategies had improved communication between team members. Where multidisciplinary meetings had been newly established, the impact of these meetings was often highlighted. Some of the reported outcomes associated with the meetings included increased discussion of the issues associated with providing treatment for breast cancer as well as an improved understanding and respect for colleagues’ roles within the multidisciplinary team. The improved communication inherent
in the multidisciplinary strategies was perceived as one of the key impacts at the facility level. Other facility-based outcomes reported by the clinicians included improved coordination of services, greater professional awareness, enhanced team functioning and the perception that women with breast cancer felt they were receiving better care.

The implementation of the multidisciplinary strategies also appeared to have had a positive impact for the clinicians themselves. The multidisciplinary approach was reported by the clinicians to provide greater emotional and intellectual support, especially with regard to making difficult treatment decisions and the discussion of issues or concerns. The supportive environment fostered by the multidisciplinary approach was reported to have had other associated benefits for the individual clinicians including reduced stress and feelings of enhanced professional satisfaction. Other positive personal impacts reported by the clinicians included improved knowledge, greater understanding of the complexities of breast cancer treatment and improved relationships with the women with breast cancer to whom they were providing treatment. The main issue for individual clinicians in terms of personal impact related to the further demands that the implementation of the strategies had placed on their time.

All clinicians who were aware of the strategies that had been implemented within their collaboration indicated that the implementation of the multidisciplinary strategies had been worthwhile. However, just over one-third of these clinicians also acknowledged that the implementation of the strategies was difficult. The difficulties associated with the implementation of the strategies were related to three main issues. Firstly, the practical issues involved in establishing the strategies, such as finding a suitable venue and time for the meetings; secondly, the political issues involved in gaining support from all team members; and thirdly, staffing issues, such as not having sufficient oncology staff at a particular site. The advice proposed by the clinicians to other groups who might be considering implementing multidisciplinary strategies in the future tended to reflect these issues. Practical tips about the timing of the meetings and ways of encouraging all team members to attend were often provided. Others emphasised the importance of the characteristics of the team leader or Chair, with many clinicians indicating that this had a major impact upon the willingness of other team members. This suggestion is validated by findings from the National Observational Study of Multidisciplinary Care that followed the Demonstration Project (see Chapter 14). The other key piece of advice to other groups related to ensuring that all team members were involved in the process of implementing change and fostering MDC, an aspect that was often enhanced by the enthusiasm of team members.
The Demonstration Project appeared to have had some important flow-on effects. Most significantly, a number of clinicians reported that their facility was now considering, or in the case of some sites in Collaboration 2 already had commenced, the implementation of similar multidisciplinary strategies for the treatment of patients with other types of cancer (see also Chapter 7). This finding provides further evidence of the perceived benefits of the multidisciplinary approach by the clinicians involved. The perception that MDC is a valuable and worthwhile approach to the care of women with breast cancer, and for patients with other cancers, was similarly evident in the general comments provided by many of the clinicians.

11.4.2 Methodological considerations

Several methodological issues associated with the sampling for the acceptability questionnaire should be considered when interpreting the data. The original aim was to interview a representative of each ‘core’ discipline from each site within each of the collaborations. However, due to changes in staff during the course of the Project and the exclusion of those respondents who had not practised at the collaboration for the duration of the Project, it was not possible to obtain a representative of each discipline from each site. For sites where there were a number of changes in staff between the commencement and conclusion of the Project, the number of clinicians who were eligible to complete the questionnaire was reduced. This means that some sites had a greater representation than others. In addition, it should be noted that the number of respondents was greatest for Collaboration 3. Thus, the overall results may tend to over-represent the views of clinicians from this collaboration.

11.4.3 Summary

- The majority of clinicians from all three collaborations agreed that the MDC strategies implemented at their facility had:
  - made it easier to provide appropriate care to women with breast cancer
  - improved care for women with breast cancer
  - enhanced communication between clinicians within their facility.

- The implementation of MDC strategies was considered worthwhile and was expected to be maintained after the Project was finished.
- The reported flow-on effects of the Project and general comments of the clinicians further support the perceived benefits of the multidisciplinary approach.

- The demands placed on individuals’ time by meeting attendance and organisation were viewed as a possible barrier to the implementation of MDC strategies.

To conclude, the results from the Acceptability Questionnaire suggest that the implementation of MDC strategies, based on the *Principles of Multidisciplinary Care*, was acceptable to clinicians within the range of Australian health-care contexts. In addition, the implementation of such strategies was believed to have had positive benefits both in terms of enhancing the provision of appropriate care for women with breast cancer and by encouraging greater communication between those involved in providing such care.
12. Log sheet data

12.1 Aims

Purpose-designed activity log sheets were developed by the National Breast Cancer Centre to provide a record of:

- all case conference meetings held at each site, including attendee numbers, duration of meeting and cases discussed (de-identified)
- all cases of women with breast cancer (de-identified) treated at the collaborating sites during the Project
- all professional development activities held at each site, including information about attendee numbers and duration of meeting.

The log sheets provided information regarding the effect of the nominated strategies on MDC activities at each of the collaborations, and were used to estimate the financial cost of implementing these strategies (see Chapter 13).

12.2 Method

Four separate log sheets were used (see Appendix XII). A nominated coordinator at each site was required to complete the log sheets throughout the three phases of the Project: start-up (8 months); implementation (7 months); and post-implementation (6 months). Completed sheets were forwarded to the National Breast Cancer Centre at regular intervals, where the information was entered onto a spreadsheet for subsequent analysis. The four log sheets are described below.
12.2.1 Log of all new cases of breast cancer

The ‘All new cases of breast cancer’ log sheet was used to record all cases of women newly diagnosed with breast cancer who underwent treatment at each site over the course of the Project. Details collected for each case included a case identification code, the hospital or unit where the woman was initially treated, the type of breast cancer (in situ, early, advanced or recurrent disease) and whether the case was presented for discussion at a case conference meeting before or after initial surgery. Collaborations were asked to complete this log on a monthly basis at each of their participating sites.

12.2.2 Log of cases not presented at case conference

The ‘Cases not presented’ log sheet was used to record all cases of women diagnosed with breast cancer who underwent treatment at a site and whose case was not discussed at a case conference. Details collected included a case identification code, disease status, the discipline of the lead clinician for the case, and an indication of whether the woman’s treatment plan was based on:

- the availability of an agreed protocol for the treatment of women with this type of breast cancer
- the decision of an individual clinician
- a collaborative decision, but not at a case conference.

The collaborations were asked to complete this log on a monthly basis at each of their participating sites.

12.2.3 Case conference log

The ‘Case conference’ log sheet was used to record details regarding organisation, attendance, cases presented and associated costs for each case conference meeting.
• Organisation details included the date and start/finish times of the meeting, as well as brief comments regarding any difficulties encountered in relation to scheduling the meeting, attendance or presentation of cases.

• Attendance details recorded for all clinicians (including those from other sites) included the name code and discipline, primary hospital site, start/finish times, and whether attendance was in person or by video-/teleconference.

• Details of cases of women with breast cancer presented at the meeting included a case identification code, disease status, name and discipline code of the presenting clinician and all clinicians who contributed to the discussion, availability of radiology and pathology results, reason for presentation and whether a treatment plan was recorded.

• Recorded costs associated with hosting the meeting included the purchase of capital equipment, video-/teleconference expenses, other telephone and facsimile costs, room and equipment hire, travel and accommodation for clinicians who had travelled specifically to attend the meeting, stationery and any other associated expenses.

The ‘host’ site was asked to complete the log sheet during and immediately following each meeting, with a different sheet used for each meeting.

12.2.4 Multidisciplinary educational and other activities log

The ‘Educational activities’ log sheet was used to record details of breast cancer seminars, presentations, workshops and other professional development activities attended by a multidisciplinary group during the course of the Project. Details recorded included the date/time, nature, aims and objectives of the activity, outcomes and any associated costs. Attendee details recorded included name code and discipline, primary hospital site, and whether attendance was in person or via video-/teleconference. The ‘host’ site was asked to complete the log sheet during and immediately following each activity, with a different sheet used for each activity.
12.3 Results

12.3.1 Completion rates

A new ‘Case conference’ and ‘Educational activity’ log sheet was completed as a meeting or relevant activity occurred. It is assumed that the number of log sheets received represents the number of meetings or activities held.

The ‘All new cases of breast cancer’ and ‘Cases not presented’ log sheets were required to be completed on a monthly basis over the entire 21-month timeframe of the Project, and the number of completed sheets received gives an indication of the completion rates for each of the collaborations. There were some delays in the regular completion of the ‘All new cases of breast cancer’ log sheets, with many sites not providing completed sheets until well into the start-up phase. Moreover, completion of these log sheets by some of the smaller or rural sites was often sporadic. Therefore, the overall completion rates for the ‘All new cases of breast cancer’ logs varied within each of the collaborations as outlined below:

- at Collaboration 1, the highest completion rate was 95% (n = 20; Site a), while the lowest was 57% (n = 12; Site c)
- at Collaboration 2, the highest completion rate was 86% (n = 18; Site a) whereas two of the smaller participating sites (Sites d & e) did not complete any of these log sheets
- at Collaboration 3, one of the rural sites had a completion rate of 100% (n = 21; Site b), while the large urban site returned 76% (n = 16; Site a) and the other rural site returned only 10% (n = 2; Site c) of the log sheets.

12.3.2 Cases of breast cancer

Over the duration of the Project, a total of 1176 cases of women with breast cancer were recorded on the ‘All new cases’ log sheets across the three collaborations. However, this number does not accurately reflect the number of ‘new’ cases: some cases were recorded on more than one occasion either during different months at the same site or at different sites.
within the collaboration. Once this is accounted for, the number of new patients recorded is 1113. Results from the ‘Case conference’ log sheets indicate that a total of 967 cases were presented at case conference meetings. Again, some cases were recorded on more than one occasion at the same site and once this is accounted for, the number of patients recorded at case conference was 775. A review of the ‘Cases not presented’ log sheets reveals that a total of 276 cases were not discussed at case conference meetings. Once duplicate cases have been removed, the number of patients whose cases were not discussed is 251. The discrepancy of 87 patients between the ‘All new cases’ log sheets and the ‘Cases presented’ and ‘Cases not presented’ log sheets is likely to be due to an incomplete data set for the ‘Case conference’ and ‘Cases not presented’ log sheets.

These data indicate that, of the 1176 ‘new’ cases of breast cancer treated within the collaborations, about 83% were presented at a case conference meeting, and of the 775 new patients with breast cancer treated, approximately 70% were discussed at a case conference meeting.

This chapter will focus on the cases presented rather than patients presented, as this provides a more accurate reflection of the workload of the multidisciplinary teams.

### 12.3.3 Case conference meetings

The number of case conference meetings and the number of cases presented at each meeting over the three phases of the Project are shown for each of the collaborations in Table 12.1.

- At Collaboration 1, a large increase in the number of meetings held was seen over the course of the Project, from less than one meeting per month at start-up (n = 2) to 3.8 meetings per month at post-implementation (n = 23). Meetings occurred at two sites, with the majority at the urban site (Site a). The total number of cases presented during each phase of the Project increased with the number of meetings. However, the average number of cases presented per meeting also increased, from 2 cases at start-up to 2.9 cases at post-implementation.

- At Collaboration 2, an increase in the total number of meetings was seen over the course of the Project, from 3.9 meetings at start-up (n = 31) to 7.2 meetings per month at post-implementation (n = 43). The higher number of meetings compared with the other two collaborations reflects the fact that meetings occurred at three
sites. Of particular note, was the fact that the number of meetings at Site b increased from <1 per month (n = 3) at start-up to 2.3 per month (n = 14) at post-implementation. The average number of cases presented per meeting was higher than for Collaboration 1 but still increased over the course of the Project, from 3.5 at start-up to 4.6 at post-implementation.

- At Collaboration 3, the number of meetings remained stable over the course of the Project, ranging from 3.0–3.5 meetings per month (n = 20–25) at each phase. Meetings at Collaboration 3 occurred at only one urban site (Site a). The average number of cases presented at start-up was the highest for all collaborations at 4.1 cases per meeting, and a small increase was seen over the course of the Project, with 4.5 cases presented per meeting at post-implementation.

### 12.3.4 Types of breast cancer cases presented

The types of breast cancer cases presented at the multidisciplinary case conferences in total and by collaboration are shown in Table 12.2. While early breast cancer tended to be the main type of case presented across all phases of the Project, other types of breast cancer, including in situ, advanced and recurrent disease, were also discussed. Differences in the mix of cases presented were seen between and within each of the collaborations at different stages of the Project. At all collaborations, a decrease was seen between start-up and post-implementation in the number of cases of in situ disease that were discussed, while the number of cases of early breast cancer discussed increased. By post-implementation at Collaborations 1 and 3, early breast cancer represented 81% and 90%, respectively, of all cases presented. At Collaboration 2, a high level of 'no status recorded' entries meant that numbers for each type of breast cancer were lower than for the other two collaborations. The number of cases of advanced breast cancer discussed was also higher at Collaboration 2 across all phases of the Project than for the other two collaborations.

### 12.3.5 Evidence of a multidisciplinary approach

**Attendance at case conferences**

Representation of the six ‘core’ disciplines at case conference meetings for each of the collaborations at each phase of the Project is shown in Table 12.3.
**Collaboration 1**

Neither of the two meetings held at Site a during start-up at Collaboration 1 was attended by representatives from all six ‘core’ disciplines. However, the majority of the implementation and post-implementation meetings held at Site a did involve representatives from all six ‘core’ disciplines, with surgeons, radiologists, pathologists and supportive care professionals always represented, and radiation oncologists and medical oncologists usually in attendance. These meetings often involved three or more surgeons, and at least two radiologists, pathologists and supportive care professionals.

At Site c meetings, at least one surgeon and one radiologist was always present, and a pathologist and supportive care professional was sometimes present. No medical or radiation oncologists attended during implementation or post-implementation.

General practitioners frequently attended the meetings held within Collaboration 1, with representation at all Site c meetings and at least half of the implementation and post-implementation meetings at Site a.

**Collaboration 2**

Some changes in the mix of disciplines attending Collaboration 2 meetings were seen over time. Meetings at Site a were regularly attended by surgeons, pathologists and radiation oncologists, while medical oncologists attended around half of the meetings. During start-up and implementation, no meetings were attended by a radiologist. However, during post-implementation, at least one radiologist attended over 70% of the meetings. Attendance by a supportive care professional increased from 11% of meetings at start-up to 24% of meetings at post-implementation.

During start-up, Site b meetings were only attended by surgeons, radiologists and pathologists. However, by post-implementation radiation oncologists attended almost 80% of meetings. Medical oncologists and supportive care professionals were occasionally represented during implementation and post-implementation.

At Site c, two surgeons, two pathologists and a radiation oncologist usually attended the case conferences across all phases. Attendance by a medical oncologist increased from no attendees at start-up to attendance at every meeting during post-implementation. Representation by supportive care professionals increased from 11% of meetings at start-up to 38% at post-
implementation. Attendance by radiologists was low during start-up, and no radiologists attended any meetings at Site c during implementation or post-implementation.

General practitioners rarely attended the case conference meetings within Collaboration 2, with only one general practitioner attending a meeting at Site c during post-implementation.

**Collaboration 3**

Representation by the six ‘core’ disciplines at the Collaboration 3 meetings held at Site a tended to be high, with most disciplines represented at 70% or more of the meetings, the main exception being radiologists whose attendance declined over the course of the Project.

Attendance by pathologists and supportive care professionals at Collaboration 3 meetings increased throughout the Project, and it is noteworthy that by post-implementation at least one supportive care professional was present at every meeting, compared with an attendance rate of 64% at start-up. Collaboration 3 meetings were the only ones attended by clinical psychologists.

No general practitioners attended any of the Collaboration 3 meetings.

**Attendance at case conferences by ‘non-core’ specialists**

In addition to the ‘core’ team, case conference attendees included professionals from other disciplines providing specialist services for women with breast cancer. The involvement of other specialists varied by collaboration and by site. Specialists included breast physicians, palliative care professionals, nurse counsellors, physiotherapists, plastic surgeons, occupational therapists, oncology nurses and genetic counsellors. Other occasional attendees included data managers, administrators, staff from BreastScreen Australia, health promotion officers and medical students.

**Collaboration 1**

‘Non-core’ specialists rarely attended case conference meetings at Site a, with representation at only three meetings during implementation. At Site c, there was an increase in attendance by ‘non-core’ specialists over time. No ‘non-core’ specialists attended the two meetings held during start-up, but all meetings during implementation and post-implementation were attended by a physiotherapist, palliative care specialist or oncology nurse.
Collaboration 2

Meetings at Site a were occasionally attended by plastic surgeons, occupational therapists and physiotherapists during both start-up and implementation. However attendance by these ‘non-core’ specialists did not occur during post-implementation. In contrast, representation by nurses at the Site a meetings increased over time, as did representation by breast physicians, rising from 0% during start-up and implementation to 62% during post-implementation. At Site b, attendance by ‘non-core’ specialists also increased over time, with oncology nurses and breast physicians represented at all meetings during post-implementation. Little change over time was seen within Site c, with meetings regularly attended by oncology nurses and occasionally by palliative care specialists and breast physicians.

Collaboration 3

Across all phases of the Project, all Site a meetings were attended by oncology nurses, with a slight increase in the number of nurses attending during the implementation phase. Other ‘non-core’ specialists attending the meetings were hereditary counsellors, represented at 64% of meetings during start-up, over 100% of meetings during implementation and 95% of meetings during post-implementation.

Of note, only Collaboration 3 meetings were attended by genetic counsellors.

Case discussion at team meetings

The proportion of cases presented for discussion by clinicians from different disciplines is shown in Table 12.4, both by collaboration and by site. This table also shows which disciplines contributed to case discussion at the meetings.

Collaboration 1

While the majority of cases at Collaboration 1 meetings were presented by surgeons, across all phases of the Project, some change was seen with time. Surgeons presented all four cases during the two meetings held during start-up, but during implementation and post-implementation, cases were sometimes presented by a radiation oncologist, radiologist, supportive care professional and general practitioner. Similar results were observed in relation to the presentation of cases by site.

It appears that little case discussion took place during the two meetings held during start-up. However, during implementation and post-implementation, evidence of case discussion was
apparent. This generally involved the surgeons, radiologists and pathologists, with increasing contributions from medical and radiation oncologists. Recorded input from supportive care professionals, general practitioners and others was also apparent. An examination of the findings by site revealed that within Site a, there was a general increase over time in contributions to case discussions by pathologists, medical and radiation oncologists. For Site c, contributions from radiologists and supportive care professionals showed a strong increase over time.

Collaboration 2

At Collaboration 2, a surgeon or pathologist presented 90% of cases during start-up. During implementation, the proportion of cases presented by surgeons had declined and the proportion presented by breast physicians and other members of the breast care team, including nurses and medical students, had increased. By post-implementation, responsibility for presentation of cases appeared to be more evenly distributed across the disciplines. However, a review of the findings by site, revealed that while there was a general shift in responsibility for the presentation of cases over time, the disciplines involved varied between the sites. For instance, by post-implementation at Site a, presentation of cases tended to be shared between pathologists, radiologists, medical oncologists and surgeons. In contrast, at Site b, the majority of case presentations were undertaken by breast physicians, with remaining cases presented by pathologists, surgeons and others. At Site c, case presentation remained the primary responsibility of pathologists and surgeons, with the occasional case presented by a breast physician.

The log sheets also revealed that at Collaboration 2 case presentation was repeatedly shared between two or more team members. At Site a, the proportion of shared presentations rose from 3% at start-up to 42% during implementation and 63% during post-implementation. While most of the shared case presentations at Site a tended to involve surgeons and pathologists, during post-implementation, pathologists were also regularly co-presenting cases with radiologists and medical oncologists. The proportion of shared presentations also rose dramatically at Site c, with an increase from 11% at start-up to 90% during implementation and post-implementation. In Site c, surgeons and pathologists contributed the great majority of shared case presentations.

Contributors to case discussions at Collaboration 2 tended mainly to be surgeons, pathologists and radiation oncologists across all phases of the Project, with occasional contributions by medical oncologists, radiologists, breast physicians and others, such as plastic surgeons, nurses,
physiotherapists and counsellors. Throughout all phases of the Project, there was no recorded contribution to case discussions by supportive care professionals. Similar results were observed within the sites, with Site b showing an increase over time in contributions from radiation oncologists and Site c showing an increase in contributions from medical oncologists and breast physicians.

Collaboration 3

At Collaboration 3 meetings, which were all held at Site a, little change was seen in who presented cases, with surgeons, medical and radiation oncologists presenting all but one case over the duration of the Project.

An even distribution of contributors to case discussions was seen, with radiation oncologists, surgeons, medical oncologists, pathologists and radiologists all involved. A slight increase was observed over time in the proportion of contributions by pathologists. Recorded contributions from nurses, genetic counsellors and supportive care professionals were rare.

Protocols for deciding which cases may not require team discussion

A total of 276 cases were recorded as ‘not presented’ at the case conference meetings. Of these, 241 (87%) were cases of women with early breast cancer. For these early breast cancer cases, it was reported that treatment plans were:

- decided by individual clinicians (87%)
- made in collaboration with other colleagues but not in case conference (7%)
- based on an agreed protocol for the management of women with this type of breast cancer (5%)
- data were missing in relation to treatment plan decisions for the remaining 1% (n = 2) of cases of women with early breast cancer.
Participation in meetings regardless of location

Collaboration 1

Collaboration 1 case conference meeting participants, including general practitioners, attended the meetings in person. One exception was a meeting held during the implementation phase that was attended by a rural general practitioner by teleconference. Clinicians from the local private hospitals occasionally attended the meetings held at the large regional hospital (Site a) in person (n = 7, at 4 of 36 meetings), while half of the meetings held at the rural centre (Site c) were attended by clinicians from other rural centres (n = 7, at 5 of 10 meetings).

Collaboration 2

Collaboration 2 meetings involved clinicians from a variety of sites and locations. Videoconference links were used at Site a during start-up and implementation to allow surgeons from a regional location (Site e) to join the case conference meetings (n = 16, at 14 of 65 meetings). On one occasion, a surgeon from Site e joined the meeting at Site a in person. Meetings at Site a during post-implementation were attended in person by clinicians from the local private facilities (n = 49, at 31 of 65 meetings) and from BreastScreen (n = 29, at 12 of 65 meetings), as well as clinicians and nursing staff from other sites (n = 10, at 7 of 65 meetings). Generally, staff from other sites attended the meetings in person, although on one occasion, a surgeon and nurse from Site b joined a case conference at Site a by teleconference.

The case conference meetings at Site b were infrequently attended by clinicians from other locations. The meetings at Site b that did involve other clinicians included: six meetings that were attended in person by specialists from Site a (n = 7, at 6 of 37 meetings); one involving a specialist from a city from outside of the collaboration (n = 1, at 1 of 37 meetings); and one which was attended in person by several clinicians from a remote location (Site d) (n = 3, at 1 of 37 meetings).

Meetings at Site c were frequently attended in person by clinicians, primarily surgeons and pathologists, from the local private practices (n = 129, at 28 of 31 meetings). Site c meetings were also often attended by specialists from Site a (n = 19, at 19 of 31 meetings), while clinicians from the local BreastScreen service attended occasionally (n = 14, at 13 of 31 meetings).
Collaboration 3

While a total of 70 case conference meetings were held at Site a in Collaboration 3 over the duration of the Project, none of these meetings were attended in person or via video-/teleconference by clinicians from the other two collaborative sites (Sites b and c).

Recording a treatment plan for each woman

Some data regarding treatment planning were collected via the log of cases presented. However, the collaborations were only asked to record this information after the start-up phase and not all collaborations immediately made use of the revised log sheets. Only 382 of the 967 records of cases presented across all three collaborations (40%) indicated whether a treatment plan had been recorded. Hence, the data relating to the recording of treatment plans may not be reliable. Of the records for the 382 cases for which information about treatment planning was provided, 55% (n = 209) indicated that a treatment plan had been recorded. While no information was collected regarding the recording of a treatment plan during the start-up phase, there was evidence of a change between implementation and post-implementation with an increase from 35% to 57% in the proportion of cases for which a treatment plan was recorded.

Availability of relevant results for treatment planning

The number of cases presented at case conference meetings for which relevant radiology and pathology results were available is shown in Table 12.5.

Collaboration 1

At Collaboration 1, radiology reports and films were available for over 63% of cases, and pathology reports were available for at least 75% of cases throughout all phases of the Project. Pathology slides and hormone receptor status were not available for the four cases presented during start-up, but by post-implementation were available for 75% and 36% of cases, respectively.

Collaboration 2

The availability of radiology reports and films at Collaboration 2 was considerably lower at start-up compared with the other two collaborations. However, the availability of both items increased over time. The availability of radiology reports increased from 28% at start-up to 48% at post-implementation, while the availability of radiology films increased from 17% to 54%. Pathology reports were available for 72% of cases at start-up, increasing to 82% by post-
implementation. The availability of pathology slides and hormone receptor status remained relatively stable over the course of the Project, at an average of 61% and 40% of cases, respectively.

Collaboration 3

The availability of a number of results at case conferences within Collaboration 3 appeared to increase over the duration of the Project. Radiology reports, which at start-up were only available for 44% of cases, were available for 83% of cases by post-implementation. A large increase in the availability of pathology reports was also seen over time, from 52% of cases at start-up, to 96% during post-implementation. Pathology slides were available for an average of 50% of cases over the duration of the Project, while hormone receptor status availability increased from 33% at start-up to 63% at post-implementation. In contrast, the availability of radiology films decreased from 45% at both start-up and implementation to 34% at post-implementation.

Professional development and other multidisciplinary activities

During the Project timeframe, each of the three collaborations held a number of professional development and other multidisciplinary activities, including seminars, workshops, lectures, forums, education sessions and journal clubs.

Collaboration 1

At Collaboration 1, 20 professional development activities were recorded (start-up n = 4; implementation n = 11; post-implementation n = 5). Topics presented included:

- when to consider genetic counselling and testing for breast cancer
- management of lymphoedema
- benefits of post-surgery radiotherapy
- effects of mammography screening programs
- incidence and type of breast cancer in Papua New Guinea compared to Australia
- use of hormone replacement therapy after breast cancer
needs of patients in palliative care.

Attendees included surgeons, medical and radiation oncologists, radiologists, pathologist, breast care nurse, geneticists, registrars, BreastScreen staff, nurses, dieticians, general practitioners, data managers, palliative care specialists, medical students, gastroenterologists, microbiologists and consumers. Collaboration 1 also held multidisciplinary familial cancer genetics clinics, involving medical oncologists, surgeons and genetic counsellors. A total of six genetics clinics were held over the duration of the Project (start-up n = 0, implementation n = 2, post-implementation n = 4), five at Site a and one at Site b.

Collaboration 2

Collaboration 2 reported a total of six professional development activities during the Project timeframe (start-up n = 3; implementation n = 3; post-implementation n = 0). Topics included:

- an explanation of the multidisciplinary ethos
- MDC in Sweden
- role of sentinel node biopsy
- treatment for advanced and recurrent breast cancer
- reconstruction after mastectomy.

Attendees included: surgeons, medical oncologists, radiologists, pathologists, breast care nurses, breast physicians, nurses, general practitioners, and staff from the local Cancer Council and BreastScreen.

Collaboration 3

A total of 13 professional development activities were recorded by Collaboration 3 (start-up n = 3; implementation n = 8; post-implementation n = 2). Topics included:

- tumour mapping
- MDC and the role of the breast care nurse
• preventing breast cancer

• psychosocial and informational needs of women with breast cancer

• sentinel node biopsy

• role of the breast care nurse and community support.

Attendees included surgeons, medical oncologists, radiation oncologists, geneticists, hereditary counsellors, nurses, general practitioners, medical students and community nurses.

12.4 Discussion

12.4.1 General findings

The log sheets provide an insight into the multidisciplinary case conference meetings that were held within each of the collaborations. It is particularly interesting to compare the changes that occurred during the Project with the different situations at each of the collaborations at baseline.

Where treatment planning meetings were already occurring at baseline, the number of meetings held over the course of the Project remained relatively stable. However, at the two collaborations where case conference meetings were not regularly held at baseline, an increase in the number of meetings was seen during the Project. By post-implementation, multidisciplinary case conference meetings were occurring regularly at all three collaborations, and while the total number of meetings varied depending on the number of participating sites, the number of meetings held at the main urban site for each of the three collaborations was consistent, at 20–21 meetings over the six-month period (ie, an average of one meeting per week).

Staff attendance at meetings changed over the course of the Project, and by post-implementation, meetings at the main urban sites were generally well attended by the ‘core’ disciplines – these being representatives from surgery, medical and radiation oncology, pathology, radiology and supportive care. Collaborative links had extended beyond the ‘core’ team, with a number of meetings attended by professionals from other disciplines providing...
specialist services for women with breast cancer, such as breast physicians, physiotherapists, genetic counsellors, occupational therapists, nurses and palliative care specialists.

While the total number of cases presented during each phase of the Project varied with the number of meetings held, there were also differences between collaborations in the average number of cases discussed per meeting. Interestingly, where meetings were not regularly held at baseline, the average number of cases discussed per meeting increased over the course of the Project and it is likely that this increase will continue with time.

Some change in the types of cases presented at case conference meetings was also seen over the course of the Project, with an increase in the number of cases of early breast cancer and an emphasis on in situ disease at start-up, which decreased with time. This reflects the fact that some collaborations deliberately chose to commence case conference meetings during start-up that focussed around the discussion of in situ disease as a controversial case management issue designed to encourage clinicians to attend meetings.

The availability of a number of relevant reports at case conference meetings increased over the course of the Project. By post-implementation, radiology reports were available for over 75% of cases at two collaborations, while pathology reports were available for over 75% of cases in all three collaborations. The availability of information regarding hormone receptor status tended to be lower than for other reports, although an increase in availability was seen at Collaboration 3 over time, reaching 63% by post-implementation.

The frequency of educational meetings held during the course of the Project did not appear to change with time. However, the fact that all three collaborations held educational seminars and workshops can be viewed as a contributing factor to the multidisciplinary approach taken.

12.4.2 Collaboration-specific changes

A number of changes occurred within the individual collaborations over the duration of the Project that may be attributed to the specific MDC strategies implemented.

Collaboration 1

Site a at Collaboration 1 provides an interesting example of how multidisciplinary meetings may develop over time. During start-up, only two case conference meetings were held, there was little discussion of the cases presented and not all core team members were in attendance.
Regular meetings were established during implementation and these meetings were generally well attended by ‘core’ team members. However, case discussion tended to be limited to surgeons, radiologists and pathologists. During post-implementation, regular meetings continued and representation remained high for most disciplines. General practitioners were also in regular attendance and other team members, including radiologists, supportive care professionals and general practitioners, were now more actively involved in case discussion. The success of Collaboration 1 in attracting general practitioners to meetings was the result of focus meetings held with general practitioners during start-up to encourage participation. General practitioners were identified and invited to attend meetings through the local Divisions of General Practice and, where attendance was not possible, it was the responsibility of other attending general practitioners to inform their colleagues of the outcomes of the meeting.

Collaboration 2

Case conference meetings at Collaboration 2 also appeared to change over the course of the Project, with increases seen in both the number of meetings and cases presented. In particular, a change was apparent in the disciplines involved in presenting cases at the meetings, suggesting a shift in the dynamics of the team, away from a centralised communication pattern, where one or two members direct communication, to a decentralised pattern that is more equitable to all team members.

Collaboration 2 was the only collaboration to successfully establish regular communication links via video-/teleconference between larger sites and those in rural or remote areas during the Project. While no videoconference links between the sites were reported during post-implementation, an examination of the Site a log sheets revealed that the time of day when case conference meetings were held changed shortly into the post-implementation phase, from around midday to early morning. It may be that the surgeons in the remote site were not able to join the meetings at this time. Further investigation would be required to confirm whether this was the reason that videoconference links did not occur during this phase.

Collaboration 3

At Collaboration 3, regular case conference meetings dedicated to treatment planning were already established prior to the Project. It is therefore not surprising that the number of case conferences held, and average number of cases discussed, remained relatively stable across the three phases of the Project.
One of the key strategies implemented by Collaboration 3 was the appointment of a breast care nurse to the team. In line with this strategy, an increase in attendance at case conference meetings by supportive care professionals was seen over time. This increase was not only due to attendance by the breast care nurse – a clinical psychologist was also in attendance at some meetings, suggesting that a greater emphasis was placed on psychosocial issues in general following the implementation of the MDC strategies.

Little change was seen over time at Collaboration 3 case conference meetings in terms of who presented cases and contributed to case discussion. While this was not necessarily surprising, given that the case conference meetings, and therefore group dynamics, were already established at the start of the Project, it was anticipated that the contribution of supportive care professionals to the case discussion would have increased over time. However, reported input from supportive care professionals was extremely rare across all phases of the Project (1% or less), despite the increased representation of supportive care professionals at the meetings. Reports from the collaboration indicate that the breast care nurse had an important role in improving continuity of care for women with breast cancer (see Chapter 10). However, it is possible that the nurse did not actively contribute to treatment planning decisions at the case conference meetings and therefore her input was not recorded.

12.4.3 Methodological considerations

The information obtained via the activity log sheets provides an insight into the multidisciplinary activities, in particular the multidisciplinary case conferences that were held at the collaborations during the Project. However, there are several methodological issues that should be considered when reviewing the findings.

The log sheets were self-reported, and completed by nominated coordinators from the various sites within the collaborations. The National Breast Cancer Centre could not check the accuracy of the information recorded and it is possible that some activities that occurred were not recorded. Similarly, some ‘new’ cases of women with breast cancer were recorded on more than one occasion, while others may not have been documented at all. This is supported by the discrepancy between the number of new cases of breast cancer recorded and the number of cases recorded on ‘Case conference’ log sheets and the ‘Cases not presented’ log sheets. Despite the provision of training and instruction regarding the completion of the sheets, it is also possible that there were inconsistencies between sites and collaborations regarding how the information was recorded.
The completion rates for the ‘All new cases of breast cancer’ log sheets varied considerably between the sites. This variability may reflect the fact that many of the smaller or more regional sites saw fewer cases of women with breast cancer or had a lower level of involvement in some of the multidisciplinary activities. For example, at Collaboration 2, activity logs were only completed at those sites where multidisciplinary case conference meetings were held; no log sheets were received from the two remote sites participating in the Project. While the lack of log sheets may accurately reflect the fact that no meetings were held at the sites, it is likely that data in relation to the number of new cases of breast cancer treated are missing.

### 12.4.4 Areas for future improvement

The log sheet results highlight a number of areas where further improvements to the MDC process could be made. While 477 cases of women with early breast cancer were considered at the case conference meetings, 241 cases of early breast cancer were not presented. For 87% of the cases of early breast cancer not presented at the meetings, treatment planning decisions were made by an individual clinician rather than according to an agreed local protocol.

While considerable changes were seen over time in terms of the mix of disciplines in attendance at the meetings, additional strategies may be needed to ensure that all multidisciplinary meetings are attended by at least one representative of each ‘core’ discipline, regardless of where the meeting is held. Although multidisciplinary meetings occurred at some regional sites, there remained a lack of representation by all ‘core’ team members at these meetings. Further work is needed to ensure all women with breast cancer receive the same level of treatment planning, regardless of where they live.

Although discussion is generally shared between team members once meetings are established, the reported contribution of supportive care professionals remains relatively low – with contributions to ≤6% of all cases discussed across all collaborations and phases, even at many sites where supportive care professionals were regularly represented. The notable exception was Site c in Collaboration 1, where supportive care professionals were contributing to 46% of case discussions by post-implementation. Further strategies may be needed to promote the input of these important members of the team in case discussions.

Within two of the collaborations, information regarding hormone receptor status was available for fewer than 50% of cases over the duration of the Project, while in the third it reached 63% by post-implementation. This means that for at least one-third to one-half of cases discussed,
hormone receptor status was unknown. Given the importance of hormone receptor status for treatment planning, this is clearly an area for further improvement.

12.4.5 Summary

The log sheet findings provide evidence of an improvement in the multidisciplinary approach taken over the duration of the Project.

By the post-implementation phase:

- the number of treatment planning meetings at collaborations where previously meetings had been infrequent or had not occurred increased, and treatment planning meetings were being held regularly
- the average number of cases discussed per meeting at collaborations where previously meetings had been infrequent or had not occurred increased
- representation at meetings by ‘core’ team members increased, particularly at the main urban sites
- the availability of radiology and pathology results at meetings increased
- contribution of different core team members to case discussions increased.

The greatest changes recorded via the log sheets occurred in those collaborations where multidisciplinary case conference meetings were newly established, but some improvements were also seen at Collaboration 3 where regular case conference meetings were already occurring at baseline.

Areas identified for further improvement in the multidisciplinary approach taken included:

- involvement of all ‘core’ disciplines at case conferences in regional locations
- increased contribution to case discussion by supportive care professionals
- use of an agreed protocol for treatment planning when cases are not presented at case conference
• increased availability of information regarding hormone receptor status for cases presented.
Table 12.1 Number of multidisciplinary case conference meetings, and number of cases presented, by site, during each phase of the Project

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Site a</th>
<th>Site c</th>
<th>Total</th>
<th>Average per month</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Start-up (8 months)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meetings</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Cases</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Ave. case/meeting</td>
<td>2</td>
<td>–</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Implementation (7 months)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meetings</td>
<td>14</td>
<td>7</td>
<td>21</td>
<td>2.7</td>
</tr>
<tr>
<td>Cases</td>
<td>42</td>
<td>14</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Ave. case/meeting</td>
<td>3</td>
<td>2</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td><strong>Post-implementation (6 months)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meetings</td>
<td>20</td>
<td>3</td>
<td>23</td>
<td>2.9</td>
</tr>
<tr>
<td>Cases</td>
<td>62</td>
<td>5</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Ave. case/meeting</td>
<td>3.1</td>
<td>1.7</td>
<td>3.1</td>
<td></td>
</tr>
</tbody>
</table>

Note: numbers presented represent the total numbers recorded on case conference log sheets and include cases that were recorded on more than one occasion.
Table 12.2 Type of breast cancer cases presented at multidisciplinary case conference meetings across each phase of the Project by collaboration

<table>
<thead>
<tr>
<th>Type of breast cancer</th>
<th>Start-up (8 months)</th>
<th>Implementation (7 months)</th>
<th>Post-implementation (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td><strong>Collaboration 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>in situ</em></td>
<td>3</td>
<td>75%</td>
<td>7</td>
</tr>
<tr>
<td>Early</td>
<td>1</td>
<td>25%</td>
<td>32</td>
</tr>
<tr>
<td>Advanced</td>
<td>0</td>
<td>0%</td>
<td>11</td>
</tr>
<tr>
<td>Recurrent</td>
<td>0</td>
<td>0%</td>
<td>3</td>
</tr>
<tr>
<td>No status recorded</td>
<td>0</td>
<td>0%</td>
<td>3</td>
</tr>
<tr>
<td><strong>Collaboration 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>in situ</em></td>
<td>23</td>
<td>21%</td>
<td>16</td>
</tr>
<tr>
<td>Early</td>
<td>28</td>
<td>26%</td>
<td>70</td>
</tr>
<tr>
<td>Advanced</td>
<td>14</td>
<td>13%</td>
<td>23</td>
</tr>
<tr>
<td>Recurrent</td>
<td>4</td>
<td>4%</td>
<td>6</td>
</tr>
<tr>
<td>No status recorded</td>
<td>40</td>
<td>36%</td>
<td>116</td>
</tr>
<tr>
<td><strong>Collaboration 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>in situ</em></td>
<td>13</td>
<td>12%</td>
<td>11</td>
</tr>
<tr>
<td>Early</td>
<td>71</td>
<td>66%</td>
<td>79</td>
</tr>
<tr>
<td>Advanced</td>
<td>13</td>
<td>12%</td>
<td>7</td>
</tr>
<tr>
<td>Recurrent</td>
<td>5</td>
<td>5%</td>
<td>6</td>
</tr>
<tr>
<td>No status recorded</td>
<td>1</td>
<td>5%</td>
<td>7</td>
</tr>
</tbody>
</table>

Note: numbers presented represent the total numbers recorded on case conference log sheets and include cases that were recorded on more than one occasion.
Table 12.3 Representation of disciplines at case conference meetings (and average number of clinicians from each discipline) during each phase of the Project by sites within each collaboration

<table>
<thead>
<tr>
<th>Collaboration 1</th>
<th>Start-up (8 months)</th>
<th>Implementation (7 months)</th>
<th>Post-implementation (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Site a (n = 2)</td>
<td>Site a (n = 14)</td>
<td>Site c (n = 7)</td>
</tr>
<tr>
<td>Surgery</td>
<td>100% (4)</td>
<td>100% (3.4)</td>
<td>100% (2)</td>
</tr>
<tr>
<td>Radiology</td>
<td>0% (0)</td>
<td>100% (2.4)</td>
<td>100% (1)</td>
</tr>
<tr>
<td>Pathology</td>
<td>50% (2)</td>
<td>100% (2.5)</td>
<td>86% (0.9)</td>
</tr>
<tr>
<td>Medical oncology</td>
<td>100% (1.5)</td>
<td>71% (1.1)</td>
<td>65% (0.8)</td>
</tr>
<tr>
<td>Radiation oncology</td>
<td>50% (0.5)</td>
<td>93% (1.2)</td>
<td>95% (1.2)</td>
</tr>
<tr>
<td>Supportive care</td>
<td>50% (1)</td>
<td>100% (2.6)</td>
<td>100% (1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Collaboration 2</th>
<th>Site a (n = 18)</th>
<th>Site b (n = 3)</th>
<th>Site c (n = 10)</th>
<th>Site a (n = 26)</th>
<th>Site b (n = 20)</th>
<th>Site c (n = 13)</th>
<th>Site a (n = 21)</th>
<th>Site b (n = 14)</th>
<th>Site c (n = 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery</td>
<td>94% (2)</td>
<td>67% (1.3)</td>
<td>100% (2.9)</td>
<td>100% (2.8)</td>
<td>95% (1.8)</td>
<td>100% (2.3)</td>
<td>90% (1.9)</td>
<td>100% (2.9)</td>
<td>88% (2)</td>
</tr>
<tr>
<td>Radiology</td>
<td>0% (0)</td>
<td>100% (2.7)</td>
<td>10% (0.1)</td>
<td>0% (0)</td>
<td>75% (1)</td>
<td>0% (0.0)</td>
<td>71% (1.6)</td>
<td>64% (1)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>Pathology</td>
<td>78% (0.8)</td>
<td>100% (3)</td>
<td>90% (2.1)</td>
<td>88% (1.2)</td>
<td>90% (1.5)</td>
<td>100% (2.7)</td>
<td>100% (3)</td>
<td>86% (1.4)</td>
<td>88% (2.1)</td>
</tr>
<tr>
<td>Medical oncology</td>
<td>56% (0.6)</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td>31% (0.3)</td>
<td>10% (0.1)</td>
<td>77% (0.8)</td>
<td>52% (0.5)</td>
<td>7% (0.1)</td>
<td>100% (1)</td>
</tr>
<tr>
<td>Radiation oncology</td>
<td>89% (1.4)</td>
<td>0% (0)</td>
<td>70% (0.7)</td>
<td>100% (2.5)</td>
<td>55% (0.6)</td>
<td>69% (0.8)</td>
<td>100% (2)</td>
<td>79% (0.8)</td>
<td>63% (0.6)</td>
</tr>
<tr>
<td>Supportive care</td>
<td>11% (0.1)</td>
<td>0% (0)</td>
<td>11% (0.1)</td>
<td>15% (0.2)</td>
<td>10% (0.1)</td>
<td>54% (0.6)</td>
<td>24% (0.2)</td>
<td>0% (0)</td>
<td>38% (0.4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Collaboration 3</th>
<th>Site a (n = 25)</th>
<th>Site a (n = 25)</th>
<th>Site a (n = 20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery</td>
<td>100% (2.2)</td>
<td>100% (2.1)</td>
<td>100% (2.1)</td>
</tr>
<tr>
<td>Radiology</td>
<td>76% (0.8)</td>
<td>80% (0.8)</td>
<td>40% (0.4)</td>
</tr>
<tr>
<td>Pathology</td>
<td>72% (0.7)</td>
<td>80% (0.8)</td>
<td>95% (1)</td>
</tr>
<tr>
<td>Medical oncology</td>
<td>100% (2.6)</td>
<td>100% (2.4)</td>
<td>100% (2.2)</td>
</tr>
<tr>
<td>Radiation oncology</td>
<td>92% (1.6)</td>
<td>96% (1.7)</td>
<td>100% (1.7)</td>
</tr>
<tr>
<td>Supportive care</td>
<td>64% (0.8)</td>
<td>96% (1.2)</td>
<td>100% (1.4)</td>
</tr>
</tbody>
</table>

* within this table a supportive care professional may be a breast care nurse, psychologist, psychiatrist or social worker. It does not include nurses, oncology nurses or counsellors.
<table>
<thead>
<tr>
<th>Collab 1</th>
<th>Start-up (8 months)</th>
<th>Implementation (7 months)</th>
<th>Post-implementation (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% presenters</td>
<td>% contributors</td>
<td>% presenters</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Site a</td>
<td>Site c</td>
</tr>
<tr>
<td>Surgery</td>
<td>100</td>
<td>100</td>
<td>–</td>
</tr>
<tr>
<td>Radiology</td>
<td>0</td>
<td>0</td>
<td>–</td>
</tr>
<tr>
<td>Pathology</td>
<td>0</td>
<td>0</td>
<td>–</td>
</tr>
<tr>
<td>Med oncology</td>
<td>0</td>
<td>0</td>
<td>–</td>
</tr>
<tr>
<td>Rad oncology</td>
<td>0</td>
<td>0</td>
<td>–</td>
</tr>
<tr>
<td>Supp care</td>
<td>0</td>
<td>0</td>
<td>–</td>
</tr>
<tr>
<td>Gen practice</td>
<td>0</td>
<td>0</td>
<td>–</td>
</tr>
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<td>Others a</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Collab 2</td>
<td>Start-up (8 months)</td>
<td>Implementation (7 months)</td>
<td>Post-implementation (6 months)</td>
</tr>
<tr>
<td></td>
<td>% presenters</td>
<td>% contributors</td>
<td>% presenters</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Site a</td>
<td>Site b</td>
</tr>
<tr>
<td>Surgery</td>
<td>55</td>
<td>46</td>
<td>0</td>
</tr>
<tr>
<td>Radiology</td>
<td>2</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Pathology</td>
<td>35</td>
<td>49</td>
<td>0</td>
</tr>
<tr>
<td>Med oncology</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Rad oncology</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Supp care</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>71</td>
</tr>
<tr>
<td>Others b</td>
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<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

a for Collaboration 1 ‘Others’ = physiotherapy; b for Collaboration 2 ‘Others’ = plastic surgery, nursing, physiotherapy, medical students, or counseling; c for Collaboration 3 ‘Others’ = nursing or hereditary counselling; d for Collaboration 3, meetings were only held at one site (Site a), therefore the results in this row reflect those for Collaboration 3 overall and for Site a; –indicates that no meetings were held at this site during this phase.
Table 12.4 Proportion of disciplines who presented cases for discussion at case conference meetings and proportion of disciplines who contributed to
discussion of cases across Project phase by collaboration and by site (cont’d)

<table>
<thead>
<tr>
<th>Collab 3&lt;sup&gt;f&lt;/sup&gt;</th>
<th>Start-up (8 months)</th>
<th>Implementation (7 months)</th>
<th>Post-implementation (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% presenters – site a</td>
<td>% contributors – site a</td>
<td>% presenters – site a</td>
</tr>
<tr>
<td>Surgery</td>
<td>57</td>
<td>19</td>
<td>57</td>
</tr>
<tr>
<td>Radiology</td>
<td>0</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Pathology</td>
<td>0</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Med oncology</td>
<td>22</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td>Rad oncology</td>
<td>19</td>
<td>29</td>
<td>17</td>
</tr>
<tr>
<td>Supp Care</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Others&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

<sup>a</sup> for Collaboration 1 'Others' = physiotherapy<sup>b</sup> for Collaboration 2 'Others' = plastic surgery, nursing, physiotherapy, medical students, or counselling<sup>c</sup> for Collaboration 3 'Others' = nursing or hereditary counselling<sup>f</sup> for Collaboration 3, meetings were only held at one site (Site a), therefore the results in this row reflect those for Collaboration 3 overall and for Site a<sup>–</sup>indicates that no meetings were held at this site during this phase
Table 12.5 Proportion of cases presented at multidisciplinary case conferences where relevant reports were available, during each phase of the Project by collaboration

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Start-up (8 months)</th>
<th>Implementation (7 months)</th>
<th>Post-implementation (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collaboration 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiology – report</td>
<td>100</td>
<td>69</td>
<td>78</td>
</tr>
<tr>
<td>– films</td>
<td>75</td>
<td>63</td>
<td>73</td>
</tr>
<tr>
<td>Pathology – report</td>
<td>75</td>
<td>83</td>
<td>76</td>
</tr>
<tr>
<td>– slides</td>
<td>0</td>
<td>64</td>
<td>75</td>
</tr>
<tr>
<td>– hormone receptor status</td>
<td>0</td>
<td>46</td>
<td>36</td>
</tr>
<tr>
<td><strong>Collaboration 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiology – report</td>
<td>28</td>
<td>30</td>
<td>48</td>
</tr>
<tr>
<td>– films</td>
<td>17</td>
<td>24</td>
<td>54</td>
</tr>
<tr>
<td>Pathology – report</td>
<td>72</td>
<td>76</td>
<td>82</td>
</tr>
<tr>
<td>– slides</td>
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<td>55</td>
<td>63</td>
</tr>
<tr>
<td>– hormone receptor status</td>
<td>39</td>
<td>44</td>
<td>38</td>
</tr>
<tr>
<td><strong>Collaboration 3</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Radiology – report</td>
<td>44</td>
<td>54</td>
<td>83</td>
</tr>
<tr>
<td>– films</td>
<td>45</td>
<td>45</td>
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<td>Pathology – report</td>
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</tr>
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<td>– slides</td>
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<tr>
<td>– hormone receptor status</td>
<td>33</td>
<td>60</td>
<td>63</td>
</tr>
</tbody>
</table>
13. Costing analysis

13.1 Aims

The aim of the costing analysis was to provide indicative costs for the set-up and implementation of MDC strategies, with a focus on establishing and maintaining MDC case conference meetings. It is important to emphasise that, while the costing analysis described in this chapter provides valuable information regarding the cost of implementing MDC strategies, it is not a cost-effectiveness study. No attempt was made to forecast or quantify potential benefits to patients, clinicians or services. The costing analysis described is based on a report by M-TAG Pty Ltd, an independent health economics consultancy group.

13.2 Methods

The costing analysis was based primarily on data from the log sheets completed by each of the collaborations during each phase of the Project (see Chapter 12) and related mainly to the costs associated with case conference meetings. Additional information was obtained from budget statements produced by the collaborations and from telephone interviews with collaboration staff at the end of the Project.

13.2.1 Log sheets

The case conference and educational activity log sheets described in Chapter 12 provided a list of attendees at each case conference and educational meeting held during the three main phases of the Project (start-up, implementation and post-implementation). Attendees were identified by standard discipline code, and their attendance time at each meeting was listed, allowing a cost for their attendance to be estimated. Information supplied by the sites during the six-month period preceding start-up was used to provide an estimate of costs at baseline for comparison.

A number of additional discipline codes used by some sites could not be identified at the end of the study and have not been included in the costing analysis. These codes represent <1% of
Disciplines deliberately excluded from the analysis of the cost of case conference meetings dedicated to treatment planning included BreastScreen managers and educators, medical students, university visitors, consumers and local health executive staff, as it was assumed that these individuals were present mainly as observers. The cost of attendance by the LECs was also excluded, as in this role they did not contribute to discussions at the meeting and salaries for these individuals were captured elsewhere.

For collaborations where a breast care nurse was appointed as a specific strategy to improve MDC, the role of the breast care nurse in implementing MDC extended beyond the case conference meetings and therefore the cost cannot be captured entirely from the log sheet data. The cost associated with these breast care nurses has therefore been calculated as the pro-rated salary over the Project timeframe minus the costs associated with meeting participation.

13.2.2 Unit costs for staff attendance at meetings

The unit costs assigned to staff members from each of the six ‘core’ disciplines (surgeon, radiation oncologist, medical oncologist, pathologist, radiologist, supportive care professional) who attended multidisciplinary case conference meetings and educational activities are listed in Table 13.1. Unit costs for ‘other’ disciplines are listed in Table 13.2.

In assigning costs to each discipline, a range of unit costs was considered, including the attendance cost proposed under the Australian Medical Association (AMA) schedule, the Medical Benefits Schedule Book (MBS), the Department of Veterans Affairs (DVA) schedule and various state awards (hourly rates) for medical practitioners and other health professionals. In general, the NSW State Award for salaried medical practitioners was used, in line with the Commonwealth’s position in other economic costing processes (see ‘Manual of Resource Items and their Associated Costs’). In the case of Visiting Medical Officers (VMOs), a higher unit cost was used, sourced from the NSW Health Department, Circular 2002/42. These rates were only used when the log sheets or collaboration staff specified that a VMO was in attendance.

In deciding how to apply unit costs, the following factors were considered.

- Patients are not usually present at multidisciplinary case conferences and therefore consultation rates for hospital staff are not the most appropriate proxy. The cost to
government relates to the cost associated with employing the clinician, which is best represented by a hospital salary. Variations in total income depend on allowances and private practice rights negotiated by the clinician and do not need to be incorporated into the total cost.

- A clinical nurse consultant rate was assigned to breast care nurses, reflecting the level of responsibility and integral nature of this role in MDC strategies.

- The cost for attendance by general practitioners represents the cost to government of the general practitioner’s attendance but does not accurately reflect the opportunity cost to the general practitioner.

The unit costs listed were current up to 1/07/03. These costs were applied to all collaborations and to all phases of the Project to allow a meaningful comparison between collaborations and between baseline and subsequent costs. It is acknowledged that this unit costing method is an imperfect science, and there are likely to be exceptions to the costs presented.

### 13.2.3 Calculation of staff attendance costs

The unit costs listed in Tables 13.1 and 13.2 were applied to the log sheets for each of the collaborations. The duration of each attendee’s stay was calculated and multiplied by the relevant unit cost to provide an estimate of the cost associated with that individual’s attendance. Attendee costs were then summed to provide the total attendance cost for each of the collaborations, by phase of the Project.

### 13.2.4 Other costs

While staff attendance at meetings represented a large part of the overall cost of implementing MDC strategies, a number of other significant costs were identified by the collaborations. Some of these relate to case conference meetings (eg, room hire, equipment costs), while others are linked to other strategies implemented by the site (eg, employment of a breast care nurse) or to the overall management of the Project (eg, employment of an LEC and personal time of senior staff). Many of these costs were quantified on the log sheets or budget reports; others were described in telephone interviews with collaboration staff but did not have a cost assigned to them.
The cost items recorded were:

- capital and equipment
- room hire and catering costs
- travel and accommodation
- video-/teleconferencing
- telephone/facsimile and email costs
- stationery and advertising
- meeting organisation
- personal time (retrospective estimates only)
- additional human resources.

13.2.5 Calculation of overall costs

For each of the collaborations and each phase of the Project (start-up, 8 months; implementation, 7 months; post-implementation, 6 months), the total attendance cost at case conference meetings was added to the costs for capital and equipment, video-/teleconferencing, meeting organisation and any other meeting-related costs listed. The total cost per phase was dependent on the number of sites within the collaboration at which meetings were held, the number of meetings held at each site and the number of patients/cases presented. To allow for comparison between the collaborations, the total cost per phase was divided by: (a) the number of meetings held during that phase; (b) the number of patients seen during that phase; (c) the number of cases presented during that phase to provide an average meeting cost per case conference meeting, per patient and per case presented. The number of cases differs from the number of patients, as some patients were discussed at meetings on more than one occasion.

The cost of travel and accommodation, staff personal time, additional human resources and educational meetings are listed separately from the case conference meeting costs.
Educational meeting costs represent attendance costs only. As costs for these items do not relate to the number of case conference meetings held or cases presented, they are presented as a total cost per phase.

### 13.3 Results

Tables 13.3–13.5 list the total costs, and the average meeting costs per case conference meeting, per patient and per case presented for each of the collaborations by phase of the Project. Results for each of the collaborations are described below.

#### 13.3.1 Collaboration 1

The core strategy at Collaboration 1 for improving MDC was to implement regular treatment planning meetings. By post-implementation, weekly dedicated treatment planning meetings were held at the main urban site (Site a), with meetings also held at one of the rural sites (Site c). The costs for Collaboration 1 are listed in Table 13.3. A general overview of the costs for Collaboration 1 is given below, while phase-specific costs are described on pages 223–224.

At Collaboration 1, 36 meetings were held at Site a and 10 meetings were held at Site c over the course of the Project. The average number of attendees per meeting at Site a increased from 9 at start-up to 17 at post-implementation, while the average number at Site c remained stable across the three phases of the Project, at around 8 staff per meeting. Meetings typically lasted 90 minutes at Site a and 60 minutes at Site c.

To support the MDC strategies, Collaboration 1 employed an LEC and secretary, and salary costs for these staff members have been pro-rated over the three main phases of the Project. The LEC was integral in the implementation of MDC strategies and also acted as project coordinator, liaising with the National Breast Cancer Centre regarding Project outcomes, while the secretary was responsible for meeting organisation. A regional breast care nurse was also employed shortly after completion of the implementation phase of the Project to standardise breast care nurse practice across the region.

- The cost of the LEC salary was $50,021.30 over the course of the Project.
- While the breast care nurse salary was approximately $70,000 pa plus a vehicle and mobile telephone, funding for this position was obtained elsewhere, and only
$9500 was attributable to this Project. In calculating the cost of the breast care nurse, attendance time at meetings was subtracted from the salary so that this cost was not counted twice.

Secretarial costs of $20/hour for 6 hours per week throughout the course of the Project amounted to a total cost of $13,956.74.

Travel expenses recorded in the budget statements totalling $2719.55 have been pro-rated over the Project phases. Wear and tear on vehicles is not covered by these expenses but would have been significant due to the large distance between sites. Interviews with staff at the collaboration indicate that more travel occurred during start-up than in later phases, although this is not reflected in the budget statements.

Stationery costs amounting to $4001.66 were pro-rated over the three main Project phases, but no telephone or facsimile costs were included. The budget statements also list publicity costs of $1587.50 (including the cost of launching the collaboration), education costs of $732.00 and administration costs of $563.34 covering the cost of incorporating.

Educational meetings were already occurring at Collaboration 1 at the start of the Project and continued throughout all Project phases. The cost associated with the 23 educational meetings held across the three main phases of the Project was $34,919.46, giving an average cost of $1518.24 per meeting held.

Costs relating to specific phases of the Project are described below.

**Baseline**

As no dedicated treatment planning meetings occurred at baseline at Collaboration 1, no costs have been assigned to this phase of the programme. Educational meetings occurred at baseline, with associated costs of $16,072.29 (based on baseline costing study sheets).

**Start-up**

Due to issues encountered in the implementation of regular treatment planning meetings during start-up, only two treatment planning meetings were held during this phase (both at Site a), with only four cases discussed. Staff attendance costs for this phase are therefore low
compared with later phases of the Project ($3222.35). The average staff attendance cost per meeting was $1611.17.

Equipment purchased during start-up for use in the meetings included a microscope, data projector and document camera, with a total value of $40,000. While this equipment was not completely paid for by the Demonstration Project, $11,500 was apportioned to the Project during start-up.

Meetings during start-up at Collaboration 1 were held in an education room at one of the hospital venues and were preceded by an existing meeting. Room hire and catering costs of $1244.18 recorded in the log book have been included in the analysis.

During start-up, a senior clinician and the LEC (a clinical nurse consultant) spent large amounts of time in lobbying other staff members to support the new MDC strategies. Retrospective estimates based on individual recollections suggest that these two staff members each spent 20–30 hours per week in meetings during start-up, with around 10 hours per week representing personal unpaid work. This unpaid personal time was estimated at around $997 per week (10 x $63.23 for the senior specialist and 10 x $36.53 for the LEC [based on CNC rates]), which over the course of the 35-week start-up phase represented a cost of $34,895.

Six educational meetings occurred during start-up with a total cost of $9,749.30 (average cost of $1624.88 per meeting).

**Implementation and post-implementation**

During implementation and post-implementation, treatment planning meetings were more regular and occurred at Sites a and c, with 21 and 23 meetings held during each phase, respectively. This is reflected in the higher total staff attendance cost during these phases compared with start-up ($25,614.31 and $31,766.79 for implementation and post-implementation, respectively). The average staff attendance cost per meeting was $1219.73 for implementation and $1381.16 for post-implementation.

Meetings during implementation and post-implementation were held in a conference room at Site a. Room hire and catering costs of $2278.04 recorded in the log book have been pro-rated over the implementation and post-implementation phases.
Personal time was still a factor during implementation and post-implementation, amounting to approximately 6 hours/week each for the senior clinician and LEC (retrospective estimate). At salaried rates, this accounts for around $598/week, totalling $18,538 during implementation and $15,548 during post-implementation.

Seventeen educational meetings occurred during implementation and post-implementation, with associated costs of $15,439.65 and $9730.51, respectively. The average cost per educational meeting was $1403.60 during implementation (11 meetings) and $1621.75 during post-implementation (6 meetings).

### 13.3.2 Collaboration 2

Monthly MDC meetings were already occurring at Collaboration 2 at baseline, although only at Site a, and meetings were not dedicated to treatment planning. A key strategy implemented at Collaboration 2 was the development of regular dedicated treatment planning meetings, with a secondary strategy of improving interactions between the numerous sites servicing the region. By post-implementation, treatment planning meetings were held regularly at Sites a, b, and c with good attendance by staff. All meetings held at Site b were held in personal time to maximise attendance by radiation oncologists and medical oncologists visiting from other sites. Staff attendance costs for these meetings have been calculated in the same way as for meetings held during working hours. The costs relating to Collaboration 2 are listed in Table 13.4. A general overview of the costs for Collaboration 2 is given below, while phase-specific costs are described on pages 226–227.

At Collaboration 2, 65 meetings were held at Site a, 37 meetings were held at Site b and 31 meetings were held at Site c over the course of the Project. The average number of attendees per meeting increased at Site a from 6 at start-up to 11 at post-implementation, whereas average numbers per meeting at Sites b and c remained relatively stable at 6 and 8 staff members, respectively across the course of the Project. Case conference meetings at Sites a and c usually ran for up to 45 minutes, whereas meetings at Site b usually ran for 75 minutes.

Meetings at Sites a and b were held in rooms with no associated room hire cost. A catering cost of $100 was listed on the budget statements. No information is available regarding where meetings at Site c were held, although it is assumed that a room at the hospital was used.

The meeting room at Site a was equipped with projection and video-link equipment. Initially, a microscope was supplied by the pathologist attending the meetings. This equipment was later
purchased by another group at a cost of $50,000 and the team involved at Collaboration 2 borrowed this for use at case conference meetings. Since the equipment was not purchased by the group involved in the Project, and no hire charge was levied for borrowing the equipment, no associated cost was recorded in the log book or budget statements. Equipment at Site b was provided by staff attending the meetings and therefore no opportunity cost was incurred.

Travel between sites was mostly reimbursed by the hospitals. Travel costs totalling $3256.07 recorded in the budget statements for implementation and post-implementation have been pro-rated over these phases. Telephone and fax costs totalling $1237.95 were recorded over the course of the Project.

Three part-time LECs were employed at Collaboration 2 to help with the implementation of MDC strategies and to liaise with the National Breast Cancer Centre regarding Project outcomes. The total salary cost for the LECs was $88,006.04 over the course of the Project.

Collaboration 2 estimated that meeting organisation involved half a day’s work for a registrar and 1 hour of secretarial support per week, amounting to a weekly cost of $151.43 and a total cost of $13,931.56 across the course of the Project.

Costs relating to specific phases of the Project are described below.

**Baseline**

Monthly multidisciplinary meetings for post-surgical review were occurring at Site a at baseline at Collaboration 2, with a total associated staff attendance cost of around $15,500.40. No data are available regarding educational meetings at baseline.

**Start-up**

During start-up, 31 case conference meetings were held at Sites a, b and c at Collaboration 2, with a total staff attendance cost of $15,488.94 and an average attendance cost of $499.64 per meeting.

Information from the budget statements indicates that $732.41 was incurred for telephone use, $4348 for ‘overheads’ and $296.81 for ‘other’. It is unclear what these ‘overheads’ and ‘other’ costs were. The costs included as ‘overheads’ in later phases were much reduced, suggesting that this cost represents a variety of cost items that were split out under different headings in later phases of the Project.
Interviews with a senior clinician at Collaboration 2 indicated that personal time of around 10 hours per week (retrospective estimate) was spent during start-up in lobbying for site support, recruiting staff and other tasks associated with setting up the Project. This amounts to a cost of $22,130.50 over the start-up phase.

While no travel costs were recorded in the financial statements for start-up, staff indicated that some travel did occur during this phase of the Project.

Five educational meetings were held during start-up, with an associated cost of $11,905.69 (average cost of $2381.14 per meeting).

**Implementation and post-implementation**

The total number of meetings held at sites a, b and c at Collaboration 2 during implementation and post-implementation was 59 and 43 meetings, respectively. The increased number of meetings compared with start-up is reflected in a higher total cost associated with staff attendance ($30,954.72 and $32,167.42 for implementation and post-implementation, respectively). The average staff attendance cost per meeting was $524.66 for implementation and $748.08 for post-implementation.

Site a linked with Site e on a weekly basis by videoconference, with an associated cost of approximately $100/hour. It is assumed that this cost was subsidised by the hospital, as the costs recorded in the log sheets reflected a lower hourly rate.

Additional costs of $610 for equipment, $679 for printing and photocopying, $815.70 for consumables and $1739.14 for ‘overheads’ are recorded in the budget statements for implementation and post-implementation.

Personal time by one of the clinicians at Site a was retrospectively estimated at around 5–10 hours per week during implementation. Costed as 5 hours per week, this represents a total cost of $9800.65 during this phase. However, it should be noted that some of the tasks undertaken by the clinician were associated with the running of the demonstration Project rather than MDC strategies per se (eg, following up consent forms for participating in evaluation activities, reporting to the National Breast Cancer Centre).

Ten educational meetings occurred during implementation and post-implementation, with an associated cost of $4897.69 and $4964.09, respectively. The average cost per meeting during
implementation was $979.54 (5 meetings) and $992.82 during post-implementation (5 meetings).

### 13.3.3 Collaboration 3

Weekly MDC treatment planning meetings were already being held at Collaboration 3 before the start of the Project, with reported regular attendance from most ‘core’ disciplines. The main strategy implemented by Collaboration 3 was the employment of a breast care nurse to be part of the MDC team, attend treatment planning meetings, improve links between team members and patients, and thereby ensure continuity of care for women with breast cancer. It was also proposed that the breast care nurse would act as a link for women from rural sites being treated at Site a. The costs relating to Collaboration 3 are listed in Table 13.5. A general overview of the costs for Collaboration 3 is given below, while phase-specific costs are described on pages 229–230.

At Collaboration 3, 70 meetings were held at Site a during the course of the Project. Meetings typically ran for around 1 hour, and the number of attendees remained relatively stable over the course of the Project, at 11 attendees per meeting.

The number of case conference meetings held at Site a during the Project did not change significantly across all four phases of the Project (including baseline), although the average staff attendance cost did increase, perhaps reflecting a change in the disciplines who attended these meetings.

A significant part of the costs for Collaboration 3 was the breast care nurse salary of $5925.22 per month. In calculating the cost of the breast care nurse, attendance time at meetings was subtracted from the salary so that this cost was not counted twice.

Meetings at Site a were held in a hospital conference room, incurring no room hire fees. Staff who attended the meetings brought any equipment needed with them and therefore no costs for purchasing equipment were associated with the Project.

Travel to Sites b and c by a clinician and breast care nurse to attend outreach clinics, as part of the strategies to improve multidisciplinary links, incurred travel costs. Travel costs recorded in the budget reports totalled $1,889.35 over the start-up and implementation phases. Interviews with the clinician and breast care nurse indicated that these costs are likely to under-represent the actual costs.
No telephone, email or facsimile costs were recorded across any phase of the Project, but interviews with staff at Collaboration 3 indicated that these costs would have increased in proportion with the number of patients discussed at MDC meetings who were treated at outreach centres.

Collaboration 3 meetings were organised by a senior clinician at Site a, who dedicated around 2 hours per week to meeting organisation, representing a total cost of $11,634.32 over the course of the Project.

Costs relating to specific phases of the Project are described below.

**Baseline**

At baseline, multidisciplinary case conferences were already occurring, with 26 meetings held during this phase. Data are only available regarding staff attendance costs for this phase of the Project, which were $13,206.55. No data are available regarding educational meetings during this phase.

**Start-up**

During start-up, 25 case conference meetings occurred at Site a, with an associated staff attendance cost of $17,688.37 and an average attendance cost of $707.53 per meeting.

The organisation and implementation of Project strategies necessitated lengthy discussion between a senior clinician and two senior nurses at Site a, each of whom estimated retrospectively that they dedicated around 20 hours of personal time during start-up. Using the salary rates identified in Table 13.1 and 13.2, this personal time represents a cost of $2631.80 during start-up.

A cost of $10 relating to stationery was recorded in the budget statements.

No cost relating to educational meetings was supplied for the start-up phase.

**Implementation and post-implementation**

Regular case conference meetings continued at Site a during implementation and post-implementation, with 25 and 20 meetings held during each phase, respectively. The staff attendance cost was $14,098.71 for implementation and $12,571.10 for post-implementation, with an average cost of $563.95 and $628.56, per meeting for each phase, respectively.
The cost of educational meetings held during implementation and post-implementation was $1868.69 and $544.56, respectively. The average cost per meeting was $233.59 during implementation (8 meetings) and $272.28 during post-implementation (2 meetings).

13.4 Discussion

13.4.1 Overview of costs relating to case conference meetings

This costing analysis provides an indication of the costs involved both in establishing new MDC case conference meetings and in adapting existing meetings. As expected, the costs varied considerably, based on the number of meetings and attendees, and differences between each of the collaborations at baseline, with the average cost of MDC case conference meetings at post-implementation ranging from $178–548 per case presented. It should be noted that the staff costs for attending meetings excluded meeting observers and those not directly involved in treatment planning, but included all others attending. Hence, at a number of sites, attendees costed would have included ‘core’ disciplines plus others involved in managing women with breast cancer.

Factors influencing the average cost per meeting and the average cost per case presented included the length of the meeting and number of attendees, together with the number of meetings held and the number of cases presented. In general, newly established meetings seemed to be longer, and the number of cases discussed lower than for well-established meetings, resulting in a higher average cost. It is likely that as meetings become more routine, more time-efficient processes are implemented, leading to an increase in the number of cases discussed during meetings, and a decrease in the time needed to discuss each case.

Meeting organisation tasks included notifying participants about the meeting and gathering patient information and test results before the meeting. Some preparation tasks would be performed in any care plan and therefore not all of the preparatory work should be considered as an additional resource use. The associated costs differed according to who was responsible for these tasks and the situation at baseline, with more time spent on meeting organisation for newly established meetings. It is likely that the amount of organisational time required decreases with time as attendees become familiar with the processes involved.
The resource costs associated with MDC case conference meetings included room hire and equipment costs. Costs for room hire were generally not incurred as the meeting rooms used were typically hospital rooms that would otherwise be left vacant. Some catering costs were incurred, although these were generally not large. The use of existing equipment, such as data projectors, represented a significant cost saving compared with the purchase of new equipment.

Only one collaboration used video-/teleconferencing as a regular communication tool for MDC strategies. The necessary equipment was already in place and therefore the only costs incurred were call costs. The costs involved in setting up the technology to be able to run videoconferencing were not recorded as part of this Project.

### 13.4.2 Other costs relating to multidisciplinary care strategies

Other costs associated with the implementation of MDC strategies related to staff salaries, personal time of staff members, project management, and other resource costs such as travel and telephone calls. These costs are not necessarily related to the number of case conference meetings held.

Staff employed specifically for the purposes of implementing MDC strategies included breast care nurses, LECs and secretarial support staff. At Collaboration 3, the breast care nurse salary represents the major increase in cost seen compared with baseline.

A significant amount of personal time was committed to establishing MDC strategies by collaboration staff, and the amount of time spent during the initial stages of the Project was higher where treatment planning meetings were newly established and intensive lobbying of staff was needed to gain acceptance of the nominated strategies. Less personal time was used where the Project strengthened and formalised existing structures and a complete change in processes and attitudes was not required in order for the nominated strategies to be implemented. Although personal time is not an actual expense, it represents a proxy of opportunity cost. In reality, these staff members were not precluded from working but were deprived of leisure time. While valuation of leisure time is difficult, salary rates have been used as an estimation of the professional worth of these individuals’ time. It is important to note that estimates of personal time and the time associated with meeting organisation were made retrospectively and may not be a true reflection of the actual hours spent. In all collaborations, the amount of personal time spent by staff decreased over the course of the Project, suggesting that once strategies have been implemented, less personal time is needed. It is
reasonable to assume that a significant change in practice or procedures requires time commitment from the staff involved. Awareness of the potential barriers to the implementation of MDC strategies should help to pre-empt some of the difficulties that may be encountered.

Project management was crucial to the implementation of MDC strategies and the associated cost depended on who was responsible for this task. Where LECs were employed to fulfil this role, the individuals had a dual role of assisting with implementing MDC strategies, and liaising with the National Breast Cancer Centre regarding Project outcomes. The total cost associated with these staff cannot therefore be assigned wholly to the implementation of MDC strategies and it is likely that the cost associated with project management related solely to implementation of MDC strategies is lower than represented here.

Travel and accommodation costs over the course of the Project ranged from $1889.35 to $3256.07. Much of this travel related to the promotion of MDC strategies rather than travel to MDC case conference meetings. Typically, hospitals continued to pay salaries to clinicians while travelling, and travel expenses such as fuel costs were reimbursed. While this Project provides some indication of the likely costs of travel within multi-site facilities, it is apparent from staff interviews that the costs recorded are likely to underestimate the actual costs incurred. The costs of wear and tear on vehicles and personal travel time are also uncaptured here. It is reasonable to assume that the costs associated with travel and accommodation would increase with the number of distant sites, the distance between sites and the frequency with which staff members travel between sites.

Limited information is available regarding costs for telephone calls, stationery and advertising. Collaboration 1 recorded stationery costs of $4001.66 and advertising costs of $1587.50 over the course of the Project. It is not clear from the other two collaborations what expenditure related to this cost item. However, it is reasonable to assume that similar costs would be incurred by other collaborations undertaking a similar project.

The cost of educational meetings also varied between collaborations. The costs of these meetings represent the attendance cost for staff and therefore cost variations can be explained by the length of the meetings and the number of staff in attendance.
13.4.3 Methodological limitations

The costs presented in this chapter are based on information supplied by each of the collaborations regarding the cost of implementing MDC strategies. It is important to note that this was not designed as a cost-effectiveness study and that the costs presented are estimates only.

Not all costs relating to the Project have been captured. Areas where data have not been fully captured include telephone, facsimile and email costs, as well as costs for stationery and other consumables. Travel costs are also incomplete and should be viewed with caution. However, the incomplete data represent only a small proportion of the overall expenses associated with MDC programmes of this nature and are unlikely to impact significantly on the overall results.

It is also important to note that the estimates of personal time and time required to organise meetings are based on retrospective estimates and may not be an accurate reflection of the actual time spent by staff at the collaborations.

13.4.4 Summary

- The cost of implementing MDC strategies was dependent on the level of multidisciplinary initiatives already in place at a facility. Costs were higher for newly established strategies compared with adaptation of existing strategies.

- Significant personal time was needed to implement new strategies such as treatment planning meetings. While this does not represent a direct cost to the government, it should be considered in models of MDC.

- The cost of staff attendance at case conference and educational meetings was dependent on the number and type of attendees and the length and frequency of meetings.

- The average cost per meeting and per case presented at multidisciplinary case conference meetings tended to decrease as meetings became better established.

- The use of existing facilities, such as hospital meeting rooms and equipment from other groups reduced the overall cost.
• Capital and equipment costs were significant at some sites but were reduced by sharing the costs between different departments and disciplines.

• While travel and accommodation costs can be reduced using video-/teleconferencing, the technology set-up and associated costs, and difficulties in finding mutually acceptable meeting times were barriers to the use of such technology.
Table 13.1  Unit costs used to calculate the costs of attendance by ‘core team’ health professionals at multidisciplinary case conferences and educational meetings

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Source of cost</th>
<th>Cost per hour</th>
<th>VMO rate/hour (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeon</td>
<td>NSW Award 470 – Salaried Senior Medical Practitioners (State) Award. Level 3, Year 4 specialist</td>
<td>$63.23</td>
<td>$187.20</td>
</tr>
<tr>
<td>Radiation Oncologist/Medical</td>
<td>NSW Award 470 – Salaried Senior Medical Practitioners (State) Award. Level 3, Year 4 specialist</td>
<td>$63.23</td>
<td>$174.10</td>
</tr>
<tr>
<td>Oncologist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathologist/Radiologist</td>
<td>NSW Award 470 – Salaried Senior Medical Practitioners (State) Award. Level 1, Year 1 staff specialist</td>
<td>$53.78</td>
<td>$163.60</td>
</tr>
<tr>
<td>Supportive care: Breast Care</td>
<td>NSW Award 470 – Public Hospital Nurses’ (State) Interim Award. Clinical Nurse Consultant, Grade 3</td>
<td>$35.86</td>
<td></td>
</tr>
<tr>
<td>Nurse/Oncology Nurse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive care: Psychologist</td>
<td>NSW Health and Community Employees Psychologists (State) Award. Psychologist, 2nd year.</td>
<td>$21.07</td>
<td></td>
</tr>
<tr>
<td>General Practitioner</td>
<td>MBS code 726 – Attendance by a general practitioner, as a member of a multidisciplinary care team, to contribute to a multidisciplinary care plan or to review a plan prepared by a different provider</td>
<td>$39.80</td>
<td>$127.40</td>
</tr>
</tbody>
</table>
Table 13.2  Unit costs used to calculate the costs of attendance by ‘other’ health professionals and professional staff at multidisciplinary case conferences and educational meetings

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Source of cost</th>
<th>Cost per hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast physician</td>
<td>NSW Award 470 – Salaried Senior Medical Practitioners (State) Award. Level 3, Year 4 specialist</td>
<td>$63.23 (174.10 VMO rate)</td>
</tr>
<tr>
<td>Clinical researcher</td>
<td>NSW Award 287 – Private Hospital Professional Employees (State) Award. Principal Scientific Officer, 1st year.</td>
<td>$27.90</td>
</tr>
<tr>
<td>Community nurse</td>
<td>NSW Award 470 – Public Hospital Nurses’ (State) Interim Award. Clinical Nurse Specialist.</td>
<td>$27.07</td>
</tr>
<tr>
<td>Cytologist</td>
<td>NSW Health Employees (State) Award, 2nd year.</td>
<td>$16.16</td>
</tr>
<tr>
<td>Data manager</td>
<td>NSW Public Hospital Medical Record Librarians Award. Grade 1.</td>
<td>$26.15</td>
</tr>
<tr>
<td>Dietician</td>
<td>NSW Scientific Officers (Public Hospital Dieticians) Award. Dietician, General, 3rd year.</td>
<td>$22.27</td>
</tr>
<tr>
<td>Gastroenterologist</td>
<td>NSW Award 470 – Salaried Senior Medical Practitioners (State) Award. Level 3, Year 4 specialist</td>
<td>$63.23</td>
</tr>
<tr>
<td>Genetic counsellor</td>
<td>Nurse Counsellors Determination pursuant to Sec 40BA of the Public Hospital Act 1929. Graduate, 2nd year.</td>
<td>$19.46</td>
</tr>
<tr>
<td>Geneticist</td>
<td>NSW Award 470 – Salaried Senior Medical Practitioners (State) Award. Level 3, Year 4 specialist</td>
<td>$63.23</td>
</tr>
<tr>
<td>Hereditary cancer specialist</td>
<td>NSW Award 470 – Salaried Senior Medical Practitioners (State) Award. Level 1, Year 1 staff specialist</td>
<td>$53.78</td>
</tr>
<tr>
<td>Histologist</td>
<td>NSW Award 287 – Private Hospital Professional Employees (State) Award. Senior Scientific Officer, 1st year.</td>
<td>$22.62</td>
</tr>
<tr>
<td>Microbiologist</td>
<td>NSW Scientific Officers, Crown Employees (Scientific Officers, Various Departments). Agreement number 2433 of 1982, Grade 2.</td>
<td>$26.15</td>
</tr>
<tr>
<td>Nuclear physician</td>
<td>NSW Award 470 – Salaried Senior Medical Practitioners (State) Award. Level 3, Year 4 specialist</td>
<td>$63.23</td>
</tr>
<tr>
<td>Nuclear scientist</td>
<td>NSW Health Employees’ Medical Radiation Scientists (State) Award. Level 3 Medical Radiation Scientist/Radiographer, 1st year.</td>
<td>$27.10</td>
</tr>
</tbody>
</table>
Table 13.2  Unit costs used to calculate the costs of attendance by ‘other’ health professionals and professional staff at multidisciplinary case conferences and educational meetings (cont’d)

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Source of cost</th>
<th>Cost per hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse counsellor</td>
<td>Nurse Counsellors Determination pursuant to Sec 40BA of the Public Hospital Act 1929. Graduate, 2nd year.</td>
<td>$19.46</td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>NSW Public Hospital (Physiotherapists, Occupational Therapists and Speech Pathologists) (State) Award. Grade 2.</td>
<td>$27.41</td>
</tr>
<tr>
<td>Palliative care nurse</td>
<td>NSW Award 470 – Public Hospital Nurses’ (State) Interim Award. Clinical Nurse Specialist.</td>
<td>$27.07</td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>NSW Public Hospital (Physiotherapists, Occupational Therapists and Speech Pathologists) (State) Award. 4th year.</td>
<td>$22.27</td>
</tr>
<tr>
<td>Radiographer</td>
<td>NSW Health Employees Medical Radiation Scientists (State) Award. Level 3. Medical Radiation Scientist/Radiographer, 1st year.</td>
<td>$27.10</td>
</tr>
<tr>
<td>Registered nurse</td>
<td>NSW Award 470 – Public Hospital Nurses’ (State) Interim Award. Registered Nurse, 5th year.</td>
<td>$22.69</td>
</tr>
<tr>
<td>Registrar</td>
<td>NSW Public Hospital (Medical Officers) Award. 4th year.</td>
<td>$37.55</td>
</tr>
<tr>
<td>Resident</td>
<td>NSW Public Hospital (Medical Officers) Award. 4th year.</td>
<td>$32.51</td>
</tr>
<tr>
<td>Social worker</td>
<td>NSW Public Hospital Social Workers Award. Grade 2.</td>
<td>$28.80</td>
</tr>
</tbody>
</table>
Table 13.3 Cost summary for Collaboration 1

<table>
<thead>
<tr>
<th>Cost item</th>
<th>Baseline (6 months)</th>
<th>Start-up (8 months)</th>
<th>Implementation (7 months)</th>
<th>Post-implementation (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Staff attendance at treatment planning meetings(^a)</td>
<td>Nil</td>
<td>3222.35</td>
<td>25,614.31</td>
<td>31,766.79</td>
</tr>
<tr>
<td>B Capital &amp; equipment</td>
<td>No data</td>
<td>11,500</td>
<td>379.50</td>
<td>0.00</td>
</tr>
<tr>
<td>C Teleconferencing</td>
<td>No data</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>D Meeting organisation(^b)</td>
<td>No data</td>
<td>5316.85</td>
<td>4652.25</td>
<td>3987.64</td>
</tr>
<tr>
<td>E Other meeting related costs(^c)</td>
<td>No data</td>
<td>1244.18</td>
<td>1307.41</td>
<td>970.63</td>
</tr>
<tr>
<td>F Total cost of education meetings(^a)</td>
<td>16,072.29</td>
<td>9749.30</td>
<td>15,439.65</td>
<td>9730.51</td>
</tr>
<tr>
<td>G Breast care nurse (non-meeting)(^d)</td>
<td>No data</td>
<td>0.00</td>
<td>0.00</td>
<td>4049.27</td>
</tr>
<tr>
<td>H Project Manager/Coordinator(^e)</td>
<td>No data</td>
<td>19,055.73</td>
<td>16,673.77</td>
<td>14,291.80</td>
</tr>
<tr>
<td>I Staff personal time(^f)</td>
<td>No data</td>
<td>34,916.00</td>
<td>18,538.00</td>
<td>15,548.00</td>
</tr>
<tr>
<td>J Travel &amp; accommodation(^g)</td>
<td>No data</td>
<td>1036.02</td>
<td>906.52</td>
<td>777.01</td>
</tr>
<tr>
<td>K Other costs(^h)</td>
<td>No data</td>
<td>4407.28</td>
<td>1333.89</td>
<td>1143.33</td>
</tr>
<tr>
<td>L Total costs per phase</td>
<td>16,072.29</td>
<td>90,447.71</td>
<td>84,845.30</td>
<td>82,264.98</td>
</tr>
<tr>
<td>M Total meeting costs (A+B+C+D+E)</td>
<td>0.00</td>
<td>21,283.38</td>
<td>31,953.46</td>
<td>36,725.06</td>
</tr>
<tr>
<td>N Number of treatment planning meetings (number of sites)</td>
<td>0</td>
<td>2 (1)</td>
<td>21 (2)</td>
<td>23 (2)</td>
</tr>
<tr>
<td>O Average staff attendance cost per meeting (A/N)</td>
<td>0.00</td>
<td>1611.17</td>
<td>1219.73</td>
<td>1381.16</td>
</tr>
<tr>
<td>P Average total cost per meeting (M/N)</td>
<td>0.00</td>
<td>10,641.69</td>
<td>1521.59</td>
<td>1596.74</td>
</tr>
<tr>
<td>Q Number of patients</td>
<td>No data</td>
<td>4</td>
<td>49</td>
<td>58</td>
</tr>
<tr>
<td>R Average total meeting cost per patient (M/Q)</td>
<td>No data</td>
<td>5320.85</td>
<td>652.11</td>
<td>633.19</td>
</tr>
<tr>
<td>S Number of cases presented</td>
<td>No data</td>
<td>4</td>
<td>56</td>
<td>67</td>
</tr>
<tr>
<td>T Average staff attendance cost per case presented (A/S)</td>
<td>No data</td>
<td>805.59</td>
<td>457.40</td>
<td>474.13</td>
</tr>
<tr>
<td>U Average total meeting cost per case presented (M/S)</td>
<td>No data</td>
<td>5320.85</td>
<td>570.60</td>
<td>548.14</td>
</tr>
</tbody>
</table>

Information from log book and supplementary data where specified.

\(^a\) Baseline calculated from information provided on Baseline costing study sheets.
\(^b\) From project budget summary: $13,956.74 spent on secretarial wages for entire Project. Pro-rated.
\(^c\) Includes the costs associated with room hire, food and catering, from logbook data. Catering of $2872.22 from project budget summary pro-rated.
\(^d\) The breast care nurse salary of $9500 (project budget summary), less breast care nurse meeting attendance (log book). \(^e\) From project budget summary: $50,021.30 spent on local evaluator wages for entire Project. Pro-rated.
\(^f\) Collaboration retrospectively estimated personal time. Costed at appropriate salary rates.
\(^g\) Log book data ($0) and project budget summary: $619.55 travel costs and $2100 project worker costs. Pro-rated.
\(^h\) From project budget summary: stationery $4001.66 pro-rated equally; advertising ($880.75+706.75), education ($732) and incorporation ($563.34) assumed to occur in start-up.
Table 13.4 Cost summary for Collaboration 2

<table>
<thead>
<tr>
<th>Cost item</th>
<th>Baseline (6 months)</th>
<th>Start-up (8 months)</th>
<th>Implementation (7 months)</th>
<th>Post-implementation (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>15,500.40</td>
<td>15,488.94</td>
<td>30,954.72</td>
<td>32,167.42</td>
</tr>
<tr>
<td>B</td>
<td>No data</td>
<td>0.00</td>
<td>328.46</td>
<td>281.54</td>
</tr>
<tr>
<td>C</td>
<td>No data</td>
<td>938.66</td>
<td>765.06</td>
<td>231.48</td>
</tr>
<tr>
<td>D</td>
<td>No data</td>
<td>5300.05</td>
<td>4694.33</td>
<td>3937.18</td>
</tr>
<tr>
<td>E</td>
<td>No data</td>
<td>100.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>F</td>
<td>No data</td>
<td>11,905.69</td>
<td>4897.69</td>
<td>4964.09</td>
</tr>
<tr>
<td>G</td>
<td>No data</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>H</td>
<td>No data</td>
<td>14,898.55</td>
<td>39,227.88</td>
<td>33,703.30</td>
</tr>
<tr>
<td>I</td>
<td>No data</td>
<td>22,130.50</td>
<td>9800.65</td>
<td>0.00</td>
</tr>
<tr>
<td>J</td>
<td>No data</td>
<td>0.00</td>
<td>1753.27</td>
<td>1502.80</td>
</tr>
<tr>
<td>K</td>
<td>No data</td>
<td>4644.81</td>
<td>1741.30</td>
<td>1492.54</td>
</tr>
<tr>
<td>L</td>
<td>15,500.40</td>
<td>75,407.19</td>
<td>94,163.36</td>
<td>78,280.35</td>
</tr>
<tr>
<td>M</td>
<td>15,500.40</td>
<td>21,827.65</td>
<td>36,742.57</td>
<td>36,617.62</td>
</tr>
<tr>
<td>N</td>
<td>24</td>
<td>31 (3)</td>
<td>59 (3)</td>
<td>43 (3)</td>
</tr>
<tr>
<td>O</td>
<td>645.85</td>
<td>499.64</td>
<td>524.66</td>
<td>748.08</td>
</tr>
<tr>
<td>P</td>
<td>645.85</td>
<td>704.12</td>
<td>622.76</td>
<td>851.57</td>
</tr>
<tr>
<td>Q</td>
<td>No data</td>
<td>82</td>
<td>186</td>
<td>155</td>
</tr>
<tr>
<td>R</td>
<td>No data</td>
<td>266.19</td>
<td>197.54</td>
<td>236.24</td>
</tr>
<tr>
<td>S</td>
<td>No data</td>
<td>109</td>
<td>231</td>
<td>198</td>
</tr>
<tr>
<td>T</td>
<td>No data</td>
<td>142.10</td>
<td>134.00</td>
<td>162.46</td>
</tr>
<tr>
<td>U</td>
<td>No data</td>
<td>200.25</td>
<td>159.06</td>
<td>184.94</td>
</tr>
</tbody>
</table>

Information from log book and supplementary data where specified.

- Baseline calculated from information provided on Baseline costing study sheets.
- From financial statements $610 spent on equipment during implementation and post-implementation period. Pro-rated.
- From financial statements $732.41 spent on telephone and fax during start-up and $501.54 during implementation and post-imp period. Cost in latter two periods is pro-rated.
- Cost based on 0.5 day registrar time + 1 hr secretarial support.
- Includes the costs associated with room hire, food and catering, from logbook data.
- The breast care nurse cost was pro-rated using 'salaries' $14,982.22 during start-up and $73,023.82 during implementation and post-imp, from the financial statements less breast care nurse meeting attendance (log book).
- May form part of 'salaries' amount listed under breast care nurse.
- Based on estimate of personal time by senior clinician; costed at appropriate salary rates.
- Log book data ($0) and financial statements $3256.07 travel costs. Pro-rated between implementation and post-implementation.
- From financial statements. During start-up: $4348 overheads & $296.81 other; during implementation and post-implementation: overheads $1739.14, printing & copying $679, and consumables $815.70 (other of $244.35 assumed to have been counted in start-up). Cost in latter two periods is pro-rated.
Table 13.5 Cost summary for Collaboration 3

<table>
<thead>
<tr>
<th>Cost item</th>
<th>Baseline (6 months)</th>
<th>Start-up (8 months)</th>
<th>Implementation (7 months)</th>
<th>Post-implementation (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Staff attendance at treatment planning meetingsa</td>
<td>13,206.55</td>
<td>17,688.37</td>
<td>14,098.71</td>
<td>12,571.10</td>
</tr>
<tr>
<td>B Capital &amp; equipment</td>
<td>No data</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>C Teleconferencing</td>
<td>No data</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>D Meeting organisationb</td>
<td>No data</td>
<td>4426.10</td>
<td>3920.26</td>
<td>3287.96</td>
</tr>
<tr>
<td>E Other meeting related costsc</td>
<td>No data</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>F Total cost of education meetings</td>
<td>No data</td>
<td>0.00</td>
<td>1868.69</td>
<td>544.56</td>
</tr>
<tr>
<td>G Breast care nurse (non-meeting)d</td>
<td>No data</td>
<td>47,401.76</td>
<td>41,476.54</td>
<td>35,551.32</td>
</tr>
<tr>
<td>H Project Manager/Coordinatorc</td>
<td>No data</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>I Staff personal timef</td>
<td>No data</td>
<td>2,631.80</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>J Travel &amp; accommodationg</td>
<td>No data</td>
<td>572.70</td>
<td>1316.65</td>
<td>0.00</td>
</tr>
<tr>
<td>K Other costsh</td>
<td>No data</td>
<td>10.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>L Total costs per phase</td>
<td>13,206.55</td>
<td>72,730.73</td>
<td>62,680.84</td>
<td>51,954.94</td>
</tr>
<tr>
<td>M Total meeting costs (A+B+C+D+E)</td>
<td>13,206.55</td>
<td>22,114.47</td>
<td>18,018.97</td>
<td>15,859.06</td>
</tr>
<tr>
<td>N Number of treatment planning meetings (number of sites)</td>
<td>26</td>
<td>25 (1)</td>
<td>25 (1)</td>
<td>20 (1)</td>
</tr>
<tr>
<td>O Average staff attendance cost per meeting (A/N)</td>
<td>507.94</td>
<td>707.53</td>
<td>563.95</td>
<td>628.56</td>
</tr>
<tr>
<td>P Average total cost per meeting (M/N)</td>
<td>507.94</td>
<td>884.58</td>
<td>720.76</td>
<td>792.95</td>
</tr>
<tr>
<td>Q Number of patients</td>
<td>No data</td>
<td>90</td>
<td>104</td>
<td>86</td>
</tr>
<tr>
<td>R Average total meeting cost per patient (M/Q)</td>
<td>No data</td>
<td>245.72</td>
<td>173.26</td>
<td>184.41</td>
</tr>
<tr>
<td>S Number of cases presented</td>
<td>No data</td>
<td>103</td>
<td>110</td>
<td>89</td>
</tr>
<tr>
<td>T Average staff attendance cost per case presented (A/S)</td>
<td>No data</td>
<td>171.73</td>
<td>128.17</td>
<td>141.25</td>
</tr>
<tr>
<td>U Average total meeting cost per case presented (M/S)</td>
<td>No data</td>
<td>214.70</td>
<td>163.81</td>
<td>178.19</td>
</tr>
</tbody>
</table>

Information from log book and supplementary data where specified.

- Baseline calculated from information provided on Baseline costing study sheets.
- This cost was not recorded but is estimated using the methods described in the report.
- Includes the costs associated with room hire, food and catering.
- The breast care nurse salary of $5925.22 per month (report) less breast care nurse meeting attendance (from log book = $0). Higher than actual costs as a more senior nurse rate has been used.
- Not employed.
- Collaboration estimated personal time during teleconference. Costed at appropriate salary rates.
- From ledger summary: $1050 travel from 8/00-6/01 (pro-rated at $95.45/month) and $839.40 from 8-9/01.
- From ledger summary: $10 for stationery, assumed to be during start-up.
14. Observational Study of Multidisciplinary Care

14.1 Aim

The aim of the Observational Study of Multidisciplinary Care was to explore current ‘best practice’ in the conduct of multidisciplinary breast cancer case conference meetings in Australia, by observing and describing the commonalities and differences of four models of case conferences perceived to be ‘good’ or ‘successful’.

14.2 Methods

14.2.1 Design overview

In order to explore and describe ‘best practice’ for multidisciplinary case conference meetings in Australia, a two-phase study design was employed:

- phase 1 (July 2002–March 2003) involved developing a coding framework for data collection, piloting this at three consecutive multidisciplinary case conference meetings at one hospital, and revising the coding framework as necessary

- during phase 2 (April–May 2003), the revised coding framework was used to record observations at three consecutive multidisciplinary case conference meetings at each of four hospitals in Australia that had been identified as having well-established multidisciplinary care meetings.

The coding framework allowed information regarding processes, general content, atmosphere and types of issues discussed at the meetings to be recorded. Brief interviews with members of the multidisciplinary team following each meeting were used to elicit further information about the organisation, style, leadership and benefit of the meetings.

The methodology was approved by the Ethics Committee of The New South Wales Cancer Council prior to recruitment of participating sites.
14.2.2 Development of the coding framework

The draft coding framework was developed by the National Breast Cancer Centre in consultation with six health professionals from across Australia (a pathologist, radiation oncologist, breast care nurse, breast services program manager, and two medical oncologists) who regularly attend multidisciplinary case conferences. These health professionals attended a forum in July 2002 to discuss what makes a ‘good’ or ‘successful’ MDC meeting.

Through the forum, the following key factors perceived to underpin ‘good’ or ‘successful’ multidisciplinary case conference meetings were identified:

- interpersonal factors, such as: leadership; goodwill; and members gaining value from the meetings
- procedural issues, such as: administrative and technical support for meeting organisation; input into the meeting from consumers, usually via the advocacy of a breast care nurse; involvement of several disciplines in case discussions; and a balance in the volume and mix of cases discussed.

It became evident during the forum that a number of different models of MDC are employed around Australia. Common themes of these models, such as meeting goals, structure, and sustainability over time, were considered to be important for ‘successful’ multidisciplinary case conference meetings.

Using the forum results, a draft coding framework was developed, with data forms to record:

- room layout and facilities
- timeline for meeting and attendance log
- atmosphere
- proceedings and content
- de-identified log of individual patient cases, including information about the case discussion, availability of patient records and test results, and decision-making processes.

Interview questions for the Chair and other meeting participants were also developed. Comment on the draft coding framework was invited from three behavioural scientists, before being tested during a pilot observational study.
14.2.3 Site selection

Hospitals were considered eligible to participate in the study if they had been identified through the *National Profile Study of Multidisciplinary Care* (see Chapter 4) as having well-established regular multidisciplinary meetings that met the *Principles of Multidisciplinary Care* (see Chapter 3). The selection criteria were:

- hospitals held regular face-to-face multidisciplinary case conference meetings for the purpose of treatment planning for women with breast cancer
- multidisciplinary case conference meetings involved discussion of all breast cancer cases, or of cases selected using known and agreed criteria
- multidisciplinary case conference meetings were always/almost always attended by the core team of clinicians, including a surgeon, radiologist, pathologist, radiation oncologist, medical oncologist, and supportive care professional
- clinicians involved in the meetings had a shared view of what MDC means
- there was a system in place for centralised data collection and a process for review of the data.

The target sample size was five hospitals, including one hospital for piloting the data coding frameworks. Given the highly qualitative nature of the study, this sample size was considered sufficient.

14.2.4 Sample

Seven hospitals were identified through data from the *National Profile Study of Multidisciplinary Care* as being eligible to participate in the study. Six of the seven hospitals were interested in taking part in the study, and one hospital declined. Further investigations revealed that two of the interested hospitals did not completely fulfil the study criteria. To reach the target sample size of five hospitals, an additional hospital was approached and consented. This hospital was not involved in the Profile Study but was known to conduct regular multidisciplinary case conference meetings for the purpose of treatment planning, in line with the Observational Study criteria.

All five participating hospitals (including the pilot hospital) had high case loads (100 or more cases of breast cancer treated per year) and were located in urban areas of New South Wales,
Victoria and Queensland. Four hospitals, including the pilot hospital, were public and one was private.

14.2.5 Recruitment and consent procedure

A letter was sent to the Chief Executive Officer (CEO) of each eligible hospital, outlining the objectives of the study and inviting them to participate. A fax-back consent form was enclosed.

Following CEO consent, the lead clinician involved in breast cancer management at the hospital, as identified by the Profile Study, was sent a similar letter, information sheet and fax-back consent form. The lead clinician was asked to seek agreement from the multidisciplinary team members to participate in the observational study before returning the signed consent form. Prior to the first observed multidisciplinary case conference meeting at each site, the presence of the Observer was announced, and meeting participants had the opportunity to voice any objections or ask questions about the study.

14.2.6 Piloting observations

An independent consultant with experience in observational research and interviewing for research purposes (the Observer) undertook all observations and interviews, including those for the pilot study.

During the pilot study, three consecutive multidisciplinary case conference meetings at one hospital were observed using the draft coding framework, and structured interviews with the meeting participants were conducted. The coding forms and interview instruments were revised and modified based on the pilot experience, to improve the data collection process and increase the extent of information recorded. The final coding framework and clinician interview schedules are included in Appendix XIII.

14.2.7 Observations and interviews

The Observer attended three consecutive multidisciplinary meetings at each of the four trial hospital sites. All observations were completed within a two-month period. Prior to the first meeting at each site, the Observer was met by the breast care nurse or administrator and introduced to the Chair of the meeting. The Observer provided a brief information sheet about the Observational Study, to be used by the Chair when introducing the Observer to the meeting participants. Participants were informed that all data collected during the study would be de-identified and kept confidential. After introducing the Observer to participants, the Chair
invited questions about the Observational Study, and asked whether there were any objections to the meeting being observed. No objections were raised at any of the four sites.

Where possible, the Observer sat apart from the key meeting participants during the meetings. For example, if the key participants sat at a large meeting table, the Observer sat behind the table, often near other observers such as medical students or registrars. The Observer used the coding framework forms to record elements of the meetings such as the process, general content, atmosphere, interactions between participants, and the types of issues discussed.

A sub-sample of meetings was attended by two independent Observers to assess the inter-rater reliability of the final coding framework. The observation processes were the same as those for meetings attended by one Observer.

After each meeting, the Observer sought to conduct structured interviews with meeting participants, with the aim of interviewing each ‘core’ team participant (surgeon, radiologist, pathologist, medical oncologist, radiation oncologist, supportive care professional) at least once over the three observed meetings. The Observer also sought to conduct a brief sub-set of the interview questions with as many participants as possible each week. The interviews aimed to elicit further qualitative information about the meetings, such as participants’ perceptions of the organization, style, leadership and benefits of the meetings.

In addition, the Observer wrote a descriptive summary of the proceedings following each meeting. The summaries were qualitative in nature and covered issues such as group dynamics, conflict-resolution and the decision-making processes.

14.3 Results

14.3.1 Pilot study results

The main purpose of the pilot study was to trial the draft coding framework and other aspects of the observation process. While the pilot observations were recorded using a slightly different methodology and therefore cannot be incorporated into the final results analysis, some interesting observations were made. These are briefly discussed below.

- The role of Chair was rotated every month, and this was very much supported by meeting participants.
Meetings were held in a lecture theatre with all seats facing the lecture stage, rather than in a meeting room around a table. This format did not appear to limit group discussion.

The case discussion and outcomes were relayed to each woman’s general practitioner using a standardised form.

Patient names were listed on an overhead during case discussions. This raised the issue of patient confidentiality and was a point of contention at this site.

### 14.3.2 Inter-rater reliability of the coding framework

Two independent observers recorded their observations of a selected sub-sample of multidisciplinary case conference meetings using the coding framework. Overall, the two observers coded the same events during the meetings in a similar fashion, and the coding framework was found to be a reliable tool.

Some differences between observers were found in the coding of meeting atmosphere and proceedings, which were perhaps the most subjective sections of the coding framework. For example, one observer considered meetings to be ‘formal’ if they followed a set structure and agenda, whereas the other observer felt meetings were ‘informal’, due to the comfortable way in which participants interacted with each other. The latter approach to coding meeting atmosphere was used when reporting results.

Other differences between the two observers’ coding related to levels of participation during individual case discussions. One observer rated participants as having participated in a case discussion even if they only contributed non-verbally when the discussion was relevant for their specialty. For example, a medical oncologist might nod in agreement to a surgeon’s proposal to give hormonal therapy, but not feel the need to talk. The second observer measured the amount of time spent talking by each participant during a case discussion. The differences between the two approaches were only noticeable when cases were not complex and treatment decisions were easily made. The former interpretation of participation in case discussions was used when reporting results.

### 14.3.3 Overview of meeting attendance

The number of participants varied slightly from meeting to meeting within each site. The average number of participants, by discipline, is listed for each site in Table 14.1.
14.3.4 Site 1 results

Site 1: Background

Multidisciplinary case conference meetings for treatment planning at Site 1 are held on a weekly basis, except when a public holiday falls on the meeting day. The meeting location is always the same and the meeting is organised by registrars and the research nurse. The site has a protocol that all new cases of breast cancer are presented at the meeting, together with any previously discussed cases that meeting attendees wish to discuss further. Participants from all the core disciplines are expected to attend the meetings at Site 1, as well as geneticists and breast physicians.

Site 1: Participants

All core disciplines (defined as surgery, radiology, pathology, radiation oncology, medical oncology and supportive care) were represented at the three observed meetings, with the exception of radiology, which has been an ongoing difficulty for this site. The Chair was a surgeon, and this was the same person for each meeting. Meetings were also attended by non-participating observers, including a data manager, medical students. Representatives from pharmaceutical companies\(^1\) were present for the first part of two meetings, prior to commencement of case discussions.

Site 1: Room layout and facilities

Meetings at Site 1 were held in a large board room at the hospital and participants sat around an oval-shaped table in the centre of the room. Participants representing the core disciplines (including the breast care nurse and research nurse) sat at the table. The other supportive care professionals (the social worker and clinical nurse), registrars, interns and other visitors sat on chairs set back from the table. The Chair sat at the same position for every meeting while other attendees, with the exception of one surgeon, varied their seating location at each meeting.

View boxes were used to display relevant mammograms and images on the wall, and a microscope and two projection monitors were used for viewing pathology slides. An overhead projector was available but not utilised.

In general, temperature, lighting and noise levels in the room were adequate, although an inside air conditioner made it difficult to hear at times. Spare chairs were available, and the space and comfort of the furnishings were adequate.

\(^1\) Throughout this chapter, ‘pharmaceutical company representatives’ refer to sales representatives and/or clinical research associates.
Site 1: Meeting format

Meetings at Site 1 were scheduled to run from 12.30–1.30pm. Cold drinks and sandwiches were provided for meeting participants, usually by pharmaceutical companies. The first 15–20 minutes of the scheduled time appeared to be set aside for eating lunch and informal discussion, with a lot of social interaction. Information was available from the pharmaceutical company representatives prior to commencement of case discussions.

Only the supportive care professionals and pathologists arrived on time for each meeting. The surgeons arrived together a little later, and meetings started only once they had arrived. The commencement of meetings was announced by the Chair. The radiation oncologist and breast physician arrived half way through the meeting on each occasion, and several participants left the room and returned at various stages. The first observed meeting ran late, the second finished on time, and third meeting finished slightly early.

Site 1: Case discussion

On average, four to five cases were discussed during each meeting. Most of these were public patients, but some private patients were presented by one surgeon. The surgical registrar put any films relating to case discussions on the view box, and made available hand-outs with details about each case at the start of the meeting. The surgeons were responsible for deciding which cases were presented in advance of the meeting, and a surgeon or surgical registrar introduced each case. The pathologist presented histopathological slides, and the findings were then discussed by the group.

Nearly all discussions were about treatment planning, although not necessarily all post-surgery. In fact, when interviewed, a breast physician told the Observer that one of the best aspects of the meetings was that the surgeons did not necessarily believe that surgery should be performed prior to team discussions.

In general, case discussions mainly involved the core disciplines (with the exception of supportive care) and the breast physicians. Discussions were rarely dominated by one or two clinicians and the Observer noted that questions were respected. Frequent references to ‘the evidence’ supporting treatment decisions were observed. During each case discussion, the Chair asked questions of the participants, including the relevant registrars in the absence of a particular clinician. Supportive care professionals were generally not actively involved in discussions unless questions were specifically addressed to them, with psychosocial issues usually raised by the specialists.
At the end of each case discussion, the Chair invited any further input, and summed up the presentations and outcomes of discussion. In this way, the meetings kept to the agenda and the Chair kept the discussions overall on track. Concurrent discussions were very rarely observed. When they did occur, they were relevant to topics covered in the case discussions.

During case discussions, the Observer noted respect between participants and for the opinions of others; this was supported by participant interviews. All participants from the core disciplines interviewed felt they always had ample opportunity to have input into discussions, and that their input was always valued and respected. Other participants expressed similar views. Overall, the Observer rated the mood of the meetings as very friendly, very inclusive, not formal and not tense. However, the atmosphere of one meeting, attended by the head of cancer services, was rated as slightly more formal and some political factions were detected.

**Site 1: Additional discussions and conclusion**

During the three observed meetings, some time was set aside for additional discussions of general clinical interest. For example, a medical oncologist gave a brief presentation about a clinical trial proposal that was about to be submitted for Ethics Committee review. General discussions were also held about unusual cases that had been discussed in previous meetings, and other topics of interest, such as recent policy and service developments.

Each meeting was closed by the Chair. Most participants stayed to continue informal discussions for a few minutes before leaving.

**Site 1: Communicating outcomes of case discussions**

Following each meeting, the surgeon (as the primary clinician) was responsible for reporting the outcomes of the case discussion to the woman concerned, although the medical oncologist or radiation oncologist would do so if they were the first to see the woman after the meeting. The surgeon was responsible for writing to the woman’s general practitioner.

**14.3.5 Site 2 results**

**Site 2: Background**

Multidisciplinary case conference meetings for treatment planning at Site 2 are held on a weekly basis, with a breast clinic following immediately afterwards. The location only changes if the meeting room becomes unavailable for some reason. The meeting is coordinated by a surgeon and organised by the surgical registrars. The site has a protocol that all new cases of breast cancer are presented at the meeting, together with any previously discussed cases that meeting attendees wish to discuss.
Attendance at Site 2 meetings is expected from surgeons, radiation oncologists, medical oncologists, breast care nurses, physiotherapists and registrars involved in the management of women with breast cancer. Data managers for breast cancer clinical trials are also invited to attend. Pathologists and radiologists are not required to attend, as they participate in a diagnostic case conference meeting the following day, and data from the previous diagnostic case conference meeting is collated by the surgical registrar and presented at the treatment planning meeting. Some surgeons and the surgical registrar attend both the diagnostic and the treatment planning case conference meetings.

**Site 2: Participants**

All core disciplines, with the exception of pathology and radiology, were represented at two of the three observed meetings. Two senior surgeons appeared to share the role of Chair – the meeting was chaired by the surgeon who arrived first. Meetings were also attended by non-participating observers, including ward nurses, clinical nurses, medical students or residents and pharmaceutical company representatives.

**Site 2: Room layout and facilities**

Meetings at Site 2 were held in a large room and participants sat around three sides of a square-shaped table in the centre of the room, with the fourth side facing a projector screen. The surgeons, medical oncologists, radiation oncologists and usually the physiotherapist, breast care nurses and some residents sat at the table. Others such as residents, nurses, and medical students sat on chairs set back from the main table, around the edges of the room. All participants varied their seating location at each meeting, although the two senior surgeons sat next to each other when they were both present.

A data projector was used to present patient histories and summaries of findings onto the screen at the end of the table. An overhead projector was sometimes used, and a view box was available but not utilised.

The room temperature was generally adequate, but was too hot on one occasion. Lighting and noise levels were adequate, and the space and comfort of the furnishings were quite comfortable.

**Site 2: Meeting format**

Meetings at Site 2 were scheduled to run from 1.30–2.30pm. Food and drinks were available for meeting participants, provided by pharmaceutical companies. The first 10–15 minutes of the scheduled time appeared to be set aside for eating lunch and informal discussion, with a lot of social and work-related interaction. Most participants arrived on time, or during the 10–15
minute lunch period. The Chair announced the commencement of the meetings. At each meeting, one or two participants from the core disciplines arrived 10 minutes after the meeting had begun. Two of the observed meetings finished on time, and one ran slightly late.

**Site 2: Case discussion**

The number of cases discussed varied between meetings, ranging from four to eight, and all were public patients. The surgical registrar was responsible for collating information for case discussions, and preparing information slides and accompanying handouts in advance of the meeting. The slides included information such as case history, a summary of imaging and pathology results, significant co-morbidities and surgical procedures. Diagnostic imaging and pathology slides were not viewed, as these were shown in the diagnostic meetings.

The surgical registrar introduced each case and presented the findings, which were then discussed by the group. All discussions were about treatment planning, and occasionally cases were discussed pre-surgery.

Overall, representatives from all core disciplines in attendance participated in the case discussions and the discussions were only occasionally dominated by one or two clinicians. All participants volunteered input into case discussions, and the Observer felt that their input was respected. The breast care nurses were actively involved in meetings at Site 2, often raising psychosocial issues during case discussions. If no psychosocial issues were mentioned, the Chair sought this information from participants. During one observed meeting, no radiation oncologist was able to attend. While this was not a preferred scenario, case discussions continued and treatment decisions were able to be made.

A lot of discussion about the evidence for treatment decision-making was observed, particularly with respect to chemotherapy, and to a lesser extent, radiotherapy. Concurrent discussions were occasionally observed, although when they occurred, they were relevant to topics covered in the case discussions.

At the end of each case discussion, the Chair asked for any further input, and summarised the discussion and outcomes, before moving onto the next case.

While all three observed meetings followed the same format, the usual surgical registrar was unable to attend one meeting due to a conference, and another registrar presented the cases for discussion. This registrar did not specialise in breast cancer, was not familiar with the structure of the meetings, and had not reviewed the patient files or prepared any presentation or handouts. Consequently, key information, such as pathology reports, was missing from several
patient files. A breast care nurse left the meeting to try to locate the missing information, and
several case discussions were postponed until the full range of information was available.

In general, the Observer noted respect between participants and for the opinions of others
during case discussions; this was supported by participant interviews. Some tension was
observed during one case discussion, when two medical oncologists disagreed about the course
of treatment for a patient with an intellectual disability. However, the Observer noted that there
was never any sign of disrespect between these participants, and, through discussions will all
core team members about the risks and benefits of the proposed treatments, treatment decisions
were able to be made. It was agreed that, in consultation with the patient’s carer, a stronger
regime of chemotherapy would be trialled first, with the option of altering the regime if it was
not well-tolerated by the patient. All core team members interviewed felt that they had ample
opportunity to have input into case discussions in general, and that their input was valued and
respected.

The Observer rated the mood of the meetings as very friendly, very inclusive, and not usually
tense. The meetings were not considered formal, and were generally not political. However,
during the meeting at which the usual surgical registrar was not present and case presentations
had not been prepared, the Observer detected some political factions and tension.

**Site 2: Additional discussions and conclusion**

Case discussions during two of the three observed meetings ended slightly early, so the registrars
took this opportunity to give a brief presentation about an aspect of current clinical research.
Group discussions about the research followed.

The Chair closed the meetings, and most participants stayed to continue informal discussions
for a few minutes before going to the breast clinic.

**Site 2: Communicating outcomes of case discussions**

The two surgeons who chaired the meetings and a medical oncologist took alternate
responsibility for taking notes about case discussions and treatment decisions. These notes were
added to the patients’ files. Site 2 had no set protocol for communicating outcomes of the case
discussions to the woman. According to one Chair, the next clinician to treat the woman could
decide what information was communicated to the woman, and how it was communicated. A
summary letter was sent to the woman’s general practitioner. The surgeon or medical oncologist
ddictated the letters on the day of the case conference meeting, but clinicians reported that
transcribing and posting of letters by hospital administration took up to one or two weeks.
14.3.6 Site 3 results

Site 3: Background

Multidisciplinary case conference meetings for treatment planning at Site 3 are held on a weekly basis, except when a public holiday falls on the meeting day. Meetings are followed immediately by a breast clinic, which is attended by approximately half of the meeting participants. The meeting location is always the same and the meeting is organised by the Chair, who is a surgeon. The site is a private hospital, but meetings are attended by clinicians who work at one of two hospitals: Site 3 and a nearby public hospital. A mix of private and public patients is discussed at every meeting. All core disciplines, including nurses and sometimes psychologists, are expected to attend the meetings at Site 3, usually with a representative from both hospitals for each discipline.

Site 3: Participants

All core disciplines were represented at two of the three observed meetings. At one meeting, neither a pathologist nor a radiologist was able to attend, and participants noticeably disapproved of their absence. Meetings were also attended by a data manager, and non-participating observers, including medical students, residents, and registrars. A pharmaceutical company representative attended two of the three meetings; one left before any case discussions began. The usual Chair was absent for one meeting, and the meeting was chaired by a different surgeon on that day.

Site 3: Room layout and facilities

Meetings at Site 3 were held in a small board room, which included a very small kitchenette. The participants representing the core disciplines tended to sit at the table, if they arrived early enough; the others either sat back from the table or stood, as there were fewer chairs than attendees. Most attendees varied their seating or standing location between meetings, although the Chair sat at the same location for the two meetings he attended.

There was a view box on the wall, and larger, mobile view boxes were also used. A microscope and projection monitor was wheeled in for each meeting. As this monitor was at table height, it was quite difficult for some participants to see the screen.

The room temperature was generally good, as were lighting and noise levels. The comfort of the furnishings was adequate, but the space was very cramped and there were not enough chairs for all present.
Site 3: Meeting format

Meetings at Site 3 were scheduled to run from 7.00–8.30am. Breakfast was provided, by the hospital for one meeting, and by a pharmaceutical company for two meetings. The Chair arrived early, to set up the room for the meeting. During the first 30 minutes attendees ate breakfast and informally viewed mammograms and ultrasounds brought to the meeting by the surgeons. The films were of women who: were awaiting surgery; or had unusual features that the surgeons wished to discuss with the radiologist or use as a teaching tool with the attending medical students and registrars. There was not much informal discussion during this time. Information was available from the pharmaceutical company representatives and at one meeting the representative spoke briefly during a break between case discussions.

Few participants arrived on time, with most arriving just before or just after 7.30am. During the meeting that was not attended by the usual Chair, half the participants arrived at or after 7.45am. The commencement of case discussions was announced by the Chair, usually at about 7.30am, and all three meetings finished on time.

Site 3: Case discussion

The number of cases discussed at each meeting ranged from eight to 11. No one person was responsible for organising which cases were presented. The pathologists brought slides for all cases they had seen during the previous week, and sometimes the surgeons brought information about additional cases for discussion. Some patient films were presented if surgeons brought them along, but there were no patient files. During the first meeting, one surgeon brought handouts for participants, with information about patients being treated by that surgeon.

A surgeon or pathologist introduced each case, and the pathologist presented the pathology slides for discussion by the group. Most discussions were about treatment planning, but some cases were presented for diagnostic discussion.

The patient’s surgeon or the Chair began the discussions, and generally representatives from all core disciplines contributed to the case discussions. The discussions were never dominated by one or two clinicians, and the Observer noted that input by all participants was respected. The usual Chair always invited input from all participants, and specifically sought psychosocial information. However, during the third meeting, the substitute Chair did not seek psychosocial input and the breast care nurse did not participate in any discussions.

A lot of discussion about the clinical evidence for treatment decision-making was observed, with references made to conference papers, relevant research articles, and clinical trials. Concurrent discussions were occasionally observed during the third meeting.
At the end of each case discussion, the usual Chair asked for any further input, and summarised the discussion and outcomes before moving onto the next case. The substitute Chair in the third week did not ask for further input or summarise the outcomes. As a result, there were several cases for which the Observer reported that the decision outcomes were unclear.

In general, the Observer noted respect between participants and for the opinions of others during case discussions; this was supported by participant interviews. All core participants felt that they had ample opportunity to have input into discussions, and that their input was valued and respected. However, the breast care nurses did not rate the value of their input as highly as other participants did.

The Observer rated the mood of the meetings as very friendly, usually inclusive and not usually tense. The third meeting, chaired by the substitute Chair, was not so inclusive of breast care nurses, and the Observer noted some tension. The meetings were not considered formal, and no political factions were noticed.

**Site 3: Additional discussions and conclusion**

There were no additional presentations during the three observed meetings. However, many discussions relating to clinical evidence were observed in association with case discussions.

The Chair closed the meetings, and most participants left very quickly, to either go to the breast clinic, or to go to different hospitals. Some participants had to leave prior to the end of the meeting.

**Site 3: Communicating outcomes of case discussions**

The Chair recorded the case discussion outcomes in a book, and the breast care nurse also recorded outcomes for patients that she would be seeing. Following the meeting, the Chair or another surgeon wrote letters to the women’s general practitioners to summarise the outcomes.

**14.3.7 Site 4 results**

**Site 4: Background**

Multidisciplinary case conference meetings for treatment planning at Site 4 are held on a weekly basis, straight after the breast clinic. In the past they were held before the breast clinic, but the time was changed because the meetings tended to go on longer than anticipated, and women were being kept waiting at the clinic. The meeting location is always the same and the
meeting is organised by the breast care nurse. The site has a protocol that all new cases of breast cancer at Site 4 are presented at the meeting. All participants representing the core disciplines are expected to attend the meetings at Site 4.

**Site 4: Participants**

Participants representing the all core disciplines were present at the three observed meetings. The Chair was a surgeon, and this was the same person for each meeting. The meetings were also attended by non-participating observers, including residents and medical students.

**Site 4: Room layout and facilities**

Meetings at Site 4 were held in a rather cramped tea room and almost all participants sat around a table in the centre of the room. Due to lack of space, occasionally one or more participants sat back from the table, along with some visitors. The participants seemed to sit in different seats for each meeting.

The only equipment available was a view box on the wall, which was used once during the three observed meetings. There were no facilities for projecting information, such as pathology images.

In general, the room had adequate temperature, lighting and noise levels. The meeting space was very small, and not very comfortably furnished.

**Site 4: Meeting format**

Meetings at Site 4 were scheduled to run from 4.00–5.00pm. Coffee and snacks were provided. The first 5–10 minutes were spent eating food and in informal discussion, before the beginning of the meeting was announced by the Chair. Most participants arrived on time for the three observed meetings, and all three meetings finished slightly early.

**Site 4: Case discussion**

The number of cases discussed during each meeting varied considerably, ranging from three to 10. The surgical registrar introduced each case for discussion, referring to the patient files brought by the breast care nurse. The pathologist distributed copies of the pathology reports and presented histopathological findings, which were then discussed by the group.

All discussions were about treatment planning. One case had been discussed in a previous treatment planning meeting: this particular woman had not liked the first treatment plan presented to her, and had asked that the group rediscuss her case. While the meeting participants had reservations about the potential risks associated with the woman’s preferred treatment, the
treatment plan was altered in accordance with her wishes. This new treatment plan and the associated increased risks were to be discussed with the woman after the meeting.

In general, case discussions involved representatives from all of the core disciplines, were rarely dominated by one or two clinicians, and the Observer noted that input from all team members was respected. There were frequent references to new clinical findings, clinical trials and levels of evidence on which to base treatment decisions. The Chair sought input from participants and often encouraged the surgical registrar to participate by responding to surgical queries.

The Chair always invited any further input before moving onto the next case. The meetings were kept on track and the Chair returned the focus of discussions to the cases if they digressed significantly. Concurrent discussion was rarely observed, although some occurred in the third meeting when the breast care nurses were trying to organise referrals.

During the case discussions, the Observer noted respect between participants and for the opinions of others; this was supported by participant interviews. All participants felt that they always had ample opportunity to have input into discussions, and that their input was always valued and respected. The Observer rated the mood of the meetings as very friendly, very inclusive and not tense. All participants referred to each other by their first names, and a feeling of camaraderie between participants was observed. The meeting followed a structured agenda, but the tone of the meetings was informal. No political factions were detected.

**Site 4: Additional discussions and conclusions**

As one meeting involved discussion of only three cases, there was time left for additional discussion. A general group discussion was held about various clinical matters, and some issues relating to the clinical pathways at Site 4.

Each meeting was closed by the Chair. As the meeting was at the end of the day, most participants left straight away, without staying to talk further. This made it difficult for the Observer to interview participants after the meeting.

**Site 4: Communicating outcomes of case discussions**

The surgical registrar recorded the case discussions and outcomes in the patients’ files. The breast care nurse and the radiation oncologist also made notes during the meetings. It was the responsibility of the next treating clinician to convey the discussion outcomes to the woman concerned. A summary of the case conference outcomes, including treatment and supportive
care recommendations, was completed by the surgical registrar and breast care nurse, and faxed by the breast care nurse to the woman’s general practitioner.

14.3.8 Meeting outcomes and perceived benefits

Interviews with the core team participants revealed a number of perceived benefits of MDC case conference meetings for both the patients discussed and the meeting participants. A total of 34 interviews were conducted with meeting participants across all four sites, ranging from six to 10 interviews conducted at each site. At least one interview was conducted at every site with a representative from the following disciplines: surgery, radiation oncology and supportive care. Medical oncology was represented in interviews conducted at three sites, pathology at two sites, and radiology at one site only.

In addition, a total of 32 responses to a sub-set of the interview questions were obtained, ranging from four to 11 interviews conducted at each site.

The perceived benefits of MDC case conference meetings for the patients discussed during the meeting are outlined in Table 14.2. The perceived benefits of meetings for the clinicians participating in the meetings are outlined in Table 14.3. The clinicians’ perceptions of the key factors contributing to the ‘success’ of meetings are outlined in Table 14.4.

The benefits in Tables 14.2–14.4 are listed by the number of sites at which the benefits were listed by at least one interviewed clinician. Where the specific details associated with a particular benefit differed between sites, details are listed in a separate column.

14.4 Discussion

Analysis of the observations of multidisciplinary case conference meetings and interviews with participants about their perceptions of the meetings revealed many factors that were common to all four sites. These factors were perceived by the Observer and the meeting participants to contribute to the success of meetings. Throughout this discussion, ‘success’ refers to the meeting and decision-making processes, rather than to clinical outcomes for the women with breast cancer whose cases are discussed.
**14.4.1 Meeting format**

**Meeting venue and rooms**

Meetings were always, or nearly always, held at the same time in the same venue at each site. The type of meeting rooms and available facilities differed between sites. While the Observer rated some rooms and facilities as more spacious and comfortable than others, this did not appear to affect meeting processes, including case discussion and clinical decision-making.

**Refreshments and food**

At three of the four trial sites, multidisciplinary case conference meetings were held outside normal working hours, during breakfast or lunchtimes. Meetings at the fourth site were held towards the end of the working day, at a time when people can be tired or lacking in energy. As participants were asked to attend a meeting at these times, it seemed important that refreshments and food were available. This was the case at all trial sites.

**Number of cases discussed**

Although each site allowed approximately 45–60 minutes for case discussions, the number of cases discussed per meeting varied considerably between and within sites, ranging from three to 11. The number of cases discussed did not seem to affect the perceived ‘success’ of the meetings, and any additional time was used for educational purposes, ranging from presentations about clinical trials to discussions about clinical evidence.

**14.4.2 Preparation for meetings**

Good preparation of materials and information in advance of the meeting appeared to be a key factor at three of the four sites, although the types of materials and the way in which they were prepared varied between sites. At three sites, the surgical registrar was responsible for preparing information and presenting the case discussions, sometimes with the assistance of other staff members. The importance of good preparation and organisation of information was highlighted on one occasion by the absence of the usual surgical registrar at Site 2. The meeting was disorganised where it was usually organised, tense where it was usually friendly, and the ability of the group to discuss cases and develop treatment plans was limited because key information about the cases concerned was missing.

At Site 3, each clinician was responsible for preparing and bringing along their own materials, such as slides of patients they had seen that week, rather than this being the responsibility of
one individual. However, despite this, materials did not seem to be missing for discussions and the Chair kept meetings on track.

14.4.3 Leadership and facilitation of case discussions

At each site, good leadership and facilitation of meetings by the Chair appeared to be a key factor in the success of meetings. The Chair was a surgeon at each site. The most important roles of the Chair included: keeping meetings to the agenda, commencing discussions, encouraging involvement of participants in case discussions, and, at the conclusion of each case discussion, summarising the discussion and inviting any further input before moving to the next case. The importance of this role is illustrated by the experience at Site 3, where a substitute Chair did not adequately fulfil the leadership and facilitation functions, which resulted in no psychosocial input into case discussions, and seemingly unclear case discussion outcomes.

The use of an alternating Chair at Site 2, and the pilot site’s use of a rotating Chair, demonstrates that a successful meeting is not dependent on the Chair being the same person in every meeting, as long as the leadership and facilitation roles are fulfilled. ‘Strong’ leadership involved facilitation and did not equate to dominance of clinical decision-making. Rather, the Chair’s role was to facilitate participation by all members of the multidisciplinary team in clinical discussions and decision-making, ensuring that meetings were not dominated by a few clinicians.

A recent study of breast care teams in the United Kingdom found that the most effective team meeting outcomes were from teams that shared the leadership role for clinical decision-making. Outcomes of teams led by a single clinician for clinical decision-making were better than those for teams with no leader or conflict about leadership, but they did not perform as well as teams with a number of leaders. Interestingly, evaluation of leadership separated the concept of leadership for clinical decision-making from the ‘(usually) single administrative head’ of the team. It is unclear from the results of the present study whether participants viewed the Chair as a leader of clinical decision-making, or an administrative head, or both. However, the Observer noted that the Chairs facilitated discussions rather than leading them, and from this it is reasonable to assume that there was generally more than one leader for clinical decision-making across the four study sites.

At all sites, all representatives of the core disciplines interviewed felt they had ample opportunity to contribute to case discussions, and all appeared to do so, when the discussions were relevant to their expertise. The Chair’s role appeared to be to prompt the full range of input into discussions if it was not forthcoming. The present study indicates that the Chair’s leadership and facilitation roles are important for multidisciplinary case conference meetings. While the Chair
does not have to be the same person every meeting, and there can be more than one clinician leading clinical decision-making, the experience at Site 3 also demonstrates that some people are better able to fulfil the role effectively than others, although this could be due mainly to differences in experience and training.

14.4.4.1 Motivation to attend meetings

Participants’ motivation to attend multidisciplinary case conference meetings was a factor that was apparent across all sites. The Observer rated the meeting atmosphere as generally friendly, inclusive and social at all sites, and noted that most participants seemed to enjoy talking with each other on both a professional and social level. Participants at different sites specifically mentioned that they found the meetings enjoyable as an opportunity to interact with other members of the multidisciplinary team.

All meeting participants who were interviewed felt there were benefits of the meetings for their patients and for the participants. These perceived benefits appeared to be strong motivational factors for attending the meetings.

At least one participant at each site mentioned that the meetings were valuable because they were educational, providing an opportunity to: learn from peers; hear about new ideas and the latest techniques; and discuss complex clinical issues and evidence-based clinical practice. Presentations and discussions about clinical research, or other clinical matters that were educational rather than for planning treatment for a specific case were observed at least once at three of the four sites. Several participants clearly placed considerable value on the educational aspect of the case conference meetings. Participants also believed that discussions about evidence resulted in good, up-to-date, evidence-based treatment plans for patients that were more likely to be suited to the individual patient’s needs, and free from the biases of individual clinicians.

Participants reported that the meetings made it easier for them to do their job well, as they already had some knowledge of patients before meeting with them, and they knew other members of the multidisciplinary team, making the referral pathways easier. Streamlining the clinical pathway was also perceived to benefit the patients discussed.

14.4.5 Participation and respect

At each site, participants reported that representation across several disciplines, and mutual respect or ‘good’ group dynamics were important for multidisciplinary case conferences in their hospital. Each site did have good representation across disciplines, and the Observer
noted that each participant’s input into discussions was valued and respected by the other participants at every site.

### 14.4.6 Communicating outcomes of case discussions

Research has found that the mental health and well-being of adults with cancer can be improved through the provision of adequate information,\(^4\) and most women prefer to be involved in decision-making about their own treatment.\(^4\) All four trial hospitals had a method for communicating case discussion outcomes to the women concerned and/or their general practitioners. For three hospitals, the treating clinician (usually the surgeon) was responsible for communicating outcomes to the women concerned, while no procedure was in place for the fourth hospital. Communication of case discussion outcomes enables the women concerned to be involved in decision-making.

All four hospitals also forwarded a summary of outcomes to the woman’s general practitioner, either as a letter from the treating surgeon or hospital administration, or via a faxed, standardised hospital case summary form.

### 14.4.7 Clinician mental health and well-being

Recent research from the United Kingdom has found that clinicians who work as part of a breast cancer care team have a significantly lower incidence of minor psychiatric morbidity than in the general health care workforce and in samples of the general population.\(^4\) While the mental health and wellbeing of participating health care professionals was not directly measured during the present study, participants’ perceptions of the many benefits to themselves and their patients of the multidisciplinary case conference meetings indicated a positive approach of clinicians to their professional life, which may possibly extend to their overall mental health and wellbeing.

### 14.4.8 Methodological considerations

While the study design provides a highly valuable insight into factors of multidisciplinary case conference meetings, the generalisability of these results is somewhat limited by a number of factors, including:

- a small sample size
- practical difficulties in accessing all meeting participants for interviews
• reliance on one person’s interpretations.

Sample size

The observation of multidisciplinary case conference meetings at four hospital sites allowed the collection of in-depth qualitative data to gain an understanding of meetings at these individual sites. However, it is possible that the three meetings observed at each site were not completely representative of multidisciplinary case conference meetings held at these sites, and additional factors contributing to these meetings may have been revealed, had further observations been made.

It is also possible that factors, not observed at the four study sites, may contribute to meetings in other sites across Australia. A study of a broader range of sites may also reveal a change in the relative importance of factors that were observed at the four study sites. Other forms of communication, such as tele-/video-conferencing, may also be used elsewhere and were not assessed in this study.

Access to clinicians for interview

Within each site, the Observer found it difficult to interview all meeting participants after every meeting. This was particularly difficult when the meeting was held immediately before a breast clinic, as patients were usually waiting to see clinicians, and the Observer was unable to interview some clinicians at all. This may have introduced a bias into the results, if clinicians whose perceptions were not recorded were those who felt most rushed, most under-resourced or least part of a team.

Reliance on one person’s interpretations

The observational data were mostly qualitative, and required the Observer to observe and interpret events, including subtle aspects of interactions between members during each meeting. The use of the Observer’s interpretations introduces some bias in data collection. Potential bias was reduced in the following ways:

• the same observer recorded data for all meetings

• the data collection instrument was found to be relatively reliable through tests of inter-rater reliability

• the perspectives of meeting participants were also recorded, validating data collected by the Observer.
14.4.9 Summary

Key factors contributing to multidisciplinary case conference meetings included:

- excellent leadership of meetings, including facilitation of full participation in cross-discipline discussions
- good preparation of relevant materials and information in advance of meetings
- good group dynamics, including full participation by all disciplines, and mutual respect between participants
- motivation for participants to attend meetings
- outcomes of case discussions are communicated to the woman concerned, and/or to her general practitioner.

Key perceived benefits of multidisciplinary case conference meetings included:

- patient care is more likely to be evidence-based
- all treatment options can be considered, and treatment plans tailored for individual patients
- clinical pathways are more likely to be streamlined
- clinicians have educational opportunities
- meetings provide opportunities for clinicians to interact with colleagues, on social and professional levels.
Table 14.1  Average number of participants, by discipline, attending multidisciplinary care treatment planning meetings at each hospital site

<table>
<thead>
<tr>
<th>Core clinicians</th>
<th>Site 1</th>
<th>Site 2</th>
<th>Site 3</th>
<th>Site 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeon</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Radiologist</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pathologist</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Medical oncologist</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Radiation oncologist</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Supportive care:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– breast care nurse</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>– clinical nurse</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>– research nurse</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Other professionals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast physician</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data manager</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>11</strong></td>
<td><strong>11</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>
### Table 14.2 Perceived benefits of multidisciplinary case conference meetings for patients

<table>
<thead>
<tr>
<th>Number of sites</th>
<th>Perceived benefits for patients (listed by at least one participant at the site)</th>
<th>Details of benefits (details sometimes differed between sites)</th>
</tr>
</thead>
<tbody>
<tr>
<td>all sites</td>
<td>• treatment plans are informed by the pooled experience of many clinicians</td>
<td></td>
</tr>
<tr>
<td>3 sites</td>
<td>• a full range of treatment options is considered for each patient</td>
<td></td>
</tr>
<tr>
<td>2 sites</td>
<td>• treatment is more likely to be evidence-based:</td>
<td>○ and informed by up-to-date information&lt;br&gt;○ with collective treatment planning tending to&lt;br&gt;reduce the bias of individual clinicians</td>
</tr>
<tr>
<td></td>
<td>• treatment plans are tailored for individuals, which:</td>
<td>○ is particularly important for unusual cases&lt;br&gt;○ means that plans are more likely to be holistic</td>
</tr>
<tr>
<td></td>
<td>• the clinical pathway is likely to be more streamlined for patients:</td>
<td>○ with patients not necessarily having to see all clinicians themselves</td>
</tr>
<tr>
<td>1 site</td>
<td>• clinicians involved in developing the treatment plans are better informed, which leads to better treatment plans for patients</td>
<td></td>
</tr>
</tbody>
</table>
Table 14.3 Perceived benefits of multidisciplinary case conference meetings for meeting participants

<table>
<thead>
<tr>
<th>Number of sites</th>
<th>Perceived benefits for meeting participants (listed by at least one participant at the site)</th>
<th>Details of benefits (details sometimes differed between sites)</th>
</tr>
</thead>
<tbody>
<tr>
<td>all sites</td>
<td>• the meetings are educational – a range of specific benefits were listed, involving opportunities to:</td>
<td>• learn from colleagues in other disciplines, including psychosocial aspects of care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• hear new ideas and the latest technological advances, and keep up-to-date with current practices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• hear other clinicians’ perspectives on the management of patients</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• learn about clinical trials, clinical developments and clarify clinical research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• be involved in discussions about clinical practice guidelines and best practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• discuss complex clinical issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• be exposed to peer-review</td>
</tr>
<tr>
<td></td>
<td>• the meetings are an opportunity for interaction with other members of the treatment team – a range of specific benefits were listed, including opportunities for:</td>
<td>• meeting with other team members directly, face-to-face</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• getting to know the way other team members think</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• creating an identity for members as part of a team</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• interacting on a social level with other members of the treatment team, which makes meetings enjoyable</td>
</tr>
<tr>
<td>3 sites</td>
<td>• meetings result in clinicians having some knowledge about individual patients before they meet with them, which assists the clinicians</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• clinicians can voice their opinions and feel reassured that treatment options (from their discipline) have been considered for every patient</td>
<td></td>
</tr>
</tbody>
</table>
Table 14.3 Perceived benefits of multidisciplinary case conference meetings for meeting participants (cont’d)

<table>
<thead>
<tr>
<th>Number of sites</th>
<th>Perceived benefits for meeting participants (listed by at least one participant at the site)</th>
<th>Details of benefits (details sometimes differed between sites)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 site</td>
<td>• knowing other clinicians through meetings makes the referral path easier</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• clinicians gain assistance from other disciplines, which can make their job easier</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• for those involved in diagnosis only such as radiologists, the meetings are an opportunity to follow the women further down the treatment pathway</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• meetings provide an opportunity to advocate for patients from a psychosocial perspective</td>
<td></td>
</tr>
</tbody>
</table>
Table 14.4 Perceived key factors in the success of multidisciplinary case conference meetings

<table>
<thead>
<tr>
<th>Number of sites</th>
<th>Perceived benefits for meeting participants (listed by at least one participant at the site)</th>
<th>Details of benefits (details sometimes differed between sites)</th>
</tr>
</thead>
<tbody>
<tr>
<td>all sites</td>
<td>• having of ‘good’ group dynamics, by involving participants who:</td>
<td>o are team-oriented</td>
</tr>
<tr>
<td></td>
<td>o attend meetings regularly</td>
<td>o attend meetings regularly</td>
</tr>
<tr>
<td></td>
<td>o listen to each other</td>
<td>o listen to each other</td>
</tr>
<tr>
<td></td>
<td>o respect each other and each others’ views</td>
<td>o respect each other and each others’ views</td>
</tr>
<tr>
<td></td>
<td>o interact well with each other</td>
<td>o interact well with each other</td>
</tr>
<tr>
<td>3 sites</td>
<td>• being well chaired, by someone who:</td>
<td>o shows good leadership</td>
</tr>
<tr>
<td></td>
<td>o runs meetings well</td>
<td>o runs meetings well</td>
</tr>
<tr>
<td></td>
<td>o ensures participants’ opinions are sought and acted on</td>
<td>o ensures participants’ opinions are sought and acted on</td>
</tr>
<tr>
<td></td>
<td>o is ‘enthusiastic’, ‘respectful’, ‘brilliant’</td>
<td>o is ‘enthusiastic’, ‘respectful’, ‘brilliant’</td>
</tr>
<tr>
<td></td>
<td>• being organised, with good preparation of information or reports in advance of the meeting</td>
<td></td>
</tr>
<tr>
<td>2 sites</td>
<td>• attendance by a representative from each specialty involved</td>
<td></td>
</tr>
<tr>
<td>1 site</td>
<td>• taking a holistic view of patient treatment and care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• participants having a common purpose, to produce the best treatment plans from MDC case conference meetings</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix I  Project team members and terms of reference

Project team membership

- Professor Sally Redman, former CEO (February 1999 – project completion)
- Professor Christine Ewan, CEO (April 2003 – project completion)
- Dr Helen Zorbas, Clinical Director/Acting CEO (February 1999 – project completion)
- Dr Karen Luxford, Program Director (February 1999 – project completion)
- Dr Anne Grunseit, Project Coordinator (February – December 1999)
- Dr Lyn Kemp, Project Coordinator (December 1999 – November 2000)
- Dr Kathy Rainbird, Project Coordinator (November 2000 – January 2003)
- Dr Alison Evans, Program Manager (March 2003 – project completion)
- Ms Liz Temple, Project Officer (April – November 2002)

Project team terms of reference

To implement the multidisciplinary care project on advice from Steering Committee within the terms of contract with the Commonwealth, specifically:

1. To prepare a draft of site Selection Criteria and Terms of Reference for Steering Committee and sub-committee(s)
2. To draft contracts for sites and subcontractors
3. To liaise with, advise and support site coordinators and their teams
4. To produce protocols for implementation of multidisciplinary care model
5. To prepare instruments for qualitative and quantitative data collection
6. To collect qualitative and quantitative data
7. To maintain and manage quantitative and qualitative databases
8. To coordinate qualitative and quantitative analysis in cooperation with project statistician

9. To appoint staff (where necessary) for project activities (e.g., data entry, transcription of interviews)

10. To draft interim and final project reports

11. To provide a secretariat role for project committees
Appendix II  Steering Committee members and terms of reference and Site Selection Subcommittee members

Steering Committee membership

The Steering Committee membership has included:

- Professor Christine Ewan (Chair), University of Western Sydney (NSW)
- Mr Bruce Barraclough, Royal Australasian College of Surgeons (NSW)
- Dr Fran Boyle, Department of Clinical Oncology, Royal North Shore Hospital (NSW)
- Mr Brian Conway, Ms Sandra Gagalowicz, Mr Andrew Benson, Ms Kristi Gooden, Dr Rosemary Knight and Ms Jen Smart, National Health Priorities and Quality Branch, Commonwealth Department of Health and Ageing (ACT)
- Dr Paul Ireland and Professor Mark Elwood, National Cancer Control Initiative, Anti-Cancer Council of Victoria (VIC)
- Ms Meg Lewis, Women’s Health Centre, Royal Adelaide Hospital (SA)
- Mr Peter Malycha, Royal Australasian College of Surgeons (SA)
- Emeritus Professor Tom Reeve, Australian Cancer Network (NSW)
- Dr David Roder, Cancer Council South Australia (SA)
- Professor Alan Rodger, William Buckland Radiotherapy Centre, Alfred Hospital (VIC)
- Professor George Rubin, Australian Centre for Effective Healthcare, University of Sydney (NSW)
- Dr Elizabeth Salisbury, ICPMR, Westmead Hospital (NSW)
Mr Glenn Salkeld and Associate Professor Judy Simpson, Department of Public Health & Community Medicine, University of Sydney (NSW)

Ms Onella Stagoll, Central Planning and Coordination Unit, BreastScreen Victoria (VIC)

Ms Lyn Swinburne, Consumer Representative (VIC)

National Multidisciplinary Care Demonstration Project Team of the Centre

Collaboration representatives on the Steering Committee

Associate Professor Richard Bell, Barwon & Western Breast Consortium (VIC)

Professor Peter Donnelly and Dr Richard Turner, North Queensland Breast Cancer Collaboration (QLD)

Dr Craig Lewis, Prince of Wales Hospital and Associated Rural Centres Collaboration (NSW)

Mr Bruce Mann and Ms Meron Pitcher, North Western Health and Ballarat Health Services Collaboration (VIC)

Steering Committee terms of reference

To oversee and provide guidance and advice on all aspects of the project, specifically:

1. To oversee the selection of project demonstration sites including approving the call for Expressions of Interest and Site Selection Criteria, appointing a site selection subcommittee, and selecting sites following advice from the Subcommittee

2. To provide advice about and endorse the model of multidisciplinary care to be implemented at demonstration sites

3. To provide advice on demonstration site contracts

4. To provide advice and oversee the establishment of the model of care at the demonstration sites

5. To provide advice regarding issues arising from the ongoing implementation of the multidisciplinary care model
6. To provide advice on, to endorse, and oversee the project evaluation component of the project

7. To endorse deliverables for subcontracted work

8. To provide advice to the Department of Health and Ageing and the Centre’s Board on the progress of the project

9. To review and provide feedback and input on interim and final reports of the project

**Site Selection Subcommittee members**

The Steering Committee appointed a Site Selection Subcommittee to recommend the collaborations for participation in the Demonstration Project. Members included:

- Emeritus Professor Tom Reeve (Chair)
- Mr Peter Malycha (breast surgeon)
- Ms Lyn Swinburne (consumer representative)
- Mr Andrew Benson (Commonwealth representative)
- Ms Sandra Gagalowicz (Commonwealth representative)
- Professor Tom Anderson (visiting pathology fellow from Scotland and international member of the Site Selection Subcommittee).
Appendix III  National Profile study survey

1. The term multidisciplinary care is increasingly being used in referring to the management of women with breast cancer.
   a) Can you describe in one or two sentences what this term means for you?
   b) Do you think that clinicians at your hospital have a shared view of what multidisciplinary care means?
      Yes  No  Don't know
      (What we mean is how confident are you that there is a shared view of multidisciplinary care amongst clinicians at hospital level.)
   c) How do you rate the following elements for the provision of effective multidisciplinary care?
      Essential  Preferable  Sometimes necessary  Not necessary
      1) The establishment of a team of clinicians with an interest and expertise in breast cancer.
      2) Clinicians involved in the management of a woman with breast cancer communicate about her care.
      3) Women with breast cancer have access to all relevant treatment and support services.
      4) Women with breast cancer are managed in accord with best practice guidelines, which are reflected in the development of local protocols.
      5) Women with breast cancer have available information and support on which to base their treatment decisions.

2. We would like to explore the ways in which your hospital organises the provision of radiotherapy, medical oncology and supportive care services for women who require them.
   a) Which statement best describes the provision of radiotherapy services to patients at your hospital?
      1) radiotherapy unit is on site
      2) women are referred to another hospital for treatment and there is a visiting radiotherapist for consultation (no travel)
      3) women are referred to another hospital for treatment and there is no visiting radiotherapist (do travel)
   b) Which statement best describes the provision of chemotherapy services to patients at your hospital?
      1) chemotherapy unit (medical oncologist and treatment) is on site
      2) women are referred to another hospital for treatment and there is a visiting medical oncologist for consultation (no travel)
3) women are referred to another hospital for treatment and there is no visiting medical oncologist (do travel)

4) chemotherapy is administered locally (at hospital/ GP/ other) and there is a visiting medical oncologist

5) chemotherapy is administered locally (at hospital/ GP/ other) and there is no visiting medical oncologist

c) Many hospitals have a nominated staff member responsible (within hospital) for the provision of information and supportive care, such as a specialist breast nurse; others have oncology nurses or clinical case managers who provide this service for women with breast cancer. Which statement best describes the provision of information and supportive care for women with breast cancer at your hospital?

1) Yes, a breast care nurse (or equivalent) is available on site

2) Yes, women are referred to a clinic or other hospital with which there are established referral links with a breast care nurse or equivalent

3) No. there is no provision of a staff member who is responsible for information and support needs

4) don’t know

3. We would like to explore how your hospital organises the provision of special care services for women who require them. (not the core services)

a) If a woman (or her family) requires specialist genetic counselling, how is this organised? (specialist referral – high risk)

1) available, on site

2) they are referred to a clinic or other hospital to which there are established referral links

3) there are no established links with a particular service therefore referrals may vary as individual clinicians or GPs organise referral

b) Do genetic counsellors participate in multidisciplinary meetings?

1) yes, regularly

2) yes, occasionally when invited

3) no, they never attend

4) no, there are no multidisciplinary meetings

c) If a woman requires specialist psychiatrist care, how is this organised?

1) available, on site

2) they are referred to a clinic or other hospital to which there are established referral links

3) there are no established links with a particular service therefore referrals may vary as individual clinicians or GPs organise referral
d) Do psychiatrists participate in multidisciplinary meetings?
   1) yes, regularly
   2) yes, occasionally when invited
   3) no, they never attend
   4) no, there are no multidisciplinary meetings

e) If a woman requires specialist treatment/management for lymphoedema, such as a physiotherapist, occupational therapist or lymphoedema clinic, how is this organised? (what is the protocol)
   1) available, on site
   2) they are referred to a clinic or other hospital to which there are established referral links for this management
   3) there are no established links with a particular service therefore referrals may vary as individual clinicians or GPs organise referral

f) Do physiotherapists, occupational therapists or lymphologists participate in multidisciplinary meetings?
   1) yes, regularly
   2) yes, occasionally when invited
   3) no, they never attend
   4) no, there are no multidisciplinary meetings

g) If a woman requires reconstructive surgery, how is this organised?
   1) available, on site (tease out /surgeon)
   2) they are referred to a clinic or other hospital to which there are established referral links for reconstructive breast surgery
   3) there are no established links with a particular service therefore referrals may vary as individual clinicians or GPs organise referral

h) Do reconstructive surgeons participate in multidisciplinary meetings?
   1) yes, regularly
   2) yes, occasionally when invited
   3) no, they never attend
   4) no, there are no multidisciplinary meetings

i) If a woman is eligible for and agrees to participate in a relevant clinical trial, how is this organised? (Different answers!)
   1) available, on site
   2) they are referred to a clinic or other hospital to which there are established referral links
3) there are no established links with a particular clinical trials centre therefore referrals may vary as individual clinicians or GPs organise referral

4) women treated at this hospital are not involved in / invited to participate in clinical trials

j) Does a staff member who is involved in recruitment and/or follow-up of women in clinical trials, participate in multidisciplinary meetings?

1) yes, regularly
2) yes, occasionally when invited
3) no, they never attend
4) no, there are no multidisciplinary meetings

4. Hospitals may use a number of different systems to communicate information between clinicians about patients they have in common for the purpose of treatment planning. For example, some hospitals institute formal regular multidisciplinary meetings for the purpose of treatment planning; others have a less formal pattern of communication between individual clinicians.

a) Which statement best describes the approach used at your hospital for communication between clinicians to develop a treatment plan? (women with breast cancer hospital based)

1) regular multidisciplinary meetings are held for treatment planning
2) occasional / irregular multidisciplinary meetings are held depending on caseload or need
3) there are no multidisciplinary meetings for the purpose of treatment planning; clinicians communicate on an individual basis as required
4) there are no multidisciplinary meetings for the purpose of treatment planning and there is little or no discussion between clinicians
5) don’t know

If answered 3, 4 or 5 the next two questions do not apply to your hospital. If respondent answers yes to either 1) or 2) above, then proceed with the following questions. For all others, go directly to question 5.

b) Where multidisciplinary meetings are held for treatment planning, could you tell us whether the representatives of the following disciplines are always or usually in attendance and the means by which they attend.

<table>
<thead>
<tr>
<th></th>
<th>Attends</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>usually/always</td>
<td>in person</td>
<td>tele/video-conference</td>
<td>Other</td>
</tr>
<tr>
<td>Surgeon</td>
<td></td>
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<tr>
<td>Pathologist</td>
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<tr>
<td>Radiologist</td>
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<td>Medical oncologist</td>
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<tr>
<td>Radiation oncologist</td>
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<tr>
<td>Supportive care</td>
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<tr>
<td>General practitioner</td>
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Note if General Practitioner attends for question to prompt question 5.
c) If multidisciplinary meetings are held for treatment planning, which statement best describes the approach to case selection for discussion?

1) all or almost all women treated for breast cancer are considered at multidisciplinary meetings

2) cases are selected on a known and agreed basis/criteria for consideration at multidisciplinary meetings

3) individual clinicians can bring cases for discussion as required

4) 2 & 3

5. We would like to explore the ways in which treatment plans are communicated to women and their general practitioners.

a) How are the outcomes of treatment planning communicated to the woman? Or how the treatment plan is communicated to the woman?

1) following the multidisciplinary meeting, a nominated clinician discusses and provides a written treatment plan to the woman

2) following the multidisciplinary meeting, a nominated clinician discusses the treatment plan with the woman

3) there is no protocol for communicating the outcomes of the multidisciplinary meeting with the woman

4) there are no multidisciplinary meetings and individual clinicians communicate with the woman about their aspect of her care

5) don’t know

b) How are the outcomes of treatment planning communicated to the woman’s general practitioner? Or how the treatment plan is communicated to the general practitioner?

1) following the multidisciplinary meeting, a nominated clinician provides a written treatment plan to the woman’s general practitioner

2) following the multidisciplinary meeting, a nominated clinician discusses the treatment plan with the general practitioner

3) there is no protocol for communicating the outcomes of the multidisciplinary meeting with the woman’s general practitioner

4) there are no multidisciplinary meetings and individual clinicians communicate with the woman’s general practitioner about their aspect of her care

5) don’t know

6. We would like to explore some ways in which best practice and quality assurance is maintained in the management of women with breast cancer at your hospital.

a) Does your hospital have agreed protocols based on best practice guidelines for the management of women with breast cancer?

1) yes, covering multiple aspects of care

2) yes, covering few or isolated aspects of care
3) no, there are no protocols
4) don’t know if there are any protocols

For example in surgery, medical oncology, nursing. If respondent answers yes (1 or 2 above) then ask this additional question:

b) Are these written protocols?

1) yes
2) no
3) don’t know

c) Does your hospital have a system for the collection and review of data about the management of women with breast cancer for the purposes of audit and review? These data may be collected, for example, for use in guiding the development of protocols, for publishing in medical journals or for professional education of hospital clinicians.

1) yes, there is a central hospital data collection and a process for review of this data
2) yes, there is a central hospital data collection but no process for review of this data
3) there is no central data collection, however some individual clinicians collect data about their practice
4) there is no data collection at your hospital either centrally or by individual clinicians
5) don’t know

d) Are there multidisciplinary meetings for the purpose of professional education in breast cancer (not including BreastScreen meetings) at your hospital?

1) yes, regular meetings four or more times a year
2) yes, between one and four times a year
3) yes, less often than once a year
4) no, there are no professional education meetings in breast cancer

Thank you for participating in this questionnaire.
### Appendix IV

List of hospitals participating in the *National Profile Study of Multidisciplinary Care*

<table>
<thead>
<tr>
<th>Hospital</th>
<th>State</th>
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<tbody>
<tr>
<td>Alice Springs Hospital</td>
<td>NT</td>
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<tr>
<td>Ashford Hospital</td>
<td>SA</td>
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<tr>
<td>Atherton District Hospital</td>
<td>QLD</td>
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<tr>
<td>Austin and Repatriation Medical Centre</td>
<td>VIC</td>
</tr>
<tr>
<td>Bankstown Hospital</td>
<td>NSW</td>
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<tr>
<td>Bathurst Base Hospital</td>
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<tr>
<td>Box Hill Hospital</td>
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<tr>
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<tr>
<td>Central Wellington Hospital</td>
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<tr>
<td>Epworth Hospital</td>
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<td>Freemasons Hospital</td>
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<tr>
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<td>Hunter Valley Private Hospital</td>
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<td>John Hunter Hospital</td>
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<td>Linacre Private Hospital</td>
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<td>Liverpool Hospital</td>
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<td>Manly Hospital</td>
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<tr>
<td>Masada Private Hospital</td>
<td>VIC</td>
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<td>Mater Misericordiae Hospital (North Sydney)</td>
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<td>Mercy Hospital</td>
<td>WA</td>
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<td>Mitcham Private Hospital</td>
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<td>Monash Medical Centre</td>
<td>VIC</td>
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<tr>
<td>Mount Gambier District Health Services</td>
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<td>Newcastle Misericordiae Hospital</td>
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<td>Hospital Name</td>
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<tr>
<td>Noarlunga Health Services</td>
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<tr>
<td>North West Regional Hospital Burnie</td>
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<td>Peter MacCallum Cancer Institute</td>
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<td>Princess Alexandria Hospital</td>
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<td>Stawell District Hospital</td>
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<td>Sunshine Coast Haematology and Oncology Clinic</td>
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<td>The Angliss Hospital</td>
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<td>The Canberra Hospital</td>
<td>ACT</td>
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<td>The Maitland Hospital</td>
<td>NSW</td>
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<tr>
<td>The Queen Elizabeth Hospital</td>
<td>SA</td>
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<tr>
<td>The Wesley Haematology/Oncology</td>
<td>QLD</td>
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<tr>
<td>Toowoomba Hospital</td>
<td>QLD</td>
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<tr>
<td>Wangaratta District Base Hospital</td>
<td>VIC</td>
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<tr>
<td>Westmead Hospital</td>
<td>NSW</td>
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Appendix V  Instructions to Site Selection
Sub-Committee

1. **Objective**

The Commonwealth Department of Health and Aged Care has funded a demonstration project exploring multidisciplinary care in the management of women with breast cancer in Australia. This project will be managed by the NHMRC National Breast Cancer Centre.

The purpose of the project is to describe multidisciplinary care in Australia and to examine the impact, acceptability and costs of strategies to foster this approach to care. It is anticipated that in the longer term this information will contribute to the development of a national approach to multidisciplinary care in Australia.

Three collaborations will be selected to participate in the project. A collaboration may be a single institution or a group of linked institutions. Participating collaborations will nominate a range of strategies to be implemented as part of the demonstration project which will assist their centres in providing multidisciplinary care. Funds of $87,000 per collaboration are available to assist in the implementation of these strategies.

Collaborations will be selected on a competitive basis and to represent diverse facilities including both the public and private sectors, and urban and rural regions.

2. **Multidisciplinary care in this national demonstration project**

When multidisciplinary care is provided, the input of professionals contributing to the management of women with breast cancer is coordinated and integrated.

Attachment 1 outlines the *Principles of Multidisciplinary Care* that will form the basis of the demonstration project. It also includes some examples of strategies that might be used to implement these principles. These examples have been included only as a guide to applicants and any reasonable approach should be considered by the Committee.
3. **Overarching factors in site selection**

In approaching its task, the Site Selection Sub Committee should bear in mind three overarching factors:

- The process must be transparent and accountable. Members should declare to the chair any conflict of interest which may arise during the course of the selection process.

- Three collaborations will be selected. They should be chosen to reflect the diversity within Australian practice. This will ensure that the best possible information is derived from the project as a whole. It is particularly important that there be an adequate representation of rural sites across the project as a whole. The three collaborations selected should represent diverse approaches to implementing multidisciplinary care. No more than one collaboration should be selected from each state.

- The process of site selection should be conducted so as to facilitate a positive relationship between the Centre and applicants. Interviews will be conducted in a positive manner and written feedback will be provided to all unsuccessful applications indicating in broad terms the reasons why they were not selected.

4. **Process of site selection**

- An advertisement will be placed in *The Australian* and on the Centre’s website and information sent to those groups who have already approached the Centre expressing interest in being informed. Information will also be included in *BreastFax*.

- Interested applicants will be asked to approach the Centre for an application form and further information. They will be sent the attached information by email or fax. There will be six weeks from the date of advertisement to the closing of applications.

- Written applications will be received by the Centre and treated as confidential. No late applications will be accepted.

- Copies of all applications will be sent to the Site Selection Sub Committee. Applications will be reviewed against the eligibility and competitive criteria. An initially teleconference will be held immediately to confirm the procedure for shortlisting applicants. Then a teleconference will be held one week after the applications are sent to the Committee to agree those applications which are ineligible and to shortlist.
• applications. Ineligible applicants will be informed and an appointment made to interview 8 eligible collaborations on the following week. Committee members will complete a rating form for each application.

• Two – three weeks after the applications are sent to the Committee, the Site Selection Sub Committee will meet. One and a half days will be required. In the first half day, the Sub Committee will review each of the eight shortlisted applications, discuss the ratings and identify any questions to be asked of applicants. On the second day which will be a full day, brief interviews will be held with each of the eight shortlisted collaborations. The collaboration will be invited to provide a brief 4 minute overview of their proposal and the Sub Committee will then ask any questions of clarification that it has for the collaboration.

• The chair will complete the Sub Committee’s joint rating scale following each interview. At the end of the interviews, the ratings will be considered as a whole by the Sub Committee bearing in mind the need to ensure diversification among the sites. The Sub Committee will recommend three preferred collaborations and one reserve collaboration.

• A site visit will be made to each of the three preferred collaborations by two members of the Site Selection Sub Committee prior to the final selection to confirm the details provided in the application. Any concerns will be discussed with the collaboration. If the Committee feels after the site visit that one of the preferred collaborations is not appointable, a visit will be made to the reserve collaboration.

5. Site selection criteria

A three tiered approach to the site selection criteria will be used as described above. First applicants will be assessed for eligibility; second, eligible collaborations will be rated against the Competitive Criteria and shortlisted and third the Committee will consider the shortlisted applications to ensure a diverse approach across the project as a whole.

Eligibility Criteria:

Applicants will be eligible if:

• They represent an appropriate collaboration. Collaborations may be a single institution or a group of institutions. In the case of multi-institution collaborations, linkages may already be well established or an intention to establish links as part of the project may be planned. Multi-institution collaborations may include geographically separate sites
• and/or sites representing particular expertise in relation to one discipline. They may include public or private institutions. Multi-site collaborations may include a site with well developed multidisciplinary care where the intent of participation in the program is to use this base to foster an improved multidisciplinary approach at other sites participating in the collaboration.

• At least 200 newly diagnosed cases of early and advanced breast cancer will be seen each year for the duration of the project across all of the sites participating in the collaboration. These numbers are necessary to ensure the quality of the evaluation. It will be necessary to ensure that accurate numbers of new breast cancer cases are being estimated by the collaboration and to clarify any potential misunderstandings about the types of patients to be included.

• The collaboration provides evidence that it will participate in each of the components of the evaluation as outlined in Attachment 2. This should include an indication that the collaboration understands the nature of the participation and that staff must agree to take part. Assistance will be provided in developing the application form for seeking ethics approval; responsibility for obtaining approval from the relevant ethics committee will be the responsibility of the collaboration.

• The collaboration provides evidence that all key clinicians and administrations (particularly the CEO) at each participating site fully support participation in the project. A list of relevant clinicians should accompany the application along with either evidence of individual support for participation or a letter indicating this support signed by the leaders of the collaboration.

**Competitive criteria:**

If the applicants meet the eligibility criteria, the second stage evaluation will rate each collaboration on the following criteria:

• **Significance (20 points):** Collaborations must indicate how participation in the project will improve multidisciplinary practice (10 points) and the patterns and outcomes of care (10 points). The applications must include a description of their current practice in relation to the Principles of Multidisciplinary Care outlined in Attachment 1, identifying the gaps in current care provision and opportunities for improving care. They will specify the strategies they plan to include as a result of participation in the project and how they anticipate that they will improve the patterns and outcome of care.
The Site Selection Sub Committee will rate each application on the extent to which the proposed strategies have the potential to significantly improve multidisciplinary care within the collaboration and are likely to improve the patterns and outcomes of care.

- **Feasibility (10 points):** Collaborations must indicate how they propose to implement the identified strategies. The Site Selection Sub Committee will rate each application on the extent to which they judge the proposals to be feasible within the time frame of the project and resources available. The Sub Committee should consider the extent to which support is available from clinicians and administrators, the extent to which the available resources will be sufficient to undertake the project and any other issues of relevance. In effect, the Sub Committee will need to weigh up the significance of the proposal against the likelihood that it can be successfully implemented.

- **Support at local level (5 points):** Collaborations may be able to indicate that they have been able to use participation in this project to leverage additional support from their local administrations or other sources. This support might include financial support or other resources. Evidence of this type of support may increase the likely success of the project.

- **Team and leaders defined (5 points):** Collaborations should provide evidence that they have available within the collaboration all of the expertise identified in the Principles of Multidisciplinary Care or will be able to use the project to ensure this expertise is available. The Sub Committee should consider the extent to which there is a clearly defined leader/s (i.e. Chief Clinical Collaborators) capable of ensuring the enthusiasm and cooperation of the team. They should consider the extent to which the team will be stable throughout the course of the project. The Sub Committee should consider the proposed project management plan by a collaboration and strategies for liaising with the NBCC, along with day to day practical administration issues such as identified staff to maintain logs.

- **Value for money (5 points):** Collaborations should provide an indicative budget as part of their application. The Sub Committee should consider the extent to which the budget represents value for money. It should be noted that applicants have been informed that the funding available is for the term of the demonstration project and is not ongoing. As such, the Sub Committee should note that the use of funding for the employment of additional staff who will not be supported locally beyond the term of the project is not a desirable use of funding.
Diversity

In selecting the three collaborations, the Sub Committee will ensure that they reflect the diversity within Australian practice. It is particularly important that there be an adequate representation of rural sites across the project as a whole. The three collaborations selected should represent diverse approaches to implementing multidisciplinary care across Australia. No more than one collaboration should be selected from each state.

Attachment 2

Participating collaborations will be required to assist in the evaluation as follows:

1. Participating in the Royal Australasian College of Surgeons Breast Surgical Audit. It is likely that a slightly modified version of this audit will be developed for the project. Collaborations will be asked to ensure that all surgeons agree to the release of data to the Centre, de-identified for both patient and surgeon.

2. Maintaining a log of nominated key multidisciplinary activities commencing in the pre-implementation period and continuing through to the post-implementation phase.

3. Participating in a survey of all clinicians during the pre-implementation and post implementation. All clinicians participating in the collaboration will be asked to complete the survey which will take approximately 90-120 minutes.

4. Allowing data collection by the health economist for the purposes of a Cost Analysis including changes in time allocation by personnel, changes in treatment processes and infrastructure expenditure in the implementation of multidisciplinary activities. Information will be obtained from staff interviews, finance departments, logs, and clinical audits.

5. Providing the names of all consenting women treated at all sites during the pre-implementation and post implementation periods. These women will be surveyed about their experiences of care during the pre-implementation and post implementation periods.

6. Ensuring approval from the relevant local ethics committee, with the support of the Centre, in documenting the evaluation.
Appendix VI  Expressions of Interest –
information for applicants

1. Objective

The Commonwealth Department of Health and Aged Care has provided funding to the NHMRC National Breast Cancer Centre (NBCC) for a demonstration project of a defined model of multidisciplinary care for the treatment of women with breast cancer. Three demonstration sites will be established nationally. The objective of the project is improve the management of women with breast cancer in Australia through the analysis a model of care developed for the Australian context from approaches employed internationally.

The acceptability and feasibility of the multidisciplinary care model will be assessed in each demonstration site. The cost, cost savings and impact on local patterns of care will be assessed by comparing patterns of breast cancer care in the demonstration sites before and after the introduction of the model.

2. Details

Sites must commit to participating in the project over a 21 month period from selection (approximately 4–6 weeks after submission deadline). This includes approximately eight months of site development and pre-test data collection and 13 months of model implementation and evaluation. During this time, financial support of up to $87,000 will be made available to each participating centre to implement the model of care. These monies will be payable in stages and may be used to cover costs incurred in providing supporting infrastructure and personnel necessary for implementing the multidisciplinary model. Payment will be contingent upon sites demonstrating achievement of project deliverables.

3. Background

The effective diagnosis and treatment of breast cancer relies upon the skills of clinicians from a range of medical and paramedical disciplines. Based on the experience in the United Kingdom, formal multidisciplinary care has the potential to improve outcomes and the quality of life of women with breast cancer.

The model of multidisciplinary care to be trialled in this project, the "A Model", is outlined in the attached protocol. This care model is a systematic approach overseen by a multidisciplinary clinical group. In addition to forming a multidisciplinary treatment team, this approach
involves the development of local treatment protocols which ensure that clinical pathways reflect an agreed multidisciplinary approach; audit and feedback to encourage care in accord with the multidisciplinary protocols; and case conferencing to ensure multidisciplinary input into the development of treatment plans for women who require a different approach to care.

In Australia there are few treatment centres which apply the formal approach to multidisciplinary care like that used in the United Kingdom. As a result, there is little information about the potential role of multidisciplinary care in Australia or the policy or funding implications of such an approach.

The aims of this project are to explore the cost, acceptability, feasibility and impact on patterns of care of a formal multidisciplinary team approach in three demonstration sites. Such information will provide a useful foundation for making recommendations about the implementation of multidisciplinary care for breast cancer nationally, including possible funding structures.

4. The project

Demonstration sites selected for this project will participate in the following activities:

a) Demonstration sites for this project will be expected to implement multidisciplinary care for women with breast cancer at both lead and regional centres according to the multidisciplinary care "A Model" protocol attached. Detailed local protocols for treatment should be developed by the multidisciplinary team based on this document.

b) Sites will form a multidisciplinary care team which will minimally include a specialist breast surgeon, a medical oncologist, a radiation oncologist, a pathologist and a nominated person responsible for supportive care. The site will also have access to a radiologist, physiotherapist, psychiatrist or psychologist, and social worker to be accessed as required by the women's treatment protocols. All staff should be trained in the treatment of breast disease and have a continuing interest in this area. The team should also work in close communication with referring general practitioners.

c) The multidisciplinary care team will meet regularly (e.g., weekly, fortnightly etc) and formally to discuss all cases of breast cancer seen at the site, and to generate treatment plans and options through this case conferencing. All members of the team must attend at least 70% of the multidisciplinary care team meetings, and all meetings in which their patient is discussed. This may be achieved either through attendance in person or by tele/video-conferencing.
Appendix VI

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d) A monthly forum is also to be held at each site in addition to the case conferencing, for the presentation of topics of interest.

e) Sites will complete log sheets developed by the Centre's project team to document participation in team meetings.

f) Sites will generate audit data for the on site monitoring of compliance with local protocols in a range of disciplines (e.g., surgery, pathology). The generation of these data should be facilitated by the use, or the development of, a standardised system of regular collection, storage and dissemination.

g) Sites will adhere to this model of multidisciplinary care for the full term of the project.

h) Sites are also expected to participate in the pre and post-intervention evaluation activities of the NBCC designed to assess the process and impact of implementing this model of multidisciplinary care at their site. This includes:

- Releasing clinical audit data (as described above in point (f)) available (subject to patient consent) for the purposes of gauging the impact of the multidisciplinary model on patterns of care from pre to post-intervention;
- Completing surveys and participating in interviews and focus groups on the feasibility and acceptability of the multidisciplinary model;
- Allowing observation by the health economist of team procedures for the purposes of gathering information on staff time allocation to breast cancer treatment;
- Assisting in the recruitment process for the surveys and interviews of consumers' experience of care both prior to and after the implementation of the multidisciplinary model.

i) Site teams will contribute information for interim and final reports to the Commonwealth Department of Health and Aged Care.

5. **Deliverables**

Specific deliverables from each site for this project will include:

a) An established model or demonstration of multidisciplinary care in breast cancer, linking urban and rural centres; the demonstration sites will be operational for a full year;
b) Development of local protocols in accord with NHMRC guidelines and the "A Model" of multidisciplinary care;

c) A multidisciplinary care team consisting of the staff outlined above, who meet regularly and formally to discuss the treatment of women with breast cancer at their site as per attached protocol;

d) Logs of the team meetings and the implementation process;

e) Collection of audit data in a range of service delivery disciplines and the infrastructure to collect and store this data.

The demonstration sites will also provide the NBCC with information which will enable an evaluation of the acceptability, cost and impact on patterns of care of the model including:

a) Completing surveys and participating in interviews and focus groups regarding the acceptability and feasibility of the multidisciplinary model;

b) Allowing observation by the health economist of team procedures for the purposes of documenting staff time allocation to the care of women with breast cancer both pre and post-implementation of the model;

c) Providing access to clinical audit data in order to gauge the impact of multidisciplinary care on patterns of care;

d) Providing names of women who have consented to be interviewed regarding their perceptions of their treatment experience.
6. **Support**

The NBCC will provide financial support linked to achievement of deliverables (see section 2). Further, the Centre will work closely with demonstration sites throughout the full term of the project and assist in the establishment and implementation of the multidisciplinary care model. This will include advising and overseeing the development of local treatment protocols, advising on the establishment of standardised audit procedures, and regular site visits by the NBCC Project Coordinator and the Centre's Clinical Adviser. All evaluation activities will be conducted by NBCC staff with the cooperation of the site team, and all project reports and costing analyses will be made available to participating centres.

7. **Publications**

Information to follow

8. **Expressions of interest**

Expressions of interest are envisaged as being no more than X pages and should reflect the performance of the applicant site against the nominated criteria.

Sites will be selected on a competitive basis from applications in response to the call for Expressions of Interest. Site selection will be made by an independent committee against set of specific criteria outlined below.

9. **Selection criteria**

A demonstration site will:

- Consist of a 'lead' centre (most likely a large, urban centre) with one or more rural site(s) working closely with the lead centre. The lead centre should capable of providing access to expertise and facilities for the regional/rural sites, for example, radiotherapy and specialist clinicians visits;

- Have access to relevant health professionals who would constitute the Multidisciplinary Care Team. The Team would minimally include a specialist breast surgeon, a medical oncologist, a radiation oncologist, a pathologist and a nominated person responsible for supportive care. The site will also have access to a radiologist, physiotherapist, psychiatrist or psychologist, and social worker to be accessed as required by the women’s treatment protocols;
• Have a new breast cancer patient caseload of at least 150 women per year (combined total between lead centre and rural/regional centres);

• Demonstrate that the applicant has the cooperation and support of the hospital administration;

• Nominate a team coordinator who has demonstrable experience and expertise in the treatment of women with breast cancer to liaise with the NBCC and coordinate the project locally;

• Have demonstrated a willingness of all team members and hospital administration to implement and adhere to the "A Model" of multidisciplinary care protocol prepared by the NBCC (available with Information for Applicants) for the entire term of the project.

In making selection for demonstration sites, the following will also be considered:

• A commitment to the delivery of care within an evidence-based multidisciplinary care framework in accord with the NHMRC guidelines for the management of breast cancer;

• Proven track record of successfully implementing and collaborating on similar projects and ability to meet deadlines;

• The ways in which participation in this project will bring the standard of care of the total site (i.e., lead centre plus regional centres) in line with the NHMRC guidelines for the management of breast cancer. Some breast cancer care facilities may have in place some or maybe even all of the components of the multidisciplinary care model outlined in the protocol for "Model A". The purpose of this project is, in part, to explore the impact of "Model A"; sites which are already fully implementing care in line with the "Model A" protocol will not be eligible. Applications should therefore include information about current care against the protocol and indications of planned changes and subsequent improvements in care as a result of participation in the project.

• Evidence of team stability and collaborative work ethic.

Submission details

Six copies of the Expression of Interest are to be provided by 5.00pm on Friday 9th of July 1999.
Address applications to:

Dr Anne Grunseit
Project Coordinator
National Multidisciplinary Care Demonstration Project
NHMRC National Breast Cancer Centre
PO Box 572
KINGS CROSS
NSW 1340


Appendix VII  Expressions of interest – advertisement

NHMRC National Breast Cancer Centre
National Multidisciplinary Care Demonstration Project

The NHMRC National Breast Cancer Centre is seeking expressions of interest from centres treating women with breast cancer to participate in a new nationally based project funded by the Commonwealth Department of Health and Aged Care. The National Multidisciplinary Care Demonstration project will examine the feasibility, acceptability, financial cost, and impact on patterns of service delivery of a defined model of multidisciplinary care of women with breast cancer. The model of care to be demonstrated has been developed for the Australian context by the NHMRC National Breast Cancer Centre from approaches employed internationally.

Funds of up to $87,000 will be available for demonstration sites participating in the above project.

It is anticipated that three sites each consisting of a large 'lead' centre with affiliated rural/regional centre(s) will be selected. The review of applications will be conducted by an independent committee.

Demonstration sites will:

• Consist of a 'lead' centre (most likely a large, urban centre) with one or more rural site(s) working closely with the lead centre. The lead centre should capable of providing access to expertise and facilities for the regional/rural sites, for example, radiotherapy and specialist clinicians visits;

• Have access to relevant health professionals who would constitute the Multidisciplinary Care Team. The Team would minimally include a specialist breast surgeon, a medical oncologist, a radiation oncologist, a pathologist and a nominated person responsible for supportive care.

• Have a new breast cancer patient caseload of at least 150 women per year (combined total between lead centre and rural/regional centres);

• Demonstrate that the applicant has the cooperation and support of the hospital administration;
• Nominate a team coordinator who has demonstrable experience and expertise in the treatment of women with breast cancer to liaise with the NBCC and coordinate the project locally;

• Have demonstrated a willingness of all team members and hospital administration to implement and adhere to the "A Model" of multidisciplinary care protocol prepared by the NBCC (available with Information for Applicants) for the entire term of the project.

Applicants intending to make a submission for selection as a demonstration site should obtain the supporting documents detailing selection criteria and the selection process from Dr Anne Grunseit by telephone on 02 9334 1705, facsimile 02 9326 9329, or by e-mail anneg@nbcc.org.au. Expressions of interest should be submitted by 5.00pm, Friday July 9th, 1999.
Appendix VIII  Consumer survey questionnaire

ID code of woman:                  Postcode of residence:

Good morning/afternoon/evening, My name is xxxx from the Hunter Valley Research Foundation. I believe you received a letter from the <<participating collaboration site>> and the National Breast Cancer Centre recently, explaining a survey of women with breast cancer. In this survey we are collecting information about issues relating to diagnosis, choices about treatment options, and information and support received since diagnosis.

I understand that you have agreed to take part in this survey.

The survey will take approximately 35 minutes to complete. However, if you would like to stop the interview at any time, just tell me. Would you be happy to do the interview now, or can I make an appointment to call you at some other time?

If no: say “Is there a better time for me to call you back?” If yes, record time and date and call back as arranged. If no, say “Would you like to receive more information about the survey? I could ring you again next week after you’ve had a chance to read information we send you.” (If yes, Check name and address details). If person does not want to participate, say “Thank you anyway for your time. Would you like me to send you any information about the National Breast Cancer Centre?”

ASK EVERYONE

First some questions about when you were told of your diagnosis.

Q1 Who first told you that you definitely had breast cancer? [READ OUT]
   • A senior doctor, such as a surgeon or consultant   1
   • A training or junior doctor, such as a resident doctor 2
   • A general practitioner   3
   • A nurse   4
   • A relative/friend   5
   • A secretary/receptionist (on behalf of the doctor)   6
   • Someone else   97
   • Can’t say [DO NOT READ]   98
   • Refused [DO NOT READ]   99

Q2 Some women get told they definitely have breast cancer over the telephone, others are told by letter or face-to-face. Were you told your diagnosis… [READ OUT]
   • By telephone, which was fine   1
   • By telephone, which was not fine   2
   • By letter   3
   • Face to face   4
   • By some other means   97
   • Can’t say [DO NOT READ]   98
   • Refused [DO NOT READ]   99
Q3  Did the person telling you your diagnosis inform you in a way that was…  
[READ OUT]  [the answers to Q3 to be reversed]

• Clear and accurate, using words you were familiar with  1
• Complicated or unclear, using words you were not familiar with 2
• Too distressed to understand what I was told  [DO NOT READ]  97
• Can’t say  [DO NOT READ]  98
• Refused  [DO NOT READ]  99

Q4  Did this person inform you in a way that was…  
[READ OUT]  [the answers to Q4 to be reversed]

• Very supportive and understanding      1
• Quite supportive and understanding     2
• Not as supportive and understanding as you would have liked  3
• Can’t say  [DO NOT READ]  98
• Refused  [DO NOT READ]  99

If was informed face-to-face (code 3 on Q2), ask:

Q5  Were you encouraged to have family or friends with you when you were told your diagnosis?

• Yes          1
• No          2
• Can’t say  [DO NOT READ]  98
• Refused  [DO NOT READ]  99

ASK EVERYONE

Now some questions about the process of deciding on your treatment.

Q6  When your treatment options were being discussed, were you given the impression that …  [READ OUT]

• You had to decide about treatment straight away  1
• You had a week or two to think about it  2
• You had a longer time to think about it    3
• Can’t say  [DO NOT READ]  98
• Refused  [DO NOT READ]  99

Q7  And did you feel comfortable with the amount of time you had to think about it?

• Yes          1
• No          2
• Can’t say  [DO NOT READ]  98
• Refused  [DO NOT READ]  99
Q8 In the process of deciding what treatment to have, would you say...

[READ OUT] [The answers in Q8 are to be reversed]

- You were as involved as you wanted to be in the decision & was happy about the degree of your involvement 1
- You would have preferred to have been MORE involved 2
- You were not given the option or opportunity to be involved in the decision 3
- You chose not to be involved 4
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q9 Do you feel that where you live limited your choice about what treatment to have...

[READ OUT] [The answers in Q9 are to be reversed]

- Very much 1
- Somewhat 2
- Not at all 3
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q10 I am going to read a list of different aspects or types of treatment for breast cancer. Considering the amount of information you received about each one from the people treating you, at the time did you feel you...

[READ OUT]

Received as much information as you needed 1
Would have liked more information 2
Would have liked less information 3
Not applicable [DO NOT READ] 97
Can’t recall [DO NOT READ] 98
Refused [DO NOT READ] 99

A Surgery, including what it is, what to expect from it, and side effects
B Radiotherapy, including what it is, what to expect from it, and side effects
C Chemotherapy, including what it is, what to expect from it, and side effects
D Tamoxifen, including what it is, what to expect from it, and side effects
E Breast reconstruction
F Breast prostheses
G Follow-up care
H Your prognosis
I Lymphoedema, including what it is and how to deal with it
J Long term effects, be they physical, mental, emotional, social, sexual or anything else

Q11 Next is a list of things your treating team may have offered to help you understand what you were told about your breast cancer. Please tell me whether each one was offered, and whether you took it.

Offered and taken 1
Offered but not taken 2
Not offered 3
Not applicable [DO NOT READ] 97
Can’t recall [DO NOT READ] 98
Refused [DO NOT READ] 99
A The orange consumer’s guide on treatment of early breast cancer
B The pink book or tape on “all about early breast cancer”
C Written information specifically about your own diagnosis, such as notes that the doctor may have written for you during your consultations
D An audio tape of any of your consultations

Q12 Considering the level of access your family had to information about breast cancer and issues related to having a family member with breast cancer, do you think … [READ OUT] [the answers to Q12 are to be reversed]

• They had access to as much information as they needed 1
• They may have liked more information 2
• They may have liked less information 3
• Can’t say [DO NOT READ] 98
• Refused [DO NOT READ] 99

Now we are interested in finding out how satisfied you were with the level of support you received during your diagnosis and treatment periods.

[If woman asks what we mean by support say “By support, we mean someone to talk with about the problems or difficulties you were experiencing or about personal issues, such as emotional or relationship difficulties, how you and your family were coping and so on.”]

Q13 Do you feel that … [READ OUT]

• Most of the doctors and nurses were aware of your need for support 1
• Some of the doctors and nurses were aware of your need for support 2
• None of the doctors or nurses were aware of your need for support 3
• OR you did not need support 97
• Can’t say [DO NOT READ] 98
• Refused [DO NOT READ] 99

Q14 Do you feel the people treating you, such as specialist doctors and nurses, ...

[READ OUT]

• Gave you as much support as you needed at the time 1
• OR you needed a little more support than you received 2
• OR you needed much more support than you received 3
• Can’t say [DO NOT READ] 98
• Refused [DO NOT READ] 99

Q15 Do you feel your family… [READ OUT]

• Were given as much support as they needed at the time 1
• Needed a little more support than they received 2
• Needed much more support than they received 3
• Can’t say [DO NOT READ] 98
• Refused [DO NOT READ] 99
Appendix VIII

National Multidisciplinary Care Demonstration Project 295

Q16 A breast care nurse specialises in breast cancer and gives information and support to women. Were you seen by a breast care nurse…

[READ OUT - CODE AS MANY AS RELEVANT]

- At the time of diagnosis 1
- Before surgery 2
- Immediately after surgery 3
- In the 2 months following surgery 4
- Approximately 2 to 6 months following surgery 5
- Or at some other time 6
- Not seen by breast care nurse at all [DO NOT READ] 7
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q17 Overall, was the support you and your family received from people treating you…

[READ OUT] [The answers in Q16 are to be reversed]

- Very appropriate and helpful 1
- Somewhat appropriate and helpful 2
- Not appropriate nor helpful 3
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

The next set of questions relate to the amount of information you received about practical resources and support.

Q18 From the following list, please tell me whether the amount of information you received about each one from the people treating you was… [READ OUT]

As much as you needed 1
OR you needed more information 2
OR you needed less information 3
Not applicable [DO NOT READ] 97
Can’t recall [DO NOT READ] 98
Refused [DO NOT READ] 99

A Where to get more support/counselling if you or your family needed it
B Availability of emotional and practical support services near treatment centres for women staying away from home for treatment
C Likely costs of treatment
D The amount of time involved in having treatment
E Financial support available for women travelling for treatment [IF ASKS WHAT THAT MEANS SAY “for example, PATS, VIPTAS, PTAP, IPTAAS, PTAS, IPTAS”]
F Accommodation if staying away from home for treatment
G Specific resources for partners of women with breast cancer
H Specific resources for children of women with breast cancer
Q19  Did you need, or would you have liked some practical assistance when organising travel and/or accommodation during your treatment?

- Yes 1
- No 2
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

If needed or would have liked assistance (code 1 on Q19), ask

Q20  Was the assistance you received… [READ OUT] (responses 1 to 3 to Q20 are to be reversed)

- Very helpful 1
- Quite helpful 2
- Unhelpful 3
- OR you didn’t receive any assistance 4
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q21  How many nights did you spend away from home when undergoing treatment, not including nights you spent in hospital having surgery?

Record nights ________________

ASK EVERYONE

Q22  Do you feel that where you live limited your access to information or support services… [READ OUT] [the answers to Q22 are to be reversed]

- Very much 1
- Somewhat 2
- Not at all 3
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Women with breast cancer often receive care from many different specialist doctors, nurses, therapists and supportive care workers. We would like to ask some questions about the coordination of your care while you were being treated, that is, after the diagnosis of breast cancer was confirmed – not when you were having tests for diagnosing your cancer.

Q23  I will read a list of people women may see when being treated for breast cancer. For each of these please tell me whether you… [READ OUT]

Saw this person 1
Didn’t see this person 2
 Didn’t see this person, but would have liked to 3
Can’t say [DO NOT READ] 98
Refused [DO NOT READ] 99
A  Surgeon
B  Medical oncologist
C  Radiation oncologist
Q24  During your overall care and treatment, would you say… [READ OUT]  
[the answers to Q24 are to be reversed]

- One person was in charge throughout all your treatment 1
- There was a regular group of people in charge 2
- Different people were in charge at different times during your treatment 3
- No-one seemed to be in charge 4
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q25  When your treatment was being planned, that is, when decisions were being  
made about what treatment would be best for you, did you see…  
[INTERVIEWERS TO CODE THE MOST COLLABORATIVE RESPONSE IF  
MORE THAN ONE NOMINATED, IE. SEVERAL SPECIALISTS TOGETHER  
AT THE SAME TIME TO BE CODED IF WOMAN SAW BOTH SEVERAL  
SPECIALISTS AT THE SAME TIME AND ALSO SEVERAL AT DIFFERENT  
PLACES] [READ OUT] [the answers to Q25 are to be reversed]

- One specialist only 1
- Several specialists together at the same time 2
- Several specialists on the same day at the same place 3
- Several specialists at the same place over several days or weeks 4
- Several specialists at different places over several days or weeks 5
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q26  And when you saw the specialist/each specialist, would you say…  
[READ OUT] [the answers to Q26 are to be reversed]

- They knew all about what had been happening  
  with your diagnosis and treatment 1
- They mostly knew what had been happening 2
- You needed to tell them about what had been happening  
  with your diagnosis and treatment 3
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99
Q27 When you saw your general practitioner at any time during your treatment, would you say he/she... [READ OUT] [the answers to Q27 are to be reversed]

• Knew all about what had been happening with your diagnosis and treatment 1
• Mostly knew what had been happening 2
• OR you needed to tell him/her about what had been happening with your diagnosis and treatment 3
• OR you did not see your general practitioner 4
• Can’t say [DO NOT READ] 98
• Refused [DO NOT READ] 99

Q28 When you were having your treatment, including any surgery, radiotherapy, chemotherapy or hormone therapy, would you say...

[READ OUT] [the answers to Q28 are to be rotated]

• You only had one person involved in your treatment 1
• Your treatment and care seemed to be a well coordinated team effort 2
• The people involved in your treatment seemed to be acting independently 3
• Can’t say [DO NOT READ] 98
• Refused [DO NOT READ] 99

If care was coordinated team effort (code 2 in Q28) ask Q29 and Q30

Q29 Did you feel your treatment and care was coordinated by a team because...

  Yes 1
  No 2
  Can’t say 98
  Refused 99

[READ OUT]

A You were told that your care was coordinated by a team
B You were given a brochure or other written material
C You saw the people involved in your care together
D You were told they had had a meeting to discuss your treatment
E All the people involved in your care used the same patient file
G The people involved in your care sent letters or reports to each other
F Your care seemed well organised and well managed

Q30 Which of these was the most important in making you feel there was a coordinated team approach to your care /READ AGAIN IF NECESSARY - ALLOW ONE RESPONSE ONLY/

A You were told that your care was coordinated by a team 1
B You were given a brochure or other written material 2
C You saw the people involved in your care together 3
D You were told they had had a meeting to discuss your treatment 4
E All the people involved in your care used the same patient file 5
G The people involved in your care sent letters or reports to each other 6
F Your care seemed well organised and well managed 7
Can’t say [DO NOT READ] 98
Refused [DO NOT READ] 99
If care was independent (code 3 in Q28) ask Q31 and Q32

Q31 Did you feel the people involved in your care were not working as a team because…

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<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
</tr>
<tr>
<td>Can’t say</td>
<td>98</td>
</tr>
<tr>
<td>Refused</td>
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</table>

[READ OUT]
A There was no rapport between the people involved in your care
B The people involved in your care did not seem to know what the other people were doing
C The people involved in your care did not seem to know what the other people had told you
D There were many gaps in the treatment and care you received
E Your care did not seem well managed or well organised

Q32 Which of these was the most important in making you feel there was not a coordinated team approach to your care

[READ AGAIN IF NECESSARY - ALLOW ONE RESPONSE ONLY]

<p>| | |</p>
<table>
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<tbody>
<tr>
<td>A There was no rapport between the people involved in your care</td>
<td>1</td>
</tr>
<tr>
<td>B The people involved in your care did not seem to know what the other people were doing</td>
<td>2</td>
</tr>
<tr>
<td>C The people involved in your care did not seem to know what the other people had told you</td>
<td>3</td>
</tr>
<tr>
<td>D There were many gaps in the treatment and care you received</td>
<td>4</td>
</tr>
<tr>
<td>E Your care did not seem well managed or well organised</td>
<td>5</td>
</tr>
<tr>
<td>Can’t say [DO NOT READ]</td>
<td>98</td>
</tr>
<tr>
<td>Refused [DO NOT READ]</td>
<td>99</td>
</tr>
</tbody>
</table>

ASK EVERYONE

Q33 Were there any occasions where you felt your treatment team had not communicated with each other?

• Yes 1
• No 2
• Can’t say 98
• Refused 99

If yes (code 1 on Q33)

Q34 Can you describe what happened?

Q35 Do you feel you received consistent information about your treatment from the doctors, nurses, therapists and supportive care staff involved…

[READ OUT] [the answers to Q35 are to be reversed]

• All of the time 1
• Most of the time 2
• Some of the time 3
Q36 Once you returned home, did you feel sure about who you should contact if you had concerns related to your treatment… [READ OUT] [the answers to Q36 are to be reversed]

- All of the time 1
- Most of the time 2
- Some of the time 3
- Rarely 4
- Never 5
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q37 Clinical trials are large research projects to try to find better treatments for breast cancer. For example, comparisons may be made about the effectiveness of different types or doses of drugs in treating breast cancer. [READ OUT]

- Were you told about clinical trials, but told that you were not eligible 1
- OR were you told about them, and told you could go in one 2
- OR weren’t you told about them 3
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q38 At the end of your treatment (that is, after the last chemotherapy or radiotherapy appointment), were you given a follow-up plan? This may have included a schedule of how often you need to come back to see the surgeon or other people involved in your treatment, such as the radiation oncologist. [IF YES, PROBE FOR WRITTEN OR VERBAL AND CODE ACCORDINGLY]

- Yes, a written plan 1
- Yes, a verbal plan 2
- Both a written and verbal plan 3
- No, not given a plan 4
- I have not completed my treatment yet 5
- Can’t say 97
- Refused 99

Q39 Did any of your treating clinicians discuss the option of breast reconstruction with you? [IF YES, PROBE FOR BEFORE OR AFTER INITIAL SURGICAL TREATMENT]

- Yes, prior to initial surgical treatment 1
- Yes, following initial surgical treatment 2
- No, not discussed at any time 3
- Was not relevant for me and/or did not have a mastectomy 97
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99
Now we would like to have some information about your background. This information, like the rest of the information you've given us, is confidential and will be used to help us identify whether some groups of women would benefit from having additional support.

Q40 What is your date of birth?

Q41 What is the main language you speak at home?

- English 1
- Other 2
- Can't say 98
- Refused 99

Q42 Are you of Aboriginal or Torres Strait Islander origin?

- No 1
- Yes, Aboriginal or Torres Strait Islander 2
- Can't say 98
- Refused 99

Q43 What is the highest level of education you have reached?

- No formal qualifications 1
- Primary school only 2
- Some secondary school 3
- School Certificate (4th year of high school) or equivalent, eg. Intermediate Certificate 4
- Higher School Certificate (6th year of high school) or equivalent, eg. Leaving Certificate 5
- Technical College/ trade certificate 6
- College of Advanced Education/University 7
- Other (please specify).......................... 97
- Can't say 98
- Refused 99

Q44 And are you … [READ OUT]

- Married or living together in a relationship 1
- Divorced or separated 2
- Widowed 3
- (or have you) never been married 4
- Can't say [DO NOT READ] 98
- Refused [DO NOT READ] 99
Q45 Which of the following best describes your usual work situation?
[IF TAKING TIME OFF DUE TO TREATMENT, ASK: WHICH ONE BEST DESCRIBES YOUR WORK SITUATION PRIOR TO TREATMENT?].

Were you/ are you … [READ OUT]

- Self-employed 1
- Employed 2
- Looking for work/unemployed 3
- Engaged in home duties 4
- Retired 5
- Student 6
- Physically or mentally unable to work 7
- Something else 97
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Now some questions about the treatment you had.

Q46 Which of the following surgical treatments did you have.
[INTERVIEWER CODE THE MOST RADICAL TREATMENT IF MORE THAN ONE NOMINATED I.E. MASTECTOMY TO BE CODED IF WOMAN HAD BOTH LUMPECTOMY AND MASTECTOMY]

Was it a … [READ OUT]

- Lumpectomy alone (which is when only part of the breast is removed) 1
- Lumpectomy plus radiotherapy 2
- Mastectomy (which is when the whole breast is removed) 3
- Mastectomy plus radiotherapy 4
- Or some other surgical treatment 5
- No surgical treatment 97
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q47 Did you have chemotherapy?

- Yes 1
- No 2
- Can’t say 98
- Refused 99

Some women receive both public and private care at different times during their treatment.

If underwent surgery (code 1,2,3,4,5 on Q46), ask:

Q48 Where did you have your surgery? ______________________________
Q49 Was that as a…. [READ OUT] [Answers to Q49 are to be reversed]

- Private patient in a private hospital 1
- Private patient in a public hospital 2
- Public patient in a private hospital 3
- Public patient in a public hospital 4
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

If underwent radiotherapy (code 2,4 on Q46), ask:

Q50 Where did you have your radiotherapy? ____________________________

Q51 Was that as a…. [READ OUT] [Answers to Q51 are to be reversed]

- Private patient in a private hospital 1
- Private patient in a public hospital 2
- Public patient in a private hospital 3
- Public patient in a public hospital 4
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

If underwent chemotherapy (code 1 on Q47), ask:

Q52 Where did you have your chemotherapy? _____________________________

Q53 Was that as a…. [READ OUT] [Answers to Q53 are to be reversed]

- Private patient in a private hospital 1
- Private patient in a public hospital 2
- Public patient in a private hospital 3
- Public patient in a public hospital 4
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

ASK EVERYONE

Q54 In general, would you say the overall standard of your care was … [READ OUT] [The scale in Q54 is to be reversed]

- Highly satisfactory 1
- Somewhat satisfactory 2
- Somewhat unsatisfactory 3
- Highly unsatisfactory 4
- Can’t say [DO NOT READ] 98
- Refused [DO NOT READ] 99

Q55 Do you have any comments about the coordination of the treatment and care you received?
Q56 Do you have any other comments about the treatment and care you received?

Thank you for taking the time to do this survey. Your responses are very valuable to us. Please be assured that your privacy will be respected, and your responses will not be identified with you. The information you give will be used for statistical purposes only.

If you have any questions or concerns arising from this survey or if you would like a copy of the study findings please call the project officer Dr Lyn Kemp at the National Breast Cancer Centre on freecall number 1800 500 812.

Thank you again for your time.
## Appendix IX  Clinical audit form

National Multidisciplinary Care Demonstration Project

---

**Case ID =** First 3 letters of last name AND 8-digit DOB

**Patient post code**

**Clinician Code**

---

1. **Date of Diagnosis**

   ![Date format]

2. **Menopausal Status:**
   - O Pre
   - O Peri
   - O Post
   - O Not Known

3. **Previous Breast Cancer**
   - O No
   - O Same Breast
   - O Contralateral
   - O Both breasts
   - O Not Known

4. **Pre-operative diagnosis by:**

<table>
<thead>
<tr>
<th>Technique</th>
<th>If done</th>
<th>Date dd/mm/yy</th>
<th>If positive or suspicious for cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Exam</td>
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</tr>
<tr>
<td>Mammography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FNA, Cytology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Biopsy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Biopsy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. **Site of breast cancer**

   - O Right
   - O Left
   - O Bilateral Synchronous
   - O Quadrant

6. **Initial Treatment of current episode**

   - O Surgery
   - O Radiotherapy
   - O Chemotherapy
   - O Other

7. **Date of initial treatment**

   ![Date format]
8. Surgical Treatment(s) of breast | if done | Date dd/mm/yy |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Re excision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Mastectomy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reconstruction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Surgical Treatment(s) of axilla | if done | Date dd/mm/yy |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentinel Node Biopsy only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampling Level 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissection – level 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissection – level 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No axillary surgery</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. At what treatment centre was initial surgical treatment performed? ________________________________

11. Did surgery depart from usual management?  ○ No  Yes    ○ Patient choice  ○ Other

12. Histological Type of Invasive Tumour
- ○ Ductal NOS
- ○ Infiltrating, Lobular
- ○ Other Invasive Cancer
- ○ Special Type
- ○ Carcinoma: Mixed Type
- ○ Not Applicable

13. Histological grade-principal tumour
- ○ Grade 1
- ○ Grade 2
- ○ Grade 3
- ○ Not Known

14. Vascular/lymphatic invasion?
- ○ Present
- ○ Absent
- ○ Not Known

15. Tumour (principal) size in mm
- ○ Size Not Known

16. Number of invasive breast cancers
- ○ One
- ○ Two
- ○ Multifocal, multicentric
- ○ Not Known

17. EIC in or contiguous with invasive tumour
- ○ Positive, >25%
- ○ Negative, ≤ 25%
- ○ Not Known

18. Final Margin Assessment
- ○ Involved by invasive or in situ cancer
- ○ Free of invasive or in situ cancer by mm
- ○ Not Known/uncertain

19. Number of axillary nodes examined
- ○ Not Known

20. Number Positive
- ○ Not Known

21. Pathological TNM stage:
- T [ ]
- N [ ]
- M [ ]

22. Receptor status
- Oestrogen
  - ○ Positive
  - ○ Negative
  - ○ Ordered, waiting for report
  - ○ Not Known
- Progesterone
  - ○ Positive
  - ○ Negative
  - ○ Ordered, waiting for report
  - ○ Not Known
- Date Reported (dd/mm/yy)

23. Were you satisfied with the quality of the pathology report?  ○ Yes  ○ No  Reason __________________

24. Was this patient’s case discussed with a:
- Radiation oncologist  ○  ○  ○
- Medical oncologist  ○  ○  ○
25. Did you refer this patient to a:

<table>
<thead>
<tr>
<th>Radiation oncologist</th>
<th>No</th>
<th>Yes Pre op</th>
<th>Yes Post op</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical oncologist</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If yes, was the patient referred prior to commencement of oncology therapy?

<table>
<thead>
<tr>
<th>Radiation oncologist</th>
<th>No</th>
<th>Yes</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical oncologist</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

26. Did you refer or arrange for this patient to consult with any other clinician, allied health or support service provider?

If yes, was the patient referred prior to commencement of oncology therapy?

<table>
<thead>
<tr>
<th>Radiation oncologist</th>
<th>No</th>
<th>Yes</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical oncologist</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27. Did this patient receive chemotherapy?

<table>
<thead>
<tr>
<th>Referred to (Discipline)</th>
<th>Date dd/mm/yy</th>
<th>Reason routine / pt symptoms / pt signs / pt request / other (specify)</th>
</tr>
</thead>
</table>

28. Chemotherapy Type(s)

<table>
<thead>
<tr>
<th>CMF</th>
<th>Anthracycline</th>
<th>Other (specify)</th>
</tr>
</thead>
</table>

29. Chemotherapy intent and timing.

<table>
<thead>
<tr>
<th>Adjuvant</th>
<th>Definitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-op</td>
<td>Post-op</td>
</tr>
</tbody>
</table>

30. Did this patient receive hormonal manipulation?

<table>
<thead>
<tr>
<th>Hormone manipulation type</th>
<th>Yes</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamoxifen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ovarian ablation/suppression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31. Did systemic therapy depart from usual management?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Patient choice</th>
</tr>
</thead>
</table>

32. Did radiotherapy depart from usual management?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Patient choice</th>
</tr>
</thead>
</table>

33. Did the patient receive radiotherapy?

<table>
<thead>
<tr>
<th>Referred to (Discipline)</th>
<th>Date dd/mm/yy</th>
<th>Reason routine / pt symptoms / pt signs / pt request / other (specify)</th>
</tr>
</thead>
</table>

34. Radiotherapy Site(s)

<table>
<thead>
<tr>
<th>Local (conserved breast)</th>
<th>Local (post mastectomy flaps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional: Axilla</td>
<td>Supraclavicular</td>
</tr>
<tr>
<td></td>
<td>Internal mammary</td>
</tr>
</tbody>
</table>

35. Radiotherapy intent and timing.

<table>
<thead>
<tr>
<th>Adjuvant</th>
<th>Definitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-op</td>
<td>Post-op</td>
</tr>
</tbody>
</table>

36. Did radiotherapy depart from usual management?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Patient choice</th>
</tr>
</thead>
</table>

Appendix IX

National Multidisciplinary Care Demonstration Project 307
37. Is this patient entered into an appropriate clinical trial? TICK appropriate
   - ○ Don’t know
   - ○ Yes
   - ○ No – not eligible
   - ○ No – patient declined
   - ○ No – Other (specify)

38. Follow-up being performed elsewhere:

<table>
<thead>
<tr>
<th>Care Transfer To</th>
<th>Date dd/mm/yy</th>
<th>Organised by (clinician code or discipline)</th>
<th>Reason routine / pt symptoms or signs / pt request / other (specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other specialist (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General practitioner or local medical officer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other hospital/unit (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

39. Follow-up after initial treatment completed: - First visit

<table>
<thead>
<tr>
<th>Test</th>
<th># if done</th>
<th>Date dd/mm/yy</th>
<th>Performed by (clinician code or discipline)</th>
<th>Reason routine / pt symptoms / pt signs / pt request / other (specify)</th>
<th>Result normal</th>
<th>Result abnormal</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and examination</td>
<td></td>
<td></td>
<td>Ordered by (clinician code or discipline)</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Mammography</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Other ________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

40. Did follow-up depart from usual management? ○ No Yes ○ Patient choice ○ Other ______________________

41. Follow-up after initial treatment completed: - Second visit

<table>
<thead>
<tr>
<th>Test</th>
<th># if done</th>
<th>Date dd/mm/yy</th>
<th>Performed by (clinician code or discipline)</th>
<th>Reason routine / pt symptoms / pt signs / pt request / other (specify)</th>
<th>Result normal</th>
<th>Result abnormal</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and examination</td>
<td></td>
<td></td>
<td>Ordered by (clinician code or discipline)</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Mammography</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Other ________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

42. Did follow-up depart from usual management? ○ No Yes ○ Patient choice ○ Other ______________________
43. Follow-up after initial treatment completed: - Third visit

<table>
<thead>
<tr>
<th>Test</th>
<th>if done</th>
<th>Date dd/mm/yy</th>
<th>Performed by (clinician code or discipline)</th>
<th>Reason routine / pt symptoms / pt signs / pt request / other (specify)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and examination</td>
<td></td>
<td></td>
<td>Ordered by (clinician code or discipline)</td>
<td></td>
<td>○ ○</td>
</tr>
<tr>
<td>Mammography</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○ ○</td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○ ○</td>
</tr>
<tr>
<td>Other ______________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○ ○</td>
</tr>
</tbody>
</table>

44. Did follow-up depart from usual management?  ○ No  Yes  ○ Patient choice  ○ Other ___________________

45. Have more than three follow-up visits have been performed?  ☒ if yes  If ticked, please provide details on additional form

Case ID = First 3 letters of last name AND 8-digit DOB

46. Follow-up after initial treatment completed: - Fourth visit

<table>
<thead>
<tr>
<th>Test</th>
<th>if done</th>
<th>Date dd/mm/yy</th>
<th>Performed by (clinician code or discipline)</th>
<th>Reason routine / pt symptoms / pt signs / pt request / other (specify)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and examination</td>
<td></td>
<td></td>
<td>Ordered by (clinician code or discipline)</td>
<td></td>
<td>○ ○</td>
</tr>
<tr>
<td>Mammography</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○ ○</td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○ ○</td>
</tr>
<tr>
<td>Other ______________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○ ○</td>
</tr>
</tbody>
</table>

47. Did follow-up depart from usual management?  ○ No  Yes  ○ Patient choice  ○ Other ___________________

48. Follow-up after initial treatment completed: - Fifth visit

<table>
<thead>
<tr>
<th>Test</th>
<th>if done</th>
<th>Date dd/mm/yy</th>
<th>Performed by (clinician code or discipline)</th>
<th>Reason routine / pt symptoms / pt signs / pt request / other (specify)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and examination</td>
<td></td>
<td></td>
<td>Ordered by (clinician code or discipline)</td>
<td></td>
<td>○ ○</td>
</tr>
<tr>
<td>Mammography</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○ ○</td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○ ○</td>
</tr>
<tr>
<td>Other ______________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>○ ○</td>
</tr>
</tbody>
</table>

49. Did follow-up depart from usual management?  ○ No
### 50. Follow-up after initial treatment completed: - Sixth visit

<table>
<thead>
<tr>
<th>Test</th>
<th>If done</th>
<th>Date dd/mm/yy</th>
<th>Performed by (clinician code or discipline)</th>
<th>Reason routine / pt symptoms / pt signs / pt request / other (specify)</th>
<th>Result normal abnormal</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and examination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>o o</td>
</tr>
<tr>
<td>Mammography</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>o o</td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>o o</td>
</tr>
<tr>
<td>Other ________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>o o</td>
</tr>
</tbody>
</table>

51. Did follow-up depart from usual management?  ○ No  Yes  ○ Patient choice  ○ Other ________________
Appendix X  Clinician survey questionnaire

MULTIDISCIPLINARY TEAM APPROACH

The multidisciplinary team is defined as having the minimal disciplines of surgery, oncology (radiation and medical oncology), pathology, radiology and supportive care. The individual woman’s GP will be part of the team. (Interviewer note: survey to record responses relating to typical activities and practice in the second half of 1999)

1. Describe who was usually involved in the management of women diagnosed with breast cancer here in the last 6 months of 1999? (Prompt: This question assists the respondent to think of who makes up the current treatment team. Probe: Include any specialist involved in the treatment of women with breast cancer, but not necessarily on site, e.g., radiotherapist).

☐ surgeon  ☐ medical oncologist  ☐ radiation oncologist  ☐ pathologist
☐ radiologist  ☐ specialist breast nurse  ☐ oncology nurse  ☐ physiotherapist
☐ social worker  ☐ general practitioner  ☐ psychologist  ☐ other, specify

______________________________________________________________________

______________________________________________________________________

2. Did your breast cancer team have formal multidisciplinary meetings (Interview NB excluding meetings for professional development)

☐ No (If No, go to Q8)
☐ Yes (If Yes, complete table)

<table>
<thead>
<tr>
<th>Purpose of meeting</th>
<th>Code</th>
<th>Regular (yes or no)</th>
<th>Frequency (eg. weekly, monthly)</th>
<th>Proportion of treatment planning component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated treatment planning meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BreastScreen meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service management meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*If had meetings that included treatment planning component, ask questions 3 thru 7*
3. **Who usually attended these meetings?**

- [ ] surgeon  
- [ ] medical oncologist  
- [ ] radiation oncologist  
- [ ] pathologist  
- [ ] radiologist  
- [ ] specialist breast nurse  
- [ ] oncology nurse  
- [ ] physiotherapist  
- [ ] social worker  
- [ ] oncology nurse  
- [ ] physiotherapist  
- [ ] social worker  
- [ ] other, specify

4. **Which cases were discussed in the treatment planning component of these meetings?**

*(Note: 'difficult cases' are complex cases that require extra time to discuss and decide treatment action, 'selected cases' are driven by protocol & discussed according to an agreed criteria, eg tumour with extensive DCIS)*

- [ ] all new cases (breast cancer)  
- [ ] difficult cases only  
- [ ] screen detected cancers only  
- [ ] selected cases only according to an agreed protocol/criteria (please note)  
- [ ] no protocol, individual clinician choice  
- [ ] other (including combinations, please note)

5. **Did you have the level of involvement in the treatment planning component of these meetings that you considered you should have had?**

- [ ] Always  
- [ ] Almost always  
- [ ] Mostly  
- [ ] Sometimes  
- [ ] Rarely  
- [ ] Never

Comment______________________________________________________________________

6. **Were you assisted by the team’s administration with your communication requirements to ensure that you have input into these meetings (e.g. teleconference if required)?**

- [ ] Always  
- [ ] Almost always  
- [ ] Mostly  
- [ ] Sometimes  
- [ ] Rarely  
- [ ] Never  
- [ ] N/A

Comment______________________________________________________________________

7. **Were all the required test results available during these meetings to assist decisions on treatment planning?**

- [ ] Always  
- [ ] Almost always  
- [ ] Mostly  
- [ ] Sometimes  
- [ ] Rarely  
- [ ] Never

Comment______________________________________________________________________

(Probe: which test results?______________________________________________________)

8. **Apart from treatment planning, how often did you collaborate with treatment team members?**

- [ ] Daily  
- [ ] Weekly  
- [ ] Monthly  
- [ ] Every few months  
- [ ] Annually  
- [ ] Never (Go to Q11)

Comment______________________________________________________________________
9. What type of activities did this include? (i.e. non-treatment planning activities)
   (NB: can be > 1)
   - ☐ specialty based meetings
   - ☐ exchange programs
   - ☐ educational meetings
   - ☐ clinical trials
   - ☐ other research
   Other ______________________________________________________________________

10. If in a rural/remote or small facility, how often did these non-treatment planning activities involve interaction with treatment team members from larger facilities (e.g. an oncologist from an urban facility)?
   - ☐ Always
   - ☐ Almost always
   - ☐ Mostly
   - ☐ Sometimes
   - ☐ Rarely
   - ☐ Never

   Comment ___________________________________________________________________

11. Ask in a rural/remote or small facility only: Were formal links established with another facility for the provision of services not available locally?
   Please indicate with a tick ✔ as appropriate (NB: can be > 1 for each service type).

<table>
<thead>
<tr>
<th>LINKS</th>
<th>REFERRAL of WOMEN</th>
<th>LOCAL PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On-site service</td>
<td>Face to face referral</td>
</tr>
<tr>
<td></td>
<td>Had no links</td>
<td>Phone referral</td>
</tr>
<tr>
<td></td>
<td>Linked to other facility</td>
<td></td>
</tr>
<tr>
<td>Surgeon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical oncologist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiation oncologist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathologist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiologist</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Supportive care (circle which):
  - Oncology Nurse
  - Breast Care Nurse
  - psychiatrist
  - psychologist
  - social worker
  - other, specify
  ______________________________________________________________________
12. **Ask Surgeon, Radiation and Medical Oncologist only:** Were diagnosis and treatment decisions communicated to general practitioners?

- □ Always
- □ Almost always
- □ Mostly
- □ Sometimes
- □ Rarely
- □ Never (go to Q16)

Comment (Probe: Why/why not?)

______________________________________________________________________________

13. **Ask Surgeon, Radiation and Medical Oncologist only:** How were diagnosis and treatment decisions standardly communicated to general practitioners? (Prompt: a formal letter Probe: the RACS National surgical audit for breast cancer is capable of generating a clinical summary letter from the data suitable to send to general practitioner)

- □ In person through attendance at treatment planning meeting
- □ Telephone
- □ Individualised letter
- □ Standardised letter
- □ Facsimile
- □ RACS National surgical audit clinical summary letter
- □ Email

Comment

______________________________________________________________________________

14. **Ask Surgeon only:** Within what time interval did you inform a woman’s general practitioner of diagnosis decisions? (Probe: tease out usual referral patterns and what circumstances may alter this pattern)

- □ 1 day
- □ 1 week
- □ 2 weeks
- □ 3 weeks
- □ 1 month
- □ Longer than 1 month

Comment on current practice

______________________________________________________________________________

15. **Ask Surgeon only:** Within what time interval did you inform a woman’s general practitioner of definitive treatment decisions? (Probe: tease out usual referral patterns and what circumstances may alter this pattern)

- □ 1 day
- □ 1 week
- □ 2 weeks
- □ 3 weeks
- □ 1 month
- □ Longer than 1 month

Comment on current practice

______________________________________________________________________________

16. **Did your team met formally for the purposes of a multidisciplinary Professional Education session in the last six months of 1999?**

- □ Yes
- □ No (If No, go to Q20)

17. **How often were these meetings held?**

- □ weekly
- □ fortnightly
- □ monthly
- □ 2 monthly
- □ Less often

Comment

______________________________________________________________________________
18. Did you attend the multidisciplinary Professional Educational sessions?
   [ ] Always  [ ] Almost always  [ ] Mostly  [ ] Sometimes  [ ] Rarely  [ ] Never (go to Q20)
   Comment (Probe: Why/why not?)

19. Were you assisted by the team’s administration with your communication requirements to ensure that you attended the multidisciplinary Professional Educational sessions (e.g. telemedicine link if required)?
   [ ] Always  [ ] Almost always  [ ] Mostly  [ ] Sometimes  [ ] Rarely  [ ] Never  [ ] N/A
   Comment

20. What kind of external Professional Education activities did you attend in the last six months of 1999? (NB: can be > 1)
   [ ] professional college meetings  [ ] annual professional conferences
   [ ] specialist breast cancer meetings
   Other

21. Have you read the ‘NHMRC Clinical practice guidelines for the management of early breast cancer’? (Prompt: the booklet with orange and white cover)
   [ ] Yes  [ ] No (go to Q23)  [ ] Don’t know

22. Which of the following best describes the treatment of women with breast cancer at your facility in the last six months of 1999 in relation to the Early Breast Cancer guidelines?
   [ ] Don’t know if consistent  [ ] Not consistent in a number of areas
   [ ] Probably consistent in most areas  [ ] Definitely consistent in all areas
   [ ] Local protocols used to ensure patient management consistent
   Comment

23. Ask Pathologist or Surgeon only: Have you read the Australian Cancer Network's "Pathology reporting of breast cancer" recommendations?
   [ ] Yes  [ ] No (go to Q25)  [ ] Don’t know

24. Which of the following best describes the reporting of pathology to you at your facility in the last six months of 1999 in relation to the ACN guidelines?
   [ ] Don’t know if consistent  [ ] Not consistent in a number of areas
   [ ] Probably consistent in most areas  [ ] Definitely consistent in all areas
   [ ] Local protocols used to ensure reporting consistent
25. Have you read the ‘NHMRC Psychosocial clinical practice guidelines: Providing information, support and counselling for women with breast cancer’?

☐ Yes  ☐ No (go to Q27)  ☐ Don’t know

26. Which of the following best describes the treatment of women with breast cancer at your facility in relation to the psychosocial guidelines?

☐ Don’t know if consistent  ☐ Not consistent in a number of areas

☐ Probably consistent in most areas  ☐ Definitely consistent in all areas

☐ Local protocols used to ensure patient management consistent

27. Do NOT ask Pathologist or Radiologist: Can you tell me about links with other specialist services involved in the treatment and management of women with breast cancer, that were present in the last six months of 1999? Please indicate with a tick ✔ as appropriate (NB: can be > 1 for each service type).

<table>
<thead>
<tr>
<th>LINKS</th>
<th>REFERRALS</th>
<th>MEETINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had No links</td>
<td>Linked to on site service</td>
<td>Linked to off site service</td>
</tr>
<tr>
<td>Face to face referral</td>
<td>Phone referral</td>
<td>Referral by letter/ form</td>
</tr>
<tr>
<td>Attended MD treatment planning meetings on request</td>
<td>Attended MD Prof Education meeting on request</td>
<td></td>
</tr>
</tbody>
</table>

Genetic testing

Genetic counselling

Nuclear medicine

Sentinel node biopsy investigation

Plastic/ reconstructive surgery

Lymphoedema service

- Physiotherapy
- Occupational therapy

<table>
<thead>
<tr>
<th>Genetic testing</th>
<th>Genetic counselling</th>
<th>Nuclear medicine</th>
<th>Sentinel node biopsy investigation</th>
<th>Plastic/ reconstructive surgery</th>
<th>Lymphoedema service</th>
<th>Physiotherapy</th>
<th>Occupational therapy</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
☐ senior clinician (specialty: ____________) ☐ junior clinician  
☐ general practitioner ☐ nurse  
☐ Other? ____________________________________________

29. After being told their diagnosis, were women routinely offered the option of coming back for a 2nd consultation to enable further discussions?  
☐ Yes ☐ No ☐ Don’t know  
Comment_____________________________________________________________________

30. Do NOT ask Pathologist or Radiologist: Which women were offered literature on treatment issues to aid decision making?  
☐ All ☐ Most ☐ only some (Specify: ________________) ☐ None  

31. Do NOT ask Pathologist or Radiologist: What characteristics of a patient did you consider when assessing which type of information to provide women?  
☐ Education level ☐ Language ☐ Degree of distress ☐ Age ☐ Culture  

32. Do NOT ask Pathologist or Radiologist: Were women offered an audio-tape of the consultation in which treatment options are discussed?  
☐ Always ☐ Almost always ☐ Mostly ☐ Sometimes ☐ Rarely or never  
Comment____________________________________________________________________

Appendix X  
National Multidisciplinary Care Demonstration Project 317
33. Was there an agreed strategy for providing women diagnosed with early breast cancer with copies of the National Breast Cancer Centre’s ‘All about early breast cancer’ (pink book) or ‘NHMRC Early breast cancer: A consumer’s guide’ (orange book)? (Prompt: who was responsible for ensuring women are given a copy?)

☐ Yes ☐ No ☐ Don’t know

If Yes, Is it a written strategy? ☐ Yes (Request copy) ☐ No

Comment

____________________________________________________________________

34. If treatment planning meetings were held, were psychosocial issues discussed by the team at the meetings when formulating a management plan for a woman?

☐ Always ☐ Almost always ☐ Sometimes ☐ Rarely ☐ Never

Comment

____________________________________________________________________

35. If treatment planning meetings were not held, how were psychosocial issues considered?

☐ Discussion with other clinician/s ☐ Considered by individual clinician

☐ Not considered

Comment

____________________________________________________________________

36. Do NOT ask Pathologist or Radiologist: Were psychosocial issues discussed with the woman when discussing the proposed management plan with her?

☐ Always ☐ Almost always ☐ Sometimes ☐ Rarely ☐ Never

Comment

____________________________________________________________________

37. Who was the nominated person on the team responsible for providing supportive care to women diagnosed with breast cancer?

☐ specialist breast care nurse ☐ ward based registered nurse ☐ oncology nurse

☐ psychologist/psychiatrist ☐ social worker ☐ no one nominated (go to Q40)

☐ don’t know ☐ other

____________________________________________________________________
Appendix X

National Multidisciplinary Care Demonstration Project

38. Did the nominated supportive care person routinely provide supportive care to women diagnosed with breast cancer who underwent surgery…? (NB: can be > 1).

☐ At diagnosis  ☐ Preoperatively  ☐ Post surgery
☐ Through follow-up at 1-6 week post surgery  ☐ Through follow-up at 6-10 weeks post surgery

Comment_____________________________________________________________________

39. Did the nominated supportive care person routinely provide supportive care to women who underwent radiotherapy and/or chemotherapy…? (NB: can be > 1).

☐ At diagnosis  ☐ Before undergoing therapy  ☐ During therapy
☐ Through follow-up at 1-6 week post therapy  ☐ Through follow-up at 6-10 weeks post therapy

Comment_____________________________________________________________________

40. Was there an agreed strategy for providing women diagnosed with breast cancer with information on and access to support services?

☐ Yes  ☐ No  ☐ Don’t know

If Yes, Is it a written strategy?  ☐ Yes  (Request copy)  ☐ No

40a) If no agreed strategy, how is this information provided to women?

Comment_____________________________________________________________________

41. What agreed strategies were in place for detecting and assessing those women diagnosed with breast cancer who may have been experiencing severe anxiety and/or depression? (NB: can be > 1).

☐ No strategies
☐ Routinely ask patients to complete a screening self-report questionnaire
☐ Rely on judgement of clinician
☐ Rely on judgement of nominated supportive care staff
☐ Other, Please specify______________________________________________________

42. What was the strategy for managing women diagnosed with breast cancer who may have been experiencing severe anxiety and/or depression? (Prompt: all clinicians Probe: for some clinicians counselling is an integral part of their clinical assessment but there may be a combination of approaches. Please tick for all responses given)

☐ Clinician manages the woman themselves (Specify how:__________________________ )
Clinician refers woman to:

- General practitioner
- Specialist Breast Nurse
- Psychologist
- Psychiatrist
- Breast Cancer Support Network
- Non-professional support group
- Other (specify)

43. **If treatment planning meetings were held, was the strategy for managing women who may be experiencing severe anxiety and/or depression discussed at the meetings when formulating the treatment plan?**

- Always
- Almost always
- Half of the time
- Rarely
- Never

Comment

44. **If treatment planning meetings were not held, how was the strategy for managing women who may be experiencing severe anxiety and/or depression considered?**

- Discussion with other clinician/s
- Considered by individual clinician
- Not considered

Comment

45. **Was an appropriate professional interpreter involved when discussing diagnosis and treatment options with a woman who had poor understanding of English?**

- Always
- Almost always
- Half of the time
- Rarely
- Never
- Not usually needed in this service

Comment

46. **Did your facility have an agreed protocol/service specification for accessing interpreters?**

- Yes
- No
- Don’t know

Comment

47. **Do NOT ask Pathologist or Radiologist: Were women with early breast cancer provided with a written treatment plan?**

- Always
- Almost always
- Mostly
- Sometimes
- Rarely
- Never

Comment
48. **Do NOT ask Pathologist or Radiologist:** _Were women with advanced breast cancer provided with a written treatment plan?_

- [ ] Always
- [ ] Almost always
- [ ] Mostly
- [ ] Sometimes
- [ ] Rarely
- [ ] Never (go to Q49)

Comment ___________________________________________________________________________________

48a): **Did this plan include a mechanism for continued assessment and follow-up of pain management?**

- [ ] Always
- [ ] Almost always
- [ ] Mostly
- [ ] Sometimes
- [ ] Rarely
- [ ] Never

Comment ___________________________________________________________________________________

49. **Do NOT ask Pathologist or Radiologist:** _How often were women diagnosed with breast cancer encouraged to provide input into their treatment plan?_

- [ ] Always
- [ ] Almost always
- [ ] Mostly
- [ ] Sometimes
- [ ] Rarely
- [ ] Never (go to Q52)

Comment ___________________________________________________________________________________

50. **Do NOT ask Pathologist or Radiologist:** _If a proposed treatment plan was discussed with the woman, was she asked whether the proposed plan was acceptable to her?_

- [ ] Always
- [ ] Almost always
- [ ] Mostly
- [ ] Sometimes
- [ ] Rarely
- [ ] Never

Comment ___________________________________________________________________________________

51. **Do NOT ask Pathologist or Radiologist:** _If the woman indicated that she would like a different treatment plan, how was this usually dealt with?_

- [ ] plan changed and reasons noted
- [ ] plan changed and team informed at next meeting
- [ ] clinician consults with another individual team member before changing plan
- [ ] team discusses different treatment plans at next meeting
- [ ] woman strongly encouraged to accept proposed plan (no alternatives discussed)

Comment ___________________________________________________________________________________

52. **Ask Surgeon only:** _With what proportion of women about to undergo mastectomy did you discuss breast reconstruction before surgery?_

- [ ] All
- [ ] Almost all
- [ ] About half
- [ ] Some
- [ ] None

Comment on the reconstruction issues standardly discussed ___________________________________________________________________________________

53. **Ask Surgeon and Medical Oncologist only:** _Did your facility participate in breast cancer clinical trials in the last six months of 1999?_ (Prompt: which trials are available for women diagnosed with breast cancer? Probe: trial availability and access could be incentives/disincentives for clinicians to make referrals)
☐ Yes          ☐ No (If No, go to Q56)          ☐ Don’t know

If Yes, Can you list the trials in which your facility participated?

__________________________


54. Ask Medical Oncologist only: Were women with breast cancer informed about and offered clinical trials for which they are eligible?

☐ Always offered          ☐ Offered if woman asks          ☐ Offered when trial centre requests

☐ Never offered          ☐ Other (describe)


54a) If ‘Never offered’ Why Not?


55. Ask Medical Oncologist only: How many women did you referred over the last six months of 1999 to clinical trials for breast cancer for which they were eligible?

the approx. number of women referred in the last six months of 1999? ____________

the approx. number of women you treated for breast cancer in the last six months of 1999? ____________

[Office use only Calculate the proportion of women referred to clinical trials ___________%]

Comment


56. Ask Surgeon, Radiation and Medical Oncologist only: Did you regularly conduct a clinical audit of your practice in the last six months of 1999?

☐ Yes          ☐ Was developing audit forms (Go to Q61)          ☐ No (Go to Q61)

57. How often did you conduct the audit?

☐ Monthly          ☐ 2-monthly          ☐ 3-monthly          ☐ 3-6 monthly

☐ 6-monthly          ☐ 6-12 monthly          ☐ Yearly          ☐ Less often


58. How was data collected for audit purposes?

☐ paper based audit          ☐ electronic audit

☐ data collected on paper and transferred to electronic system

59. Who was responsible for conducting the data collection?

Profession: __________________________

60. How were audit results disseminated?
61. Was there a protocol for managing follow-up of women with early breast cancer?
☐ Yes, a locally developed protocol (request copy - ☐ copy given ☐ copy to be sent)
☐ Yes, follow the NHMRC guidelines themselves
☐ No
☐ Other (specify)__________________________________
Comment_______________________________________

62. Was the lead clinician who would coordinate follow-up nominated for each woman at the treatment planning meetings and agreed by all team members?
☐ Always ☐ Almost always ☐ Mostly ☐ Sometimes ☐ Rarely ☐ Never
Probe: If ‘never’, ‘rarely’ or ‘sometimes’, why?_______________________________________

63. Who was the lead clinician who took primary charge of follow-up?
☐ Breast surgeon ☐ Medical oncologist ☐ Radiation oncologist ☐ General practitioner
☐ Varies according to an agreed protocol between core specialists
☐ Varies according to disease stage
☐ Varies, no agreed protocol
☐ All core specialists independently follow-up patients
Comment_______________________________________

64. Ask Surgeon, Medical and Radiation oncologist only: What was your follow-up schedule for women treated for early breast cancer? (Probe: current policy and practice at this facility, identify shared care arrangements)

<table>
<thead>
<tr>
<th>Time post-surgery</th>
<th>1 - 2 years</th>
<th>3 - 5 years</th>
<th>after 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast surgeon</td>
<td>(every)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical oncologist</td>
<td>(every)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiation oncologist</td>
<td>(every)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

65. How often were the following examinations routinely undertaken during follow-up post-breast conserving therapy? (Prompt: who orders these tests and is there any duplication Probe: for any over testing, repeat test and visits, communication between team members, check with the clinician):
<table>
<thead>
<tr>
<th>Examination</th>
<th>Never Done</th>
<th>1 - 2 years</th>
<th>3 - 5 years</th>
<th>after 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and examination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mammography</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest x-ray</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bone scan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood count &amp; biochemistry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tumour markers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comment______________________________________________________________________

66. How often were the following examinations routinely undertaken during follow-up post-mastectomy? (Probe: find out who orders the test(s) and the communication of results between the clinicians)

<table>
<thead>
<tr>
<th>Examination</th>
<th>Never Done</th>
<th>1 - 2 years</th>
<th>3 - 5 years</th>
<th>after 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and examination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mammography</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest x-ray</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bone scan</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Blood count &amp; biochemistry</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Tumour markers</td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comment______________________________________________________________________

67. Do NOT ask Pathologist or Radiologist: Did women diagnosed with breast cancer routinely receive a written follow-up plan?

- Always
- Almost always
- Mostly
- Sometimes
- Rarely
- Never

Comment______________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________
68. Do you feel there are any barriers to the implementation/improvement of multidisciplinary care in your facility/hospital?

_____________________________________________________________________________

69. Do you feel there are any facilitators to the implementation/improvement of multidisciplinary care in your facility/hospital?

_____________________________________________________________________________

Thank-you for taking part in this research.

We appreciate the time you have given us.
Appendix XI  Acceptability questionnaire

THE NATIONAL MULTIDISCIPLINARY CARE DEMONSTRATION PROJECT

The following questions relate to the National Demonstration Project that your collaboration (that is your hospital/facility in collaboration with other facilities) has been involved in over the past 18 months. The Project has involved the implementation of strategies within the collaboration to improve multidisciplinary care for women with breast cancer.

(Interviewer note: try to keep responses focused on relevant aspect of the project ie implementation of strategies - not the evaluation process)

The Project

1. Did you know your hospital/facility was involved in the Multidisciplinary Care Demonstration Project?
   - No (Go to Q4)
   - Yes

2. Which of the following best describes your role in this project?
   - Chief Executive Officer/ Senior management representative
   - Chief Clinical Collaborator
   - Member of the Project Steering Committee
   - Member of the Multidisciplinary Team
   - Clinician (not part of the multidisciplinary team)
   - Other (please specify) __________________________________________________________

3. Which of the following best describes your involvement in Project?
   (NB: ask for most accurate description - one only from list below)
   - Involved in the planning and/or organisational aspects related to the implementation of the nominated multidisciplinary strategies
   - Actively involved in the implementation of the nominated multidisciplinary strategies
   - No active involvement in the implementation of the strategies, but participant in strategies (eg attends multidisciplinary meetings)
   - No involvement
   - Other (please specify) __________________________________________________________
4. **Did you know your hospital/facility was part of a larger collaboration involved in this Project?**
   (Interviewer note: prompt with relevant name of collaboration eg Barwon & Western Breast Consortium, North Queensland Breast Cancer Collaboration, Randwick Campus and Associated Rural Centres Collaboration)
   - No (Go to Q7)
   - Yes (If yes, ask Q5 & Q6)

5. **In your opinion, overall how collaborative were the links between your facility and others within the collaboration during the course of the project (March to August 2001)?**
   - Very
   - Moderately
   - Somewhat
   - A Little
   - Not at all (Go to Q7)
   Comment (Probe: why/why not?)

6. **Do you think the established collaborative links between your facility and others within the collaboration will continue after the project is finished?**
   - No
   - Yes
   Comment (Probe: why/why not?)

---

**The Multidisciplinary Strategies**

At the start of the Project, your collaboration nominated a number of strategies to be implemented. These strategies were aimed at improving multidisciplinary care for women with breast cancer.

7. **Are you aware of the multidisciplinary strategies that were successfully implemented in your facility or collaboration? (Prompt: what were they?)**

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
8. Which of these multidisciplinary strategies do you feel will be most useful in improving care for women with breast cancer? (Note: can be >1. Prompt: what were they?)

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

9. What do you feel are the main changes that have occurred within your facility or collaboration as a result of the implementation of the multidisciplinary care strategies?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

10. How have these changes impacted on you (eg meetings take up more of my time)?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

11. How acceptable have these changes been to you? (Note: Please list each change and indicate level of acceptability on scale opposite)

<table>
<thead>
<tr>
<th>Change</th>
<th>Very</th>
<th>Moderately</th>
<th>Somewhat</th>
<th>A Little</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
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<td>1)</td>
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<td>☐</td>
<td>☐</td>
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</tr>
</tbody>
</table>

12. In your opinion, how much has the implementation of the multidisciplinary strategies within your facility or collaboration influenced your communication with others involved in breast cancer care?
☐ Very
☐ Moderately
☐ Somewhat
☐ A Little
☐ Not at all
13. In your opinion, how difficult was it to implement the multidisciplinary strategies within your facility or collaboration?

- Very
- Moderately
- Somewhat
- A Little
- Not at all (Go to Q11)

Comment (Probe: what difficulties were encountered and what was done to overcome them?)

14. Is there any advice you would give to other groups wanting to implement such strategies within their facility?

- No (go to Q15)
- Yes

Comment (Probe: what would that be?)

15. How much would you agree with the following statements?

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>Strongly agree</th>
<th>Agree somewhat</th>
<th>Disagree somewhat</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The implemented multidisciplinary care strategies have improved care for women with breast cancer at this facility.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The multidisciplinary care strategies have improved communication between team members within this facility.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The strategies have improved the collaborative links between this facility and others.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The strategies have made it easier for me to provide women with breast cancer with the appropriate treatment and care.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
The implementation of the multidisciplinary care strategies was difficult in my hospital setting. □ □ □ □ □

The implementation of the multidisciplinary care strategies was worthwhile in my hospital setting. □ □ □ □ □

The multidisciplinary care strategies will be maintained here after the project has finished. □ □ □ □ □

16. Has the project and/or implementation of the strategies had any flow-on effects? (eg to other departments or care for patients with other cancers/diseases?) In what way?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

17. Do you have any other comments you would like to make about the project and/or implementation of the multidisciplinary care strategies?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Thank-you  
We appreciate the time you have given us.
## Appendix XII Log book forms

### LOG OF ALL NEW CASES OF BREAST CANCER

<table>
<thead>
<tr>
<th>Case ID</th>
<th>Hospital or unit where cancer initially treated</th>
<th>Disease</th>
<th>Presented at case conference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early Breast Cancer</td>
<td>Other</td>
<td>Yes – pre-operative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yes – post operative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not presented</td>
</tr>
</tbody>
</table>

- Month………………………… Site ID………………………

- Log book forms for recording new cases of breast cancer.
## LOG OF CASES NOT PRESENTED AT CASE CONFERENCE

<table>
<thead>
<tr>
<th>Case ID</th>
<th>Disease/stage</th>
<th>How management plan decided</th>
<th>Designated coordinator – if any (name code)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Carcinoma in-situ</td>
<td>Early breast cancer</td>
<td>Advanced breast cancer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
### CASE CONFERENCE

#### ORGANISATION AND ATTENDANCE

<table>
<thead>
<tr>
<th>Date</th>
<th>Meeting time</th>
<th>Attendees</th>
<th>Mode of attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Start</td>
<td>Finish</td>
<td>Name (code)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Start</td>
</tr>
<tr>
<td>Comments</td>
<td></td>
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</tbody>
</table>

#### COSTS (Actual costs incurred – whole dollars)

<table>
<thead>
<tr>
<th>Capital equipment – please specify</th>
<th>Communication</th>
<th>Room hire</th>
<th>Equipment hire</th>
<th>Travel</th>
<th>Accommodation</th>
<th>Stationery</th>
<th>Other – please specify</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
### CASES PRESENTED

<table>
<thead>
<tr>
<th>Case ID</th>
<th>Disease</th>
<th>Case presenter (name code)</th>
<th>Contributors (name codes)</th>
<th>Results available</th>
<th>Reason for presentation at case conference</th>
<th>Treatment plan recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Carcinoma in-situ</td>
<td>Early breast cancer</td>
<td>Advanced breast cancer</td>
<td>Recurrent breast cancer</td>
<td>Radiology</td>
<td>Pathology</td>
</tr>
<tr>
<td></td>
<td>Report</td>
<td>Films</td>
<td>Report</td>
<td>Slides</td>
<td>HR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
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<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
</tr>
</tbody>
</table>

HR = hormone receptor status
## MULTIDISCIPLINARY EDUCATIONAL AND OTHER ACTIVITIES

### ORGANISATION AND ATTENDANCE

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Attendees</th>
<th>Mode of attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>In person</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Nature of activity</th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Aims/objectives</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Outcomes</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Comments</th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
</table>

For additional attendees, complete reverse side

### COSTS (Actual costs incurred – whole dollars)

<table>
<thead>
<tr>
<th>Capital equipment – please specify</th>
<th>Communication</th>
<th>Room hire</th>
<th>Equipment hire</th>
<th>Travel</th>
<th>Accommodation</th>
<th>Stationery</th>
<th>Other – please specify</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teleconf</td>
<td>Videoconf</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
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</tr>
</thead>
</table>

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<table>
<thead>
<tr>
<th>Attendees</th>
<th>Mode of attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (code)</td>
<td>Discipline</td>
</tr>
<tr>
<td>……………</td>
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<td>……………</td>
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<tr>
<td>……………</td>
<td>……………</td>
</tr>
</tbody>
</table>
### Section 1.01 Room Layout and Facilities Form

<table>
<thead>
<tr>
<th>Hospital/Facility:</th>
<th>Date:</th>
<th>Observation No:</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
</table>

1. Diagram of room and seating arrangement, *please indicate the position of the meeting Chair*

2. **Facilities**

<table>
<thead>
<tr>
<th>Item</th>
<th>Available</th>
<th>Utilised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer projection equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overhead projector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teleconferencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Videoconferencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>View Boxes (Mammograms)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathology Microscope/ slide projection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasound viewer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tea/coffee/cold drinks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other/s:__________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>eg/ handout______________________</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. **Other Aspects**

<table>
<thead>
<tr>
<th>Item</th>
<th>Poor</th>
<th>Adequate</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lighting level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of outside noise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comfort of furnishings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate space/chairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other/________________________</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 1.02  Time Sheet

Hospital/Facility:  Date:  Observation No: 1 2 3

Please note the exact time at which meeting events occur. Use the appropriate event code and enter relevant details (e.g. name of person arriving)

Chair name ___________________________  Discipline ________________

Event Codes:
A = arrival
D = departure
S = start of meeting
E = end of meeting
I = interruption
N = non-work related discussion
1, 2, 3, etc. = Agenda item / case number, if no agenda please assign cases in numerical order as presented

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:45</td>
<td>S</td>
<td>Meeting started by chair (MO)</td>
</tr>
</tbody>
</table>

Please record the names of the team member who carried out each event.
## Time Line; Page ____

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><em>Please record the names of the team member who carried out each event</em></td>
</tr>
</tbody>
</table>

---

Appendix XIII

National Multidisciplinary Care Demonstration Project 339
### Section 1.02 MDC Meeting Coding Sheet

Please include in comment section exactly who is responsible for each event, indicate via initials when necessary

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Observation (circle)</th>
<th>Comments / Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Atmosphere</strong> - general feel of the meeting, may be more than one answer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Formal</td>
<td>1. very</td>
<td>1.</td>
</tr>
<tr>
<td>2. Friendly</td>
<td>2. fairly</td>
<td>2.</td>
</tr>
<tr>
<td>3. Tense</td>
<td>3. fairly</td>
<td>3.</td>
</tr>
<tr>
<td>5. Inclusive</td>
<td>5. fairly</td>
<td>5.</td>
</tr>
<tr>
<td><strong>Proceedings</strong> - how the meeting runs, is the chair involving people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Chair leads discussion</td>
<td>7. always</td>
<td>7.</td>
</tr>
<tr>
<td>8. Discussion kept on topic</td>
<td>8. always</td>
<td>8.</td>
</tr>
<tr>
<td>11. All actively involved in discussions</td>
<td>11. always</td>
<td>11.</td>
</tr>
<tr>
<td>15. Input/questions respected</td>
<td>15. always</td>
<td>15.</td>
</tr>
<tr>
<td><strong>Content</strong> - what is covered in the meeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Diagnostic cases</td>
<td>16. a lot</td>
<td>16.</td>
</tr>
<tr>
<td>17. Treatment planning (future)</td>
<td>17. a lot</td>
<td>17.</td>
</tr>
<tr>
<td>18. Treatment review (past/current)</td>
<td>18. a lot</td>
<td>18.</td>
</tr>
<tr>
<td>21. Non-work related issues</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 1.04 Individual Case Coding Sheet

Hospital/Facility: Date: Observation No: 1 2 3

Case No: ____________

1. Reason for discussion  □ Case review  □ Diagnostic Case  □ Treatment planning
2. Type of discussion  □ Case presented by 1 person  □ Case discussed by team
   Discipline: ____________

Decision making
3. Decision discussed by core team  □ Yes  □ No  Who? ________________
4. Decision unanimous  □ Yes  □ No
5. Disagreement evident  □ Yes  □ No
6. Decision based on:  □ Protocols  □ Guidelines
   □ Other: ________________
7. Decision documented  □ Yes, by ________________  □ No
8. Comments/examples of decision making

____________________________________________________________

<table>
<thead>
<tr>
<th>Issues</th>
<th>Report Demonstrated</th>
<th>Discussed?</th>
<th>Discussion lead by (discipline)</th>
<th>Others involved in discussion (disciplines)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Relevant patient files</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Test results available</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Clinical examination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Imaging</td>
<td>□</td>
<td>□</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Pathology</td>
<td>□</td>
<td>□</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Oestrogen Receptor Status (pos/neg)</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Treatment planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Surgery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post / Pre Surgery case</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Chemotherapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Radiation therapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Other: __________</td>
<td>□</td>
<td>□</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eg/ Genetics _______</td>
<td>□</td>
<td>□</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Trials ________</td>
<td>□</td>
<td>□</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Psychosocial issues</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Woman’s wishes re: treatment</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Referrals organised</td>
<td>□</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

16. Comments/examples of issues discussed: ____________________________________________

______________________________________________________________________

Appendix XIII

National Multidisciplinary Care Demonstration Project 341
# Section 1.03 Questions for Key Clinician Only

<table>
<thead>
<tr>
<th>Meeting Organisation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often are meetings held?</td>
<td>1. □ weekly □ fortnightly □ monthly □ other: ____________</td>
</tr>
<tr>
<td>2. Are the meetings always held?</td>
<td>2. □ yes □ no, not held when: ____________________________</td>
</tr>
<tr>
<td>3. Does the location vary?</td>
<td>3. □ no □ yes, sometimes held: __________________________</td>
</tr>
<tr>
<td>4. Who organises the meetings?</td>
<td>4. <em>Initials &amp; discipline/s:</em> ________________</td>
</tr>
<tr>
<td>5. Who is expected to attend?</td>
<td>5. □ Surgeon □ Radiation Oncologist □ Medical Oncologist</td>
</tr>
<tr>
<td></td>
<td>□ Pathologist □ Radiotherapist □ Breast Care Nurse</td>
</tr>
<tr>
<td></td>
<td>□ Psychologist □ Physiotherapist □ General Practitioner</td>
</tr>
<tr>
<td></td>
<td>□ Other/s: ___________________________</td>
</tr>
<tr>
<td></td>
<td>□ Pathologist □ Radiotherapist □ Breast Care Nurse</td>
</tr>
<tr>
<td></td>
<td>□ Psychologist □ Physiotherapist □ General Practitioner</td>
</tr>
<tr>
<td></td>
<td>□ Other/s: ___________________________</td>
</tr>
<tr>
<td>7. Who else is invited to attend?</td>
<td>7. <em>Discipline/s:</em> ________________________________</td>
</tr>
<tr>
<td>8. Is there a protocol re: which cases are presented at meetings?</td>
<td>8. □ no □ yes, it states: ________________________________</td>
</tr>
<tr>
<td>9. Is there a protocol on reporting back to the woman what was discussed in the MDC meeting?</td>
<td>9. □ no □ yes, it states: ________________________________</td>
</tr>
<tr>
<td>10. How are the results conveyed to the General Practitioner?</td>
<td>10. ________________________________ ____________________</td>
</tr>
<tr>
<td>11. Are there any other protocols for these meetings?</td>
<td>11. □ no □ yes, relating to: ________________________________</td>
</tr>
<tr>
<td>12. Are the women discussed being treated as private or public patients?</td>
<td>12. □ public □ private</td>
</tr>
<tr>
<td>13. If public, do the clinicians discuss private patients to the meeting?</td>
<td>13. □ no □ yes</td>
</tr>
<tr>
<td>14. Was anyone who usually attends absent today?</td>
<td>14. □ no □ yes, because:</td>
</tr>
<tr>
<td></td>
<td>▪ If yes, did this have an impact on the meeting?</td>
</tr>
</tbody>
</table>

---

*Appendix XIII*

*National Multidisciplinary Care Demonstration Project*
### Interpersonal issues

1. Who do you regard as the leader/s?  
   - Initials & discipline/s: ___________________________

2. Why do you regard them as the leader?  
   - ___________________________________________

3. Do you have ample opportunities to present your views?  
   - □ always □ mostly □ sometimes □ never

4. Do you feel your input is valued and respected by the team?  
   - □ always □ mostly □ sometimes □ never

5. Do you have an active role in decision making?  
   - □ always □ mostly □ sometimes □ never

6. If there is a disagreement between team members, who makes the final decision?  
   - □ chair □ majority (eg. by vote) □ primary clinician □ other: ____________________________________

7. Does interpersonal conflict interrupt the decision making progress?  
   - □ no □ yes, when: ____________________________

8. Do you consider the meetings worthwhile?  
   - □ always □ mostly □ sometimes □ never

9. Do you feel the treatment planning decisions are based on evidence/guideline recommendations?  
   - □ always □ mostly □ sometimes □ never

### Today’s meeting

10. Of the cases presented today, which did you know about in advance?  
    - □ all □ your patients/cases only □ none

11. How many of these patients are you actively involved in treating?  
    - ___________________________

12. Was this a typical meeting?  
    - □ yes □ no, because: ___________________________

13. What do you believe are the two main benefits of these meetings for patients?  
    - __________________________________________

14. What do you believe are the two main benefits of these meetings for yourself?  
    - __________________________________________

15. What do you think is the “key ingredient” to making these meetings work?  
    - __________________________________________
## Section 1.05 Questions for All Clinicians

<table>
<thead>
<tr>
<th>Hospital/Facility:</th>
<th>Date:</th>
<th>Observation No: 2 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Discipline:</td>
<td></td>
</tr>
</tbody>
</table>

### Today’s meeting

1. Did you know in advance which cases were being presented today
   - yes [ ] no [ ]

2. Was there anything unusual about today’s meeting?
   - yes [ ] no [ ]
   Because: ___________________________
   ____________________________________
   ____________________________________
   ____________________________________

3. Was anyone who usually attends absent today?
   - yes [ ] no [ ]
   If yes, did this have an impact on the meeting?
   - yes [ ] no [ ]
   initials & discipline/s: __________
   ____________________________________
   ____________________________________
   ____________________________________
   ____________________________________
   ____________________________________
   ____________________________________

   - yes [ ] no [ ]
   because: __________________________
   ____________________________________
   ____________________________________
   ____________________________________
   ____________________________________
   ____________________________________
   ____________________________________
References


35. NHMRC National Breast Cancer Centre (1998). *Psychosocial Guidelines for providing information support and counselling to women with breast cancer*, National Health and Medical Research Council, Canberra.


