Sustainability of Multidisciplinary Cancer Care

A follow-up study to the National Multidisciplinary Care Demonstration Project

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This report on the *Sustainability of Multidisciplinary Cancer Care* was prepared and produced by the National Breast Cancer Centre:

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Collaborations

(In alphabetical order):

Barwon and Western Breast Consortium, VIC

North Queensland Breast Cancer Consortium, QLD

Prince of Wales Hospital, Royal Hospital for Women, Prince of Wales Private Hospital and associated rural sites, NSW

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Executive summary

The *Sustainability of Multidisciplinary Cancer Care Study* (Sustainability Study) was conducted by the National Breast Cancer Centre (NBCC) in early 2004 to explore the sustainability of changes resulting from strategies implemented during the *National Multidisciplinary Care Demonstration Project* (Demonstration Project), undertaken mid-2000 to mid-2002. During the Demonstration Project, locally relevant strategies to implement or improve the provision of multidisciplinary care (MDC) for women with breast cancer were trialled.

The objectives of the Sustainability Study were to explore:

- the sustainability of the changes resulting from strategies implemented during the Demonstration Project
- further developments and flow-on effects, if any, of changes resulting from strategies implemented during the Demonstration Project.

Three multi-site collaborations of health care services, each located in a different State of Australia, took part in the Demonstration Project. During the Sustainability Study, in-depth, semi-structured telephone interviews were conducted with at least two key staff members from each collaboration. Interview questions were tailored for each interview participant and were designed to explore the sustainability and transferability of the strategies implemented during the Demonstration Project.

The majority of changes resulting from strategies implemented during the Demonstration Project were sustained in all three collaborations. Major achievements of the Demonstration Project included the establishment and/or improvement of MDC case conference meetings and improvements in psychosocial care of women, primarily through the employment of breast care nurses (BCNs). At follow-up, all MDC case conference meetings established during the Demonstration Project continued to be held, and interview participants noted improvements in the meetings at most hospital sites. BCNs continued to be employed in all three collaborations, and additional strategies to improve psychosocial care had also been sustained. However, some aspects of these

strategies were either not sustained or were considered likely to lapse at follow-up. For example, links between urban and rural hospital sites to provide MDC had deteriorated in one collaboration, and in another, the regional BCN position and MDC meetings were threatened by a funding reduction due to occur in June 2004.

A number of other strategies, ranging in goals and approaches, were also implemented during the Demonstration Project. The long-term sustainability of this group of strategies was variable, with some, such as a family cancer clinic being sustained and others such as services directories, no longer sustained.

Flow-on effects of the MDC strategies into the management of patients with other cancers or other chronic diseases were apparent in two of the three collaborations. Cultural changes across health care services, such as improved communication between disciplines and acceptance of shared clinical decision-making, were other indirect outcomes of MDC strategies implemented during the Demonstration Project.

> *"the benefits (of the MDC meetings) have just been absolutely incalculable to us … mutual learning experiences, mutual communication pathways, they have spread into all our activities throughout the hospital …"*

Exploration of the factors that contributed to the sustainability of strategies demonstrated the importance of:

- allocating dedicated funds and personnel to maintain, support and improve MDC strategies
- ensuring MDC case conference meetings are held routinely, so that meeting preparation and participation become habitual for participants
- ensuring that MDC team members recognise the MDC strategies to be beneficial for patients and/or themselves
- encouraging commitment to participation in MDC case conference meetings by participants, through demonstration of the benefits

- enlisting a ‘champion’ – usually a well-respected clinical opinion leader – to drive the MDC strategies, particularly in the early stages, although this also needs to be supported by team ownership to ensure sustainability in the longer term

- developing contingency plans to allow for changes in personnel and organisational structure.

The outcomes of the Sustainability Study have important implications for health care services seeking to implement sustainable MDC.

Background

In recent years multidisciplinary care (MDC) has been identified in several prominent national policy documents as a priority for the delivery of best practice care for cancer patients in Australia.[1-3] The importance of a multidisciplinary approach to cancer care is also highlighted in a number of clinical practice guidelines, including the National Health and Medical Research Council *Clinical practice guidelines for the management of early breast cancer* (2nd edition),[4] which recommend that women with breast cancer are treated by specialists who have *'access to the full range of treatment options in a multidisciplinary setting'*. To investigate models for the implementation of MDC for women with breast cancer in Australia, the National Breast Cancer Centre (NBCC) undertook the *National Multidisciplinary Care Demonstration Project*[5] (Demonstration Project) between June 2000 and July 2002. During the Demonstration Project, locally relevant strategies to implement or improve the provision of MDC for women with breast cancer were trialled in three multi-site collaborations of health care services, each located in a different State of Australia. The process, impact, acceptability and costs associated with the implementation of these strategies were assessed.[5]

Given the diversity of health care service delivery settings and models in Australia, it was not appropriate to encourage a fixed approach to implementing MDC. Therefore, prior to commencing the Demonstration Project, a flexible, principle-based approach to MDC was developed, providing a framework for implementing MDC in the Australian context. The *Principles of Multidisciplinary Care* emphasise the importance of a team approach to cancer care, communication between team members, access to the full therapeutic range regardless of geographical location, and involvement of the woman in decisions about her care.[5]

The three multi-facility collaborations that took part in the Demonstration Project consisted of a 'lead' centre (a large, urban centre) and two or more rural and/or urban sites that worked closely with the 'lead' centre. The collaborations were located in New South Wales, Queensland and Victoria, and at least two rural services and a mix of public and private services were represented in each.

Using the *Principles of Multidisciplinary Care*, each of the collaborations nominated locally relevant, feasible strategies to be undertaken during the Demonstration Project to improve MDC in the region. Each collaboration included a proposal to establish new or improve existing regular, multidisciplinary case conference meetings. The need to strengthen communication and collaborative links was also identified by all collaborations, and emphasis on the role of the Breast Care Nurse (BCN) was a common strategy. Collaborations were funded by the NBCC to implement the proposed strategies during the Demonstration Project and not beyond, but all collaborations were encouraged to ensure that strategies would be sustained after completion of the project period.

At completion of the Demonstration Project, regular MDC case conference meetings had been established or improved in at least one site in all three collaborations. Links via teleconference or videoconference for rural sites to the urban-based case conference meetings were established in two of the collaborations. Consideration of psychosocial issues during case conference discussions improved in all collaborations, and the collaborations had employed or obtained funding to employ BCNs to enhance continuity of care and the provision of psychosocial care to women and their families. Improvements were also found in diagnostic practice (eg decrease in percentage of diagnoses achieved by open biopsy) and in the routine availability of radiology and pathology reports at meetings. Additional outcomes included the establishment of a regular family cancer clinic and the development of directories for support and off-site services. The majority of clinicians surveyed across the three collaborations found the strategies to be acceptable, and believed the changes had improved the care of women with breast cancer. In February – April 2004, the *Sustainability of Multidisciplinary Cancer Care Study* was undertaken to assess the sustainability of strategies implemented during the Demonstration Project.

Objectives

The objectives of the Sustainability Study were to explore:

- the sustainability of the changes resulting from strategies implemented during the Demonstration Project

- further developments and flow-on effects, if any, of changes resulting from strategies implemented during the Demonstration Project.

Method

Design overview

A follow-up survey to assess the sustainability of the changes resulting from strategies implemented during the Demonstration Project was commenced in 2004, 19 months after data collection had been completed. At least two key staff members from each collaboration were invited to take part in a semi-structured, follow-up telephone interview. Interview questions were designed to explore the sustainability and transferability of the strategies implemented during the Demonstration Project.

Recruitment

During the Demonstration Project, at least one Chief Clinical Collaborator and one or more Local Evaluation Coordinator(s) were nominated for each collaboration, to coordinate the identification and implementation of strategies designed to improve MDC in the region, and the associated data collection. In most cases the Chief Clinical Collaborators and Local Evaluation Coordinators were involved in the Demonstration Project for the entire project duration and therefore had an in-depth knowledge of the strategies undertaken. The three Chief Clinical Collaborators (one in each collaboration) and five Local Evaluation Coordinators (one in each of two collaborations, and three in one collaboration) who had been most involved in the Demonstration Project were invited to take part in a follow-up survey to assess the sustainability of changes resulting from the strategies implemented during the Demonstration Project.

All three Chief Clinical Collaborators and four of the Local Evaluation Coordinators were still employed by the collaborations. As one Local Evaluation Coordinator was no longer employed by Collaboration 3, the Chief Clinical Collaborator nominated an appropriate alternative interview participant.

Survey design

Survey design

The research technique chosen for the follow-up surveys was an in-depth, semi-structured qualitative telephone interview. This was considered an appropriate and cost-effective technique for assessing participants' perceptions and experiences of whether changes resulting from strategies to improve MDC in their region had been sustained. Interviews with at least two different health care professionals from each collaboration (the Chief Clinical Collaborator and the Local Evaluation Coordinator(s)) were undertaken.

As strategies varied between collaborations, interview questions to assess the sustainability of changes resulting from these strategies were tailored accordingly. However, all interview schedules included questions about: the degree to which changes resulting from strategies implemented during the Demonstration Project had been sustained; the participants' perceptions about why changes had or had not been sustained; and the degree to which MDC strategies had been transferred to other areas of the health care services.

The interview schedules were also tailored according to the participant's role in the Demonstration Project. In general, the Local Evaluation Coordinators were asked questions with a greater focus on the practicalities and details associated with administering MDC, while the Chief Clinical Collaborator interviews had a greater focus on the context of policy and resources of the health care systems across the region in which MDC is implemented.

Conduct of interviews

Telephone interviews were conducted by one NBCC Senior Project Officer ('the interviewer') during February – April 2004. The interviewer liaised directly with participants to arrange and conduct the interviews. The interviews took between 20 and

30 minutes, with the exception of one interview that took 45 minutes. All interviews were recorded, with permission from participants, to ensure accuracy of data collection. Participants were assured that the resultant tapes would be kept securely and confidentially.

Analysis of data

As interview schedules were unique for each interview participant, and the number of appropriate participants was small, in-depth statistical analysis was not appropriate. Qualitative, thematic analysis was used.

Results

Collaboration 1

Collaboration 1: background

About Collaboration 1:

Collaboration 1 consisted of four health care service sites:

- 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 the State breast screening program.

Interview participants

The Chief Clinical Collaborator and the Local Evaluation Coordinator, both of whom were based at Site a, took part in the follow-up interviews.

Strategies undertaken by Collaboration 1:

The strategies undertaken by Collaboration 1 to establish or improve MDC across the region, and the status of these strategies at completion of the Demonstration Project and then at follow-up, are outlined in the table below.

Overarching strategy	Status at completion of the Demonstration Project	Status at follow-up
Continued development of a breast clinic in Site a to provide a forum and focus to take MDC beyond the point of diagnosis	i. MDC meetings established in Site a	sustained & improved
	ii. Family cancer clinic established in Site a and held every 2 months; outreach service planned	sustained & improved
Development of MDC meetings in rural sites, with enhanced communication, and a view to extending intra-regional involvement in the longer term; (investigate and develop case conferencing throughout the region)	iii. MDC meetings established in Site c	sustained
	iv. MDC meetings not established in Site b or Site d	no change
	v. Psychosocial discussion limited in Site c but improved over time	sustained & improved
	vi. 'One stop shop' multidisciplinary clinic planned for Site c but not yet established	no change
Coordination of breast care nursing and removal of institutional barriers to enhance uniformity and continuity of care and support	vii. Seminar to discuss MDC clinical pathways to enhance continuity of care discussed but not conducted	no change
	viii. Funding obtained for the employment of a regional BCN; nurse employed towards the end of the Demonstration Project	sustained & improved

Collaboration 1: sustained or improved MDC strategies

Of the five key changes in service delivery achieved in Collaboration 1 by completion of the Demonstration Project, all had been sustained at the time of follow-up interviews. In most cases, some additional improvements had been made to the strategies since completion of the Demonstration Project, or improvements were anticipated within the coming months. However, the sustainability of at least some of these strategies was

expected to be affected by a substantial reduction in funding, due to take place at the end of June 2004.

The following sections provide further information about sustained strategies.

i. MDC meetings established in Site a

At follow-up, weekly MDC case conference meetings in Site a continued to be held with a focus on treatment planning for individual women. On average, 4–6 cases were being discussed at each meeting, compared with an average of 3 cases per meeting at completion of the Demonstration Project.

"we've seen a transition from the presentation of 'a case of breast cancer' with a lot of technical detail, to the presentation of 'a woman with breast cancer', with background details about who this woman is, what's going on in her life, what her desires might be, and how that might impact decision-making …"

Attendance at the meetings had continued to grow, with a reported average of over 25 attendees at each meeting, representing all core disciplines of surgery, oncology (radiation and medical), pathology, radiology and supportive care. The number of trainees of all specialties attending meetings had increased, and trainees were reported to be actively taking part in the meetings. A key change in attendance since completion of the Demonstration Project was an increase in attendance by general practitioners (GPs), which was reported to have been facilitated by a staff member telephoning the GPs of patients to be discussed, to invite them to attend the meeting.

"after arriving (in site a) to find absolutely no formal multidisciplinary discussions that were the basis for care planning, to having a full blown meeting, which we have weekly now and without fail … that's one of the most satisfying things …"

Psychosocial issues continued to be considered during the meetings and the BCN continued to be valued as a member of the MDC team. However, the two interview participants had differing views regarding the extent to which psychosocial issues were considered. One interview participant felt that the discussion of

"now people don't want to miss a meeting … it would take a lot to threaten the sustainability of the meetings …"

psychosocial issues had improved over time because case presentations without psychosocial aspects began to appear ‘stark’ in comparison with other presentations. The other interview participant felt that improvements could be made to empower BCNs to participate more in the meetings.

“there’s now substantially more trust, less fear of critical comment (in the MDC meetings) … people now bring in cases of difficult decisions and review very critically what’s gone on in the past and what should go on in the future …”

Interestingly, the meetings continued to be run without a fixed Chairperson. The Chairperson role was reported to rotate during each meeting, so that any clinician presenting was considered to be the Chairperson at that particular point in time. After each meeting the data manager and regional BCN prepared a summary of the meeting outcomes. These summaries were not being attached to patient records, but were being kept centrally and could be accessed by meeting participants.

“there are many dialogues that go on around … structural issues in health that have been facilitated by the interaction of the multidisciplinary team …”

The Local Evaluation Coordinator had continued to be involved in meeting organisation but to a lesser degree, as the regional BCN and the data manager had also become involved. The Local Evaluation Coordinator was seeking to improve the meetings, and had conducted a survey of all participants to assess their perceptions of the meeting benefits and outcomes, and to seek suggestions for future improvements.

“when something really important needs to change, (participants) will hold a meeting… they’ll do a literature search and present it …(and present a proposal for future service delivery) …”

One incidental function of the meetings was identifying and addressing any key problems in service delivery. For example, an additional meeting had been held to discuss a specific pathology test, when participants became frustrated that testing was not being done routinely. Routine testing across the service was implemented as a result.

“when the plan of management is sanctioned by a committee, it’s a comfortable thing …”

Interview participants reported that the meetings had improved over time, becoming more 'robust' with wider participation, increased commitment by participants, improved communication and increased trust between participants. Participants were reported to appreciate the shared decision-making with a team, and treatment plans were perceived to have become more in line with clinical practice guidelines.

"people who had unusual patterns of practice have normalised them… (now) treatment is much more aligned to guidelines …"

It was acknowledged that difficulties were still sometimes experienced during meetings, such as a clinician not wishing to present a case, or technological problems due to equipment being stolen or damaged. However, these problems were overcome and had not threatened the sustainability of the meetings.

"there would certainly be a very strong commitment from the (clinicians)… there's huge commitment, I just don't think that anybody would let (the meetings) slip …"

Factors considered by interview participants to contribute to the sustainability of the meetings included:

- the incorporation of meetings into participants' routines, such that meeting preparation and attendance had become a habit for participants

"people now have got used to the fact that come Tuesday, they should be thinking about their cases that they want to present …"

- commitment on behalf of meeting participants to take part in the meetings

"the team is absolutely committed to those meetings now and sees them as valuable …"

- peer pressure to 'normalise' practice to be aligned with that of the group

- the value placed by meeting participants on the meeting – in a recent survey, members valued the educative role of the discussions about relevant research during meetings and believed they have improved their practice as a result of the meetings.

"these meetings will go on regardless of who is here …"

An ongoing challenge for meeting participants was to increase the somewhat limited input by BCNs and GPs into meeting discussions. Strategies such as the regional BCN encouraging BCNs to present information about women that might influence decision-making had increased participation rates, but the rates were still considered to be low.

"every single respondent (to a survey of meeting participants) has stated that the educative role is very high … because … they (the clinicians speaking) cite the research all the time …"

While aspects of the meetings had improved since completion of the Demonstration Project, the ongoing improvement was likely to be threatened if, as it was anticipated, funding of the Local Evaluation Coordinator and regional BCN positions were to be discontinued at the end of June 2004.

"the BCNs … they know that psychosocial input is incredibly important, but they just are not empowered enough to put (psychosocial issues) forward …"

ii. Family cancer clinic established in Site a and held every 2 months; outreach planned

The family cancer clinic continued to be held in Site a, with improvements. The clinic was now held monthly, rather than 2-monthly, and a new 2-monthly outreach clinic to Site b had been established. The clinics were always full.

"every clinic is completely and utterly booked …"

The sustainability of the family cancer clinic was attributed to:

- a significant need for the clinic within the population at Sites a and b
- promotion of the clinic to audiences including local GPs via the local Division of General Practice
- an administrative structure to support the clinic.

"there was a dramatic need for (the clinic)… (previously) people in Site a and nearby areas were having to travel to (the capital city) ..."

iii. MDC meetings established in Site c

v. Psychosocial discussion limited in Site c but improved over time.

MDC case conference meetings continued to be held on a weekly basis in Site c. While the impetus for establishing the meetings was breast cancer care, the small breast cancer caseload in Site c had resulted in a change of focus for the meetings, with all cancer types now discussed. The meetings continued to be attended by members of the core disciplines of surgery, pathology, radiology and supportive care. Registrars and residents were also attending. Medical and radiation oncologists based in Site a were attending some Site c meetings via a videoconference link. This link was due to improve in 2004, with improved speed of transmission and image quality.

"the team developed the meetings their own way … (if there was) any sense of us looking over their shoulder, we would have lost (their participation in the project and MDC meetings) …"

"(the meetings) will continue because they are very much a part of (the clinicians') practice – the team is dependent upon the meetings for decision-making …"

One interview participant reported that the profile of the BCN at Site c had increased over time, and believed that consideration of psychosocial issues during meetings had improved since completion of the Demonstration Project.

Both interview participants believed that sustainability of the meetings was partly attributable to Site c's ownership of the meetings and meeting processes. One interview participant reported that a single clinician was instrumental in ensuring the sustainability of meetings, to the extent that the meetings could discontinue if that clinician was no longer involved. The other interview participant believed that the clinicians were sufficiently dependent on the meetings for their decision-making to ensure sustainability of the meetings. The incorporation of the meetings into participants' routines, such that they

"an ad hoc meeting wouldn't work with clinicians – they need to have a regular meeting that fits in with their week …"

"there's a champion there .. she's really running the meetings, and acting as the whip to get people there …if she left, (the meetings) would fall over …"

became habitual, was also considered important for sustainability.

"I think (the participants) now admit (the meetings) are quite useful to them …"

viii. Employment of a regional BCN: nurse employed towards the end of the Demonstration Project

A regional BCN was employed towards the end of the Demonstration Project and funding for the position had been extended beyond the initial 12-month period. Since employment, the regional BCN had achieved the following:

"the regional BCN has a very high profile in Site a and within the multidisciplinary team…"

- Education sessions for BCNs in the region. Approximately four education sessions had been held per year. Access for BCNs throughout the region to the educational sessions had improved over time through the use of videoconferencing.

"(at the beginning of the Demonstration Project) we surveyed 160 nurses across the region involved in caring for women with breast cancer… they wanted: accredited BCNs in each health service in an identified role; access to local education; a good level of service to be provided; to know who was out there in the region – they wanted to be networked…"

- Networking days for BCNs across the region. BCNs had been able to get to know each other and discuss their own local service provision. Service provision was believed to have improved through knowledge-sharing regarding different services' approaches. Networking had resulted in an increase in referrals between BCNs where appropriate.

"(the BCNs) know each other now and they refer women from one BCN to another, for better continuity of care…"

- A set of guidelines for health services for the development of clinical pathways for women with early breast cancer were being developed. The regional BCN had worked closely on these guidelines, which had been drafted and were anticipated to be available in the second half of 2004.

"(if the regional BCN were no longer there) I would hope that the BCNs have networked enough now to identify a process by which they could organise education in the region … I would hope that it would be sustainable …"

- A new lymphoedema clinic was being managed by the regional BCN 12 hours per week.

- Summary sheets were being prepared following each MDC case conference meeting at Site a. In conjunction with the data manager, the regional BCN prepared summary sheets with clinical information and treatment planning outcomes for all women discussed.

"the regional BCN is talking with BCNs about the importance of presenting (psychosocial) information (in MDC meetings) about the women that might influence decision-making…"

At follow-up, funding for the regional BCN position was due to be discontinued at the end of June 2004 because there would no longer be a regional funding structure to support it. It was considered that some of the regional BCN roles could be undertaken by local BCNs, and it was hoped that BCNs in the region would take the initiative to continue networking and running mutual education sessions.

"there's better access now in that there's a BCN service in each of the health care services now …"

General comments about the sustainability of strategies across the region

One interview participant noted that skills required to institute change were sometimes different from those required to sustain initiatives.

"the people who may be the best change agents aren't always the best at continuing to run things …"

Collaboration 1: discontinued MDC strategies

At follow-up, no changes resulting from MDC strategies that had been successfully implemented during the Demonstration Project had been discontinued.

However, the funding reduction due to commence at the end of June 2004 was considered a possible threat to the sustainability of strategies. One interview participant was concerned that additional changes to the State-wide funding structure of cancer services could threaten the sustainability of the MDC strategies.

"if the reforms in cancer care don't come through, (the MDC strategies) may not be well-sustained because (the strategies) are very dependent on one or two individuals and (they) could easily stop again; they're at risk …"

There was no change in the status of strategies that had not been completely implemented during the Demonstration Project, such as plans to establish MDC case conference meetings in Site b and Site d and the strategy to establish a 'one stop shop' multidisciplinary clinic in Site c.

Collaboration 1: transferability and other 'flow-on' effects

At follow-up, a number of 'flow-on' effects of the Demonstration Project were reported. These include the establishment and/or improvement of MDC in other cancer areas, and improved communication between different disciplines within the health service. The following sections provide further information about transferability and other 'flow-on' effects.

i. 'Flow-on' to the management of other cancers

The Committee established at Collaboration 1 to oversee the development and implementation of strategies during the Demonstration Project had continued to meet since completion of the project. The meeting prior to the follow-up interviews had included discussions about how to transition some of the Demonstration Project strategies to other cancer areas. The collaboration had also changed its name from 'Breast' Collaboration to 'Cancer' Collaboration, demonstrating the broadening interest to a range of cancer areas. However, no specific resources

"there's no doubt that there has been a flow-on to other diseases, there's been more acceptance of multidisciplinary input into the treatment of other cancers …"

"with time and budget… we'd extend (the MDC strategies) to many other diseases – right now we don't have the human resources to make that happen …"

had been allocated to carry out such changes.

One interview participant reported that MDC in lung cancer care, and to a lesser extent in bowel cancer care, had started to improve as a result of the Demonstration Project. The flow-on was considered to be partly due to some clinicians working in both breast and either lung or bowel cancer, and due to other clinicians either observing or hearing about the MDC processes in breast cancer.

"(the clinicians) have been exposed (to MDC), some of them because they do some breast (cases), and others indirectly… (they think) 'hey this process works and although it takes a bit of time, if you make it work for you it's quite efficient' …"

ii. Improved communication

The strategies to implement MDC were considered to have facilitated stronger relationships, more trust and improved communication between members of the multidisciplinary team. Improved communication had led to discussions about both patient care and health service structural issues, such as pathology testing (see page 10).

"the team has formed a relationship outside the meeting – a much closer relationship and a lot more trust. Many dialogues go on around patient care but also around structural issues in health that have been facilitated by the interaction of the team meetings ..."

"we all belong to one team…a new tribe … it's facilitated all sorts of communication …"

Collaboration 2

Collaboration 2: background

About Collaboration 2:

Collaboration 2 consisted of five health care service 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.

Interview participants

The Chief Clinical Collaborator, based at Site b, and the three Local Evaluation Coordinators, based at Site a, Site b and Site c, took part in the follow-up interviews.

Strategies undertaken by Collaboration 2:

The strategies undertaken by Collaboration 2 to establish or improve MDC across the region, and the status of these strategies at completion of the Demonstration Project and then at follow-up, are outlined in the table below.

Overarching strategy	Status at completion of the Demonstration Project	Status at follow-up
Develop an identifiable multidisciplinary team and strengthen links between members	i. Collaboration logo and letterhead developed and distributed to all relevant facilities in the region	not sustained
	ii. Posters summarising clinical pathways, with photos of relevant clinicians, displayed in patient waiting areas; compliance with pathways variable	not sustained
Establish regular MDC case conference team meetings, with distant sites linked via videoconference	iii. Weekly MDC case conference meetings established in Site a, Site b and Site c	sustained (some aspects not sustained)
	iv. Videoconferencing (or teleconferencing when unavailable) between Sites a and e occurring; surgeon from Site d attending Site b MDC meetings	partially sustained
Establish collaborative links and strengthen existing links across the region	v. Directory of off-site services being developed, but content under constant review due to ongoing changes to services	not sustained
Improve psychosocial support for women with breast cancer	vi. Directory of support services being developed, but content under constant review due to ongoing changes to services	not sustained
	vii. Funding for three part-time BCNs granted towards the end of project	sustained & improved
	viii. Counselling rooms established in Site b BreastScreen facility	sustained
	ix. Relevant mental health staff had input into treatment planning for women with psychiatric needs	sustained

Collaboration 2: sustained or improved MDC strategies

Of the nine main strategies implemented by Collaboration 2 during the Demonstration Project, four had been generally sustained or improved, and one had been partially sustained. MDC case conference meetings had been sustained at the three sites in which they had been established (sites a, b and c), and a surgeon from rural Site d continued to take part in the urban Site b meetings. BCNs continued to be employed at the three main sites (sites a, b and c). Counselling rooms continued to be available for use in site b and mental health staff continued to have input into treatment planning where appropriate and/or be available through referral.

The following sections provide further information about sustained strategies.

iii. Weekly MDC case conference meetings in Sites a, b and c

Site a – summary

"(the most satisfying experience) was actually having a functioning MDC meeting… it's developed beyond what I ever imagined it would do … beyond our belief …" (Site a)

MDC case conference meetings had continued to be held in Site a on a weekly basis. Up to 25 participants were attending each meeting. Despite significant turnover in staff since completion of the Demonstration Project, all core disciplines continued to be present at the meetings, with representatives from both the public and private sectors. Students, registrars and residents were also attending, but attempts to encourage GPs to attend the meetings had continued to be unsuccessful.

"two new medical oncologists think the meetings are wonderful … everyone can have their say, there's not the pecking order that other places have … one commented to me that it's just so good that you can put your point of view across and it's respected …" (Site a)

The Local Evaluation Coordinator, who had been appointed BCN after completion of the Demonstration Project, continued to organise the meetings. Up to 15 cases were being presented at each meeting, compared with an average of 4 cases per meeting at completion of the Demonstration Project. Treatment planning for all newly diagnosed women at Site a continued to be a focus

of the meetings. The discussion of all new cases was attributed to good relationships between the BCN and the pathology services.

"I was away for 9 weeks last year and the meetings continued … I think regardless of me being there (to organise the meetings), they would continue …" (Site a)

During the Demonstration Project, links had been established between the urban Site a and the rural Site e, so that women from Site e were discussed during the MDC case conference meetings. At follow-up, it was reported that very occasionally some women being treated at Site e were not discussed due to rare circumstances, such as biopsies for the women being sent to other centres (not Site a) for processing.

The BCN, the oncology social worker, and an aboriginal liaison case worker where appropriate, were attending meetings, and psychosocial issues continued to be raised. However, these issues were not considered as frequently or in as much detail as the BCN would have liked.

"I think (MDC) is really driving itself … (the clinicians) want to see (MDC) work – they see the benefit of it, they will state that openly, and I think they enjoy coming to the meetings …" (Site a)

Following the meetings, the surgeons or oncologists were reporting meeting outcomes in writing letters to the patients' GPs.

Since completion of the Demonstration Project, clinicians had started to request follow-up team discussions for patients with a recurrence. Meeting preparation in these cases was often difficult and time-consuming for the BCN.

"(in the meetings) they do discuss issues in relation to the women's family, the impact of children issues, but they don't really go into great detail … it's still very medically oriented … I don't think we have the time to do the psychosocial issues justice …" (Site a)

The meetings continued to fulfil an educational function for participants, with members giving presentations or discussing issues relating to health service delivery.

Site b – summary

At follow-up, the MDC case conference meetings continued to be held weekly at Site b, and continued to have a focus on treatment planning for all women newly diagnosed with breast cancer at Site b and Site d. The Site b meetings continued to be held on the day that the Site a radiation oncologist and the Site d surgeon visited Site b and hence could attend.

"we built a lot of trust across the private-public interface – before it was a barrier, and now it is an interface …" (Site b)

Each meeting was attended by approximately 10 clinicians, with a mixture of private and public sector clinicians from all core disciplines. Others, such as the genetic counsellor, attended meetings when appropriate, and the numbers of 'non-medical' meeting participants, such as radiographers, BreastScreen representatives and a range of nurses, had grown. Attempts to encourage meeting attendance by GPs had continued to be unsuccessful. While unable to attend meetings, plastic surgeons had become more involved in the multidisciplinary team.

"(the most satisfying thing) was bringing together all the diagnostic modalities and integrating them into the treatment modalities and building links with those people … these links have become stronger …" (Site b)

Organisation of the meetings had become easier over time, which was attributed to meeting preparation and attendance becoming habitual for participants. Each meeting continued to be minuted, and the minutes were kept in a central folder. If relevant clinicians were not present at a particular meeting, the meeting organiser informed the clinician in writing of the relevant meeting outcomes.

"(if there was no one to organise the meetings) I think they would continue, but they may not be quite as structured as they are now …" (Site b)

Follow-up discussions to treatment planning had been added to the meetings over time. Issues such as breast reconstruction and clinical trial participation continued to be raised.

"the benefits (of the meetings) have just been absolutely incalculable to us…mutual learning experiences, mutual communication pathways, they have spread into all our activities throughout the hospital …" (Site b)

Referral patterns in general and communication between public and private services were reported to have improved quite dramatically as a result of the meetings. This reduction in the barriers between the public and private sectors was considered a key success of the meetings.

"there's been a lot of change in the referral patterns, very much more streamlined than it was (as a result of the MDC meetings) …" (Site b)

Site c – summary

MDC case conference meetings continued to be run at Site c, however they were no longer held on a weekly basis. The meetings were held either fortnightly or once a month, because the number of breast cancer patients at Site c had decreased and the Site a radiation oncologist was only visiting once a month. However, it was noted that if a patient needed to be seen earlier, liaison with the oncology department in Site a was organised outside the meetings.

"as soon as we know that we've got enough patients (to hold a meeting) we contact one another …" (Site c)

On average, meetings continued to be attended by 10–15 participants, with representatives from the core disciplines. Attempts to involve GPs in the meetings had continued to be unsuccessful.

"the most satisfying aspect for us is that we've bridged a big gap between the public and private sectors, where we all work together, we liaise more …" (Site c)

The meetings continued to focus on treatment planning for all women newly diagnosed with breast cancer, and some discussion of patient follow-up had been added. An increased focus on psychosocial issues during meetings was reported. The BCN was seeking to visit all patients while they were in hospital after surgery and contact them again after being discharged.

Meeting organisation was considered to have become more streamlined over time. This was partly because the Local Evaluation Coordinator knew all the meeting

"I think there is a lot more input from the nursing staff, including the BCN, than there was before …" (Site c)

attendees and communication between them had improved. Communication and liaison was also considered to have improved between other meeting participants, and between the public and private sectors.

Sustainability of MDC meetings in the 3 sites

Factors considered by interview participants to contribute to the sustainability of the meetings included:

- a 'champion' who encouraged clinicians to take part in the meetings, often organised the meetings, and ensured that they would continue
- the incorporation of the meetings into participants' routines, so that the meetings had become habitual for participants
- the commitment on behalf of the meeting participants to take part in the meetings
- the value placed by meeting participants on the meetings – participants seemed to value the educative opportunities, the shared responsibility for decision-making, and the benefits to patients
- the discussion of patients with other clinicians prior to treatment planning had become a 'norm', internalised by participants as standard practice
- the opportunities for communication and relationship building between participants appeared to be valued by participants – this social element was particularly valued by interview participants from Site b, where meetings were held at the end of the week with food provided.

"(before the Project), there were separate centres in the region that didn't really communicate with each other … but this is no longer the case …"

"I feel like I've internalised it so that if I had a breast cancer patient, I would not have completed the treatment planning without presenting them (at an MDC meeting) …"

"it's just one of those communal culture things where everyone just accepts that … on Friday it's the MDC meeting… it's just part of the week …"

"before the meetings, (clinicians) were always working in separate areas and the only communication they had was by the referral letters or occasional phone calls … (the meetings) give them time to communicate …"

"people come spontaneously now … it's now a self perpetuating activity …"

"(the champion) has strong links with all people in the team… she's one of these enthusiastic people that every team needs …"

"it's a social thing as well … it's a bit of a wind-down and a bit of chit-chat towards the end… it's got a defacto social function …"

iv. Surgeon from Site d attending the MDC meetings at Site b

The Site d surgeon had continued to attend the Site b MDC case conference meetings in person. Therefore there had been no need to establish the planned video link between Site b and Site d.

vii. Funding for three part-time BCNs

Three BCNs were employed on a part time basis in Site a, Site b and Site c, towards the end of the Demonstration Project. In all cases, the positions had been extended beyond the initial contract period, and the number of funded hours had increased. Funding for the position at Site a was reported to have been threatened at one stage, but was secured shortly after the follow-up interview.

"I'm involved in the MDC meetings and I know all the clinicians well … so if a patient phones me and asks me to clarify what the clinician said, it's easy for me …" (Site a)

At all sites the BCNs attended the MDC case conference meetings and were valued members of the treatment team. One of their key roles was the coordination of care for women. For example, at Site a, the BCN contacted the referring GPs if a woman had not attended the hospital for a treatment consultation following a positive biopsy. This BCN also kept a record of all women discussed during the MDC meetings and tracked them to ensure that the women received referrals according to the recommendations made in the meetings.

"(the BCN) provides a unifying force that links the public and private sectors and the community and the hospital … continuity across those barriers …" (Site b)

"the clinicians are very appreciative, recognising (the BCN) as part of their team …" (Site b)

"what I do is a good way to track (the women) and I'm probably in the best position to do it because I've got contact with everybody …" (Site a)

Another key BCN role was the provision of support to women recently diagnosed and having any treatment at the respective sites. This included the provision of information and referral to social workers, professional counselling or volunteer peer support. Referrals came to the BCNs via MDC meetings and individual clinicians, or through leaflets and cards available through local health

"I think (the clinicians) really do value (my role) … if there's a difficult case they know they can pass the patient on to me and I have the time to spend with them …" (Site a)

care services and the Cancer Helpline.

All BCNs were available to provide support by telephone or in person. For example, the BCNs were attending initial clinic consultations and at Site a the BCN was attending at least some of the patients' first chemotherapy and radiotherapy sessions. The BCN at Site b noted that she was working closely with the aboriginal liaison officer and the clinical nurse consultant from BreastScreen to provide support to rural patients.

"I can put (the women's) mind at ease … if it's between visits they worry – I can clarify (their concerns), so that eases the worry …" (Site a)

"it's sometime nice for (the women) to see a friendly face when they're coming for their first chemo … I can prepare them for that …" (Site a)

At Site b it was interesting to note that perceptions of the benefits of the BCN position had changed over time. Initially the benefits were considered to be mainly to the patients, but over time the team perceived valuable benefits to themselves of the care coordination role.

we all benefit from (the BCN) – she ties things together, acts as a safety net … she double checks and follows things up …" (Site b)

At each site the BCN position was considered to be highly valued by MDC team members. Factors perceived to contribute to the success and sustainability of the BCN positions included the communicative and outgoing personalities of the people who fulfilled these positions, and the dedication and initiative shown by the BCNs.

"(the women) have got one point of contact which can help them navigate the system …" (Site a)

"(having the BCN) is one key strategy for bridging the gaps in local services …" (Site c)

viii. Counselling rooms were established in hospitals in Site b

The counselling rooms in BreastScreen were still available and being used in Site b. For the comfort of women having counselling, efforts were being made to avoid holding counselling sessions on days when screening of well women was also occurring.

ix. Relevant mental health staff had input into treatment planning for women identified as having psychiatric needs

For cases where mental health needs were known prior to the MDC case conference meeting, mental health staff had continued to attend the meetings and have input into treatment planning at Site b. Mental health staff were not involved in the MDC meetings at Site a or Site c, but referral pathways were in place for women with mental health needs at these sites.

Collaboration 2: discontinued MDC strategies

Of the nine main strategies implemented by Collaboration 2 during the Demonstration Project, four had not been sustained and one had been partially not sustained. A Collaboration logo and letterhead had ceased to be in use, and posters summarising clinical pathways were no longer being displayed in patient waiting areas. Two directories of services, one of off-site services and one of support services, were mostly no longer in use. A videoconferencing link between the urban Site a and rural Site e had also no longer been sustained.

The following sections provide further information about discontinued strategies.

i. Collaboration logo and letterhead

The collaboration logo and letterhead were no longer in use anywhere in the region. At Site c it was reported that there was no need for these identifiers as almost no referrals were being made between services outside the collaboration. Site b was reported to have discontinued using the logo and letterhead because they believed the collaboration was no longer a formal entity upon completion of the Demonstration Project.

ii. Posters summarising clinical pathways

The posters summarising clinical pathways were no longer in use in Sites a, b, or c. Frequent staffing changes, often involving many locums, and the resultant ongoing work required to keep the posters up-to-date were the main reasons for no longer using them. Another reason was Site a's move to a new location, where the team members were no longer in one location, and there was no suitable space to display the photos.

"(they might have been able to be sustained) if it had been anyone's responsibility (to update them) but by default it ended up being mine and I'm busy too, so unfortunately it fell by the wayside because our core business is diagnosis and I have to do that first ..." (Site b)

One interview participant believed that the photos may still be displayed in Site d, as there had been few staffing changes in Site d since completion of the Demonstration Project.

iv. Videoconferencing between Sites a and e

During the Demonstration Project, a link was established between the urban Site a and the rural Site e. Clinicians from Site e were able to attend the MDC case conference meetings at Site a, via a videoconference link, and surgeons from Site a visited patients at Site e.

At follow-up, clinicians at Site e were no longer able to link to the Site a meetings by videoconference due to technical problems arising when the Site a hospital moved location. However, pathology results for women diagnosed in Site e continued to be discussed during the Site a meeting as their pathology was being processed at this site. The Site e treating surgeon was informed of meeting outcomes. At follow-up, Site a surgeons were also no longer visiting patients at Site e.

v. The directory of off-site services

vi. The directory of support services

The Site a interview participant was not aware of existing directories for either off-site services or support services, despite having worked at the site during the Demonstration Project.

"the problems were logistic – I haven't got the time to chase around the little hospitals and find out who's the medical superintendent this week ... the directory does need constant maintenance ..." (Site b)

The directories were no longer used at Site b, because the frequently changing details without assigned responsibilities for keeping the directories up-to-date had meant the directories were no longer useful. It was noted however, that the MDC team members' personal links to off-site services and the links between MDC team members seemed to bridge any potential gaps in service provision.

"every member of the team has got personal links outside, peripheral links, and they use those links, not only for their own benefit, but for our benefit too … that was never the case before, especially between public and private …" (Site b)

The Site c interview participant reported that a list of services had been developed and was being maintained by volunteers at BreastScreen.

Collaboration 2: transferability and other 'flow-on' effects

At follow-up, a number of 'flow-on' effects of the Demonstration Project were reported. These include the establishment and/or improvement of MDC in the management of other cancers or diseases, cultural changes regarding interdisciplinary communication and consultation, and new initiatives in the provision of psychosocial support.

The following sections provide further information about transferability and other 'flow-on' effects.

Flow-on to the management of other cancers

Since completion of the Demonstration Project, the clinical work of one interview participant at Site b had changed emphasis, with reduced work in breast cancer and an increased focus on colorectal cancer. This participant reported having been significantly influenced by participation in the breast cancer MDC case conference meetings and the Demonstration Project. Plans to extend the MDC strategies to colorectal cancer, such as having regular MDC meetings for treatment planning with tele- or video-conferencing links, were reported.

"at the moment (in colorectal cancer) we do a bit of a ring around if we've got a patient that we feel needs to be discussed … but ultimately … we'd like to have scheduled MDC meetings …" (Site b)

The other Site b interview participant, the Local Evaluation Coordinator and 'champion' of the Demonstration Project, had also established MDC meetings in rectal carcinoma. The meetings followed the same format as the breast cancer meetings, and were established as a direct result of her participation in the Demonstration Project.

"we've set up a weekly rectal carcinoma MDC meeting, exactly the same as the breast cancer one … I've set these up because I'm in the diagnostic team … if I do the work, everyone's delighted to come …" (Site b)

Interview participants from Sites a and c were not aware of any flow-on effects to other areas of patient management. However, both participants were only involved in breast cancer care and stated that it was possible that flow-on effects had occurred without their knowledge.

"(the Project and the MDC meetings) have held me in good stead for my own other (non-breast cancer) clinical interests ..." (Site b)

Flow-on to the management of other diseases

One example of flow-on from the Demonstration Project to the management of other diseases was reported. The Site b Local Evaluation Coordinator had also established MDC case conference meetings for respiratory diseases, following the same format as the breast cancer meetings.

Cultural changes across the service and new initiatives in intraregional communication

The Site b clinician reported a service-wide cultural change had occurred as a result of the Demonstration Project, which had become more established over time. In particular, the clinician reported a service-wide change in acceptance and expectation of consulting with other disciplines prior to clinical decision-making.

"I think the Project gave us the legitimacy to always be consulting the other disciplines…it's now an established standard of care … it changed the culture …" (Site b)

The clinician also reported that initiatives involving communication within the region had become possible due to the Demonstration Project, even if the initiatives were not directly linked. This was believed to be because the Demonstration Project had provided a 'template' for intra-regional and inter-disciplinary communication, and had legitimised the process of consulting with peers.

"the benefits have spread into all our activities ... it's made a complete difference to the whole specialist network in the hospital …" (Site b)

"(the Project) gave us a template for that sort of communication … helping each other with difficult cases, giving each other advice and perhaps learning something from it as well … (the Project) was one of the things that actually linked us in the region …" (Site b)

New initiatives in psychosocial support

In conjunction with the clinical nurse consultant, the BCN at Site a had established a support group for women with breast cancer, held every fortnight, with informational sessions, meditation, relaxation and general group support. At follow-up they were exploring ways to improve the information content of the support group and to attract new women. The BCN was slightly concerned about a possible impact of an imminent change in location (being further from the hospital) on the popularity of the support group.

"we established a support group, a psycho-educational group for women with breast cancer … it provides educational sessions but also sessions in meditation, relaxation, proper breathing, … and its really got the women together …" (Site a)

Collaboration 3

Collaboration 3: background

About 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:

- 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.

Interview participants

The Chief Clinical Collaborator and the Local Evaluation Coordinator, both based at Site a, took part in the follow-up interviews.

Strategies undertaken by Collaboration 3

Site a MDC clinics and meetings had been established prior to the Demonstration Project, and a key focus of Collaboration 3 was to improve MDC by appointing a BCN. The strategies undertaken by Collaboration 3 to establish or improve MDC across the region, and the status of these strategies at completion of the Demonstration Project and then at follow-up, are outlined in the following table.

Overarching strategy	Status at completion of the Demonstration Project		Status at follow-up
Expand MDC through the appointment of a BCN (*Note*: MDC clinics and case conference meetings had been established prior to commencement of the Demonstration Project)	i.	BCN involved in clinics and MDC meetings; BCN facilitating consideration of psychosocial issues and clinical trial participation during meetings; BCN conveying meeting outcomes to women within 24 hours of meetings	sustained & improved
	ii.	BCN established support group for women and role perceived to reduce psychological distress in women	sustained
	iii.	BCN attended initial patient consultations with medical and radiation oncologists if asked, and followed-up afterwards to ensure understanding of consultation	sustained
	iv.	BCN perceived to improve coordination and continuity of care	sustained & improved
	v.	BCN established links with senior nursing personnel to improve awareness of the impact of treatment modalities	Sustained
Ensure all new breast cancer cases discussed in MDC meetings, particularly rural patients	vi.	All newly diagnosed women from Site a discussed during meetings	sustained
	vii.	All newly diagnosed women from Site c discussed during meetings	Not sustained
	viii.	Newly diagnosed women from Site b rarely discussed during meetings	no change
Establish links to the Site a MDC case conference meeting from Sites b and c via videoconference or teleconference	ix.	No videoconferencing links established	no change
	x.	Teleconferencing links, although limited, established	not sustained

Collaboration 3: sustained or improved MDC strategies

Of the eight key changes in service delivery achieved in Collaboration 3 by completion of the Demonstration Project, six had been sustained and/or improved at the time of follow-up interviews. The sustained strategies primarily related the BCN role, including: participation in MDC case conference meetings; provision of psychosocial care; ensuring coordinated, continuous care; provision of information to assist women in treatment decision-making.

The following sections provide further information about sustained strategies.

i. BCN involvement in MDC clinics and meetings

The Site a MDC case conference meetings and clinics had already been established prior to the Demonstration Project. While the personnel undertaking the BCN role had changed since completion of the Demonstration Project, the BCN continued to be involved in the meetings and clinics at follow-up.

"I don't have a lot to do with the meeting, but if there are any psychological concerns I bring them up – that seems to be quite valued …"

The meetings continued to be attended by representatives of all core disciplines at follow-up. Additional participants included a genetic counsellor, psychologist and data manager. Up to 12 cases were being discussed at each meeting, compared with an average of 5 cases per meeting at completion of the Demonstration Project. The meetings were reported to have improved since completion of the Demonstration Project, with increased animated discussion during meetings. One interview participant, a clinician, reported that the breast cancer meetings worked exceptionally well, much better than other regular Site a MDC case conference meetings he attended.

"the idea of MDC needs to be nurtured – you need to constantly maintain communication amongst the team members and promote it, otherwise it can fall by the wayside a little bit, but in this centre it works really well …"

"I've found that it's a very valued role, as viewed by other members of the team, and there's a lot of reliance upon me (as BCN) to make sure that the women really understand what's going on – they tend to see that as very important …"

A continued focus on treatment planning and consideration of psychosocial issues during the meetings was reported. The BCN was reported to be actively involved in the meetings, raising psychosocial concerns for consideration by the team, and facilitating psychological referrals as required. Eligibility for clinical trial participation continued to be discussed during meetings where appropriate.

"it's up to me (as BCN) to put my hand up and bring forth those (psychosocial) concerns …which are certainly well received – they (other clinicians) definitely listen to what I have to say …"

"with MDC meetings, … the women (with breast cancer) feel that they are being included as a team member …"

Women continued to be contacted within 24 hours of the meetings. A relatively recent development had seen the treatment teams meeting with their patients in the clinic directly after the meetings.

"the MDC meeting certainly became much more efficient once the BCN came in …"

Factors considered to have contributed to the sustainability of the BCN's involvement in the meetings and clinics included:

- the value placed by other meeting and clinic members on the range of the BCN's roles from information provision to coordination of care

"the BCN appointment's in concrete, it's going to be ongoing – there's no way that the hospital, the Area, can withdraw a position like this now because of the benefit that it's put in place …"

- the benefits of the BCN roles for both the patients and other team members
- the respect given by team members to the BCN's input to meetings and clinics

"to run an MDC meeting there has to be trust and respect for your colleague's skills and that only comes with time …"

- increased efficiency of the meetings due to the BCN's involvement.

ii. Reduced psychological distress in women and the support group for women

The BCN continued to provide psychosocial support for women with breast cancer. The BCN considered the provision of information and the identification of the need for psychology or social work referrals to be key aspects of her work. The BCN provided a central point of contact, was able to provide information, answer questions and clarify issues related to decision-making, refer women on if required, and coordinate women's care, all of which provided psychological benefit for the women.

"women say that they feel a lot less anxious after having had discussions with me after their diagnosis – I am able to clarify and put into perspective what's actually happening… and I can refer them on to psychology if needed …" (BCN)

The BCN believed that an observed reduction in anxiety for women with breast cancer was a key reason that the BCN role had been sustained.

"a main part of my role would be to raise psychological concerns or issues about coping mechanisms …" (BCN)

It was anticipated that the psychosocial care of women with breast cancer would improve further shortly after follow-up, with the appointment of a new psychologist who would primarily provide support for the breast clinic.

The support groups had continued to be run by the psychologist and social worker. There had been no need for the current BCN to become involved.

"the feedback from the women (about the BCN) is very, very positive …" (clinician)

iii. BCN attending patient consultations and following-up to ensure women's understanding

The BCN had continued to offer to accompany all patients to initial consultations. Patients differed in their need for such support.

"the BCN is often there with patients for that first appointment with the oncologists and the surgeon … it's important that when the patient meets a new person, often the BCN is there so there is a familiar face …" (clinician)

The BCN reported following-up all patients after initial consultations, irrespective of whether the BCN had attended the consultation. The BCN maintained a database of all patients and their treatments, using it to ensure she had contact with the patients according to specified timeframes.

Where possible, the BCN also attended the consultations with women held directly after the MDC case conference meetings to discuss treatment decisions. The BCN attended so that she could reinforce or clarify information for the women if necessary. If the BCN was unable to attend all of these meetings, or if women could not attend a meeting at that time, the BCN would telephone the women the following morning.

"women are given a lot of choices when they're first diagnosed – I think that's very, very difficult for them … I sit there and discuss in detail the various options, the benefits and disadvantages … I feel the majority of women then make a really informed choice as to what they want to do, what's right for them …" (BCN)

It was noted that the recent appointment of a full time Nurse Unit Manager for the hospital's breast services (a role previously undertaken by the BCN) had allowed the BCN to spend more time in contact with and supporting patients, contributing to the sustainability of the role. The MDC team members were considered to value this role of the BCN, perceiving benefits to both themselves and patients, and this was considered to contribute to the sustainability of the BCN role.

iv. Coordination and continuity of care through the BCN

The BCN had continued to coordinate and provide continuity of care for women newly diagnosed with breast cancer, primarily early breast cancer. The BCN aimed to meet with women early in their breast cancer journey, preferably prior to initial surgery. This was considered important, as services tended to be a bit fragmented until women had had medical and/or radiation oncology consultations.

"the BCN really has made a huge difference to the care of patients … streamlined the whole process … the BCN makes sure the patients go through the process as smoothly as possible …" (clinician)

The BCN role was considered to dramatically improve care for women with breast cancer, ensuring sustainability of the role. The role was also considered to benefit treating clinicians, as they worried less about patients *"falling through the cracks…"*

"(I) help coordinate (patients') care through the hospital system - being a bit like a lynch pin, to make sure their bumpy road is a little bit smoother …it makes it a little less fragmented for them …" (BCN)

"it involves a lot of communication from my part with other members of the MDC team, making sure that the women are aware of the potential processes, and making a lot of referrals …" (BCN)

"the BCN gets on board early because that's where the big problems lie in the treatment trail …" (clinician)

The BCN was finding the coordination of care for women in the private sector challenging. The BCN was reliant on the treating surgeons for referring women to her prior to surgery, with limited other means for accessing these women. The BCN had tried a number of different approaches to ensure patients were not missed, but she was not always informed of new patients, despite several attempts to improve this.

v. Links between the BCN and senior nursing personnel

The BCN continued to liaise with senior oncology nursing personnel, and to establish links between patients and personnel.

vi. All newly diagnosed women from Site a discussed during MDC meetings

All newly diagnosed women from Site a continued to be discussed during MDC case conference meetings.

Collaboration 3: discontinued MDC strategies

Of the eight key changes in service delivery achieved in Collaboration 3 by completion of the Demonstration Project, two had not been sustained at follow-up. Links between the urban Site a and rural Site c had deteriorated since completion of the Demonstration Project, with the result that newly diagnosed women from Site c were no longer discussed at Site a MDC case conference meetings, and Site c was no longer linked via

teleconference to the Site a meetings. A further two strategies had not been implemented by completion of the Demonstration Project, partially due to poor links between Site a and the rural Site b, and there was no change in this status at follow-up.

The following sections provide further information about discontinued strategies.

vii. All newly diagnosed women from Site c discussed during MDC case conference meetings at Site a

viii. Newly diagnosed women from Site b rarely discussed

At follow-up, newly diagnosed women from rural Site c were no longer being discussed during Site a MDC case conference meetings, unless attending Site a for treatment. Links between Site a and Site c had deteriorated since completion of the Demonstration Project.

"(the links dissolved because of) the change in politics and the change in personnel …"

Two factors were attributed to the deterioration:

- changes in key personnel at both sites at approximately the same time
- changes in health service delivery at Site c, with a medical oncologist being appointed in the local Area Health Service and hence removing the need for a visiting medical oncologist from Site a.

"the links that were forged between the original BCN and the CNC in (Site c) have changed considerably because both of these people are no longer working in those positions …"

A radiation oncologist from Site a was still visiting Site c, but women from Site c were rarely attending Site a for treatment. The visiting arrangement was expected to discontinue due to the service delivery changes predicted to occur in Site c.

Links between Site a and Site b had not been strongly established during the Demonstration Project, and these links had not improved at follow-up. Newly diagnosed women from Site b were only being discussed during the Site a meetings if attending Site a for treatment, which happened rarely. It was noted that MDC was never really established at Site b during the Demonstration Project, due to key personnel's resistance to change.

"the disappointment is the (deterioration of) links at Site c, but that's just the change in personnel and what has happened at the coalface with the Area appointments etc …"

The current BCN reported having no contact with patients from Site b or Site c unless they were travelling to Site a for treatment, which was rare. Occasionally she received calls from nurses based in Site b or Site c for advice.

Difficulties of implementing MDC in rural settings were noted, including:

- the smaller range of disciplines available in rural settings
- difficulties with telecommunications
- the greater impact made by any changes in personnel.
- Rural settings were considered more vulnerable to any changes in working groups, particularly key personnel.

"what the original BCN put in place is still in process, to make sure that if women do want to come (from Sites b or c) to Site a for treatment, that things would still happen very smoothly …"

x. Limited teleconferencing links had been established

The MDC case conference meetings at Site a were no longer being linked to Site b or Site c by any method.

The number of patients attending Site a from Sites b and c were too few to warrant a meeting link.

"to be honest, a link really needs to be by video – teleconferencing in this sort of scenario doesn't work particularly well …face-to-face or at least video-to-video works far better than just talking down a phone line …"

It is interesting to note that the Chief Clinical Collaborator felt that teleconferencing was not an appropriate mode of communication for MDC meetings.

Collaboration 3: transferability and other 'flow-on' effects

Neither interview participant was aware of any direct 'flow-on' effects of the Demonstration Project within the collaboration. However, one participant noted that developments in the broader cancer field within the state, such as moves to appoint specialised nurses for each tumour specialty, were occurring potentially because the benefits of the BCN position had been demonstrated through initiatives such as the Demonstration Project.

Discussion

Interpreting the results

The National Multidisciplinary Care Demonstration Project successfully assisted three multi-facility collaborations in different states of Australia, each with urban/ rural and public/ private service mixes, to improve the provision of MDC to women with breast cancer. The findings of the Sustainability Study, discussed below, indicate that with adequate resources and the support of relevant personnel, changes to service delivery in order to provide MDC can be sustained over the longer term.

Sustainability of multidisciplinary case conference meetings

The multidisciplinary case conference meetings established during the Demonstration Project continued to be held at follow-up. Some improvements in the meetings were reported with respect to the number of meeting participants, the number of cases discussed, the degree of consideration of psychosocial issues, and the degree of patient follow-up.

There was substantial overlap in the factors contributing to the sustainability of the meetings by the follow-up participants from different collaborations. Key factors are discussed below.

- **Routine**

  It was important that meetings were held at a convenient time for key participants, and that they became integrated into participants' weekly schedules. In all but one hospital site, meetings were held on the same day at the same time every week or every two weeks. Preparing for and attending the meetings were considered to have become habit for participants, with fewer reminders required by meeting organisers over time. In some hospital sites the meetings were considered to have equal importance in participants' schedules as other weekly appointments such as surgery.

The concept of habit was not only applicable to meeting attendance, but also to decision-making patterns. Discussion of individual women with colleagues prior to clinical decision-making was considered to have become an internalised habit for meeting participants, indicating a change in decision-making culture.

- **Commitment by participants**

  Meeting participants were generally reported to be committed to participating in meetings and ensuring that the meetings continue. The factors discussed below relate to this commitment.

- **Perceived value for patients**

  Interview participants reported a belief by case conference meeting participants that their patients benefited from the discussions and joint decision-making.

- **Peer 'normalisation'**

  Interview participants from one collaboration reported that there was peer pressure on participating clinicians to bring their clinical practice in line with group practice, which overall was considered to be in line with clinical practice guidelines. Clinical decision-making by 'outliers' of the group was perceived by interview participants to have become closer to that of the group over time, and this 'normalisation' was valued and considered to have improved care.

- **Perceived value for participants**

  A number of perceived benefits of meetings were reported to be valued by meeting participants:

  - educational opportunities through case discussion input from colleagues, citation of research during case conferences, and presentations about specific clinical issues during meetings
  - increased support for clinical decision-making
  - improvements in relationships and communication with colleagues

- opportunities for socialising with colleagues.

- **Meeting 'champions'**

  At two hospital sites the sustainability of the case conference meetings was attributed to the time, energy and enthusiasm contributed by a meeting 'champion' in organising the meetings and ensuring participation by others. At one site it was believed that the meetings would not be sustainable without the 'champion'.

- **Meeting coordinator**

  The role of the meeting coordinator seemed to be important in:

  - identifying women for discussion during the meetings
  - organising meetings and contacting participants (at the site where meetings are not held at a regular time)
  - collating information for presentations
  - recording the outcomes of case conference discussions
  - informing the treating clinician and/or the women's GPs of the meeting outcomes.

Several of the factors listed above as important for the sustainability of MDC case conference meetings in these Demonstration Project sites were also observed in successful, 'best practice' MDC breast cancer case conference meetings during the *Observational Study of Multidisciplinary Care.*[5] Factors of particular importance observed in these 'best practice' meetings were the meeting participants' commitment to the meetings, and the perceived value of the meetings to themselves and to their patients.

Sustainability across a range of MDC approaches

Several additional factors emerged as being important for ensuring sustainability across a range of approaches to MDC, including but not restricted to the MDC case conference meetings.

Dedicated resources

The experiences of the collaborations involved in the Demonstration Project highlight the importance of dedicated resources, in the form of funding, personnel and other resources, in ensuring sustainability of changes.

- **Funding**

  Continued funding of strategies implemented during the Demonstration Project was critical for ensuring sustainability. This was most apparent in situations where funding was discontinued. In Collaboration 1 an anticipated funding reduction meant that the regional BCN position and the position currently held by the Local Evaluation Coordinator were to be discontinued, threatening the sustainability of a range of strategies. At the time of follow-up interviews it was hoped that some of the regional BCN roles could be undertaken by BCNs in the region and that some of the Local Evaluation Coordinator's administrative roles could be undertaken by other administrative staff. However, the roles had not been officially allocated and the limited capacity of existing personnel to undertake additional responsibility was emphasised.

  Informal contact with the collaboration during July 2004 indicated that additional funding had not been secured, and the sustainability of the majority of changes resulting from the Demonstration Project was in doubt. The experience of Collaboration 1 highlights the need for continued funding to ensure the sustainability of MDC.

- **Personnel**

  While clearly linked to availability of funding, the role of dedicated personnel to ensure the sustainability of strategies deserves separate attention, as individual personnel contributed significantly to the sustainability of strategies.

  In addition to specific roles such as the BCN role, there was a clear need for dedicated personnel to take responsibility for tasks such as: meeting reminders; ensuring information such as mammograms and pathology slides is available in meetings; recording meeting outcomes; informing treating clinicians, GPs and women of

meeting outcomes; and trouble-shooting when unexpected difficulties arise. GP participation in the meetings was also increased by having a dedicated person who could contact relevant GPs prior to each meeting.

These experiences highlight the importance of dedicated personnel and the need for contingency planning should key personnel leave their positions.

- **Other resources**

  The continued availability of other resources, such as meeting rooms and technical equipment, is also important in ensuring sustainability of MDC strategies. In Collaboration 2, the involvement of rural sites in MDC meetings ended when the main Site a meeting venue changed, because videoconference facilities were no longer available. The experience of Site a in Collaboration 2 highlights the need to ensure that a range of resources necessary for MDC strategies continue to be available.

Allocating adequate and explicit resources was found to be an important factor in establishing MDC strategies during the Demonstration Project.[5] While the resources required for strategies implemented during the Demonstration Project were highest for newly established strategies, the Sustainability Study demonstrates the ongoing need for dedicated resources. Therefore, the Sustainability Study outcomes support Demonstration Project Policy Recommendation 6 that strategies to establish and maintain MDC must be adequately and explicitly resourced by health service providers.[5] This recommendation also suggests that affordability would be enhanced through a broad application of MDC to other cancers and chronic diseases to amortise infrastructure costs, an occurrence noted in this follow-up study.

Other factors

- **Demonstrated service need**

  A demonstrated, recognised need for change that had been implemented during the Demonstration Project was considered important for sustainability. For example, all sessions of the family cancer clinic in Collaboration 1 were completely booked, indicating a need for the service within the community.

- **Recognition of benefits**

  Recognition of the benefits of strategies by clinicians and coordinators was considered important to the sustainability of changes such the funding of new BCN roles. The value placed on these roles by MDC team members meant they had a vested interest in ensuring that the BCN roles were sustained.

  The views of senior health service administrators were not sought during the Demonstration Project or at follow-up. However, future sustainability is dependent not only on the value placed on strategies by MDC team members, but also on recognition of the benefits by health service administrators. While the benefits of MDC to patients and clinicians have been demonstrated, it will be necessary to demonstrate the cost-effectiveness of strategies to the health system in order to ensure continued resources.

- **Stability in service delivery**

  Stability in health service location and structure appears to assist the sustainability of approaches to the provision of MDC. Changes in location and structure of hospital sites in two collaborations affected strategies. In one collaboration clinical pathways were affected, and relationships between urban and rural sites were affected in the other. These experiences highlight the need for flexibility and transferability of strategies to ensure their sustainability.

Transferability of multidisciplinary care to other areas of health care

The Sustainability Study demonstrated that strategies to implement and/or improve MDC for women with breast cancer can have important positive flow-on effects throughout the health care services involved. These effects include improved communication and relationships between disciplines, and positive changes in culture around clinical decision-making. Within hospital sites from two collaborations, the MDC case conference meetings had also been extended to the management of other non-breast cancers and other diseases once the benefits in breast cancer had become apparent.

Additional issues for consideration

The size and nature of each collaboration was locally defined and differed substantially in each case. While all interview participants seemed to consider themselves a member of a MDC team within their own site, relatively few participants seemed to identify as a member of the collaboration as a whole. This was the case for all collaborations, but was most apparent with Collaboration 2 which covered a vast geographical area and had the largest number of sites. Each main site within the collaboration had successfully implemented and sustained changes to the provision of MDC, but there was less of an overall collaboration approach to MDC.

Methodological considerations

While the study design provides a valuable insight into factors contributing to the sustainability of strategies to implement MDC, there are limitations in the following which restrict the generalisability of these results: the study timeframe; the sample; and the survey design. The following sections provide further information about these methodological considerations.

Limitations of the study timeframe

Personnel and role changes

Since completion of the Demonstration Project changes had been made to key personnel and roles in two collaborations. These changes affected the type and level of information that the interview participants were able to provide.

- One Local Evaluation Coordinator was no longer working in the collaboration. While the nominated replacement had an in-depth knowledge of the BCN role within the health care service (relevant to a key strategy implemented during the Demonstration Project), the interview participant understandably did not have detailed knowledge of the Demonstration Project strategies.

- One Chief Clinical Collaborator who had been involved in the Demonstration Project was no longer working primarily in breast cancer at follow-up. The participant did not have detailed knowledge of the factors for sustainability of breast cancer strategies. However, the interview with this participant provided an insight into the flow-on effects of the Demonstration Project to other, non-breast cancer areas of patient care.

Difficulties with memory recall

The time frame between the Demonstration Project and the follow-up interviews may have led to issues of memory recall regarding some of the MDC strategies that had been implemented during the project, particularly those that had only been partially completed at conclusion of the project.

Limitations of the sample

The sample size

The number of collaborations initially involved in the Demonstration Project was capped at three, due to funding limitations. As the composition of services, size and urban/rural mix of collaborations was determined by the collaborations to address local needs, the collaborations varied considerably and therefore may not necessarily be representative of other potential future service 'collaborations' within Australia. However, the lessons learned by the collaborations about the barriers, enablers, successes and limitations of strategies will be valuable and applicable to future service collaborations seeking to implement or improve long-term MDC.

The number of interview participants was small, chosen according to involvement in the Demonstration Project. Three Chief Clinical Collaborators and five Local Evaluation Coordinators (from two to four interview participants from each collaboration) took part in the interviews.

The interview participants' depth of knowledge

Key Demonstration Project participants (Local Evaluation Coordinators and Chief Clinical Collaborators) were invited to take part in the Sustainability Study. The Chief Clinical Collaborators and Local Evaluation Coordinators had primary involvement in implementing the MDC strategies and/or coordinating data collection and other administration required for the Demonstration Project. It was therefore assumed that these participants would be best placed to understand factors contributing to sustainability of changes and any flow-on effects of strategies implemented during the Demonstration Project. However, the type and depth of knowledge varied between interview participants. This can only partly be explained by the personnel and role changes discussed earlier. The depth of knowledge of participants may also have been influenced by factors such as: the participant's clinical role; the seniority of the participant; the length of time the participant had worked in the collaboration; and the size of the hospital site in which the participant worked.

Limitations of the survey design

The Demonstration Project used a multi-pronged evaluation approach, including clinician surveys, consumer surveys, clinical audits, clinician surveys, acceptability questionnaires, and log sheets of MDC case conference meetings. However, due to the resources and time required for both researchers and participants to repeat such an evaluation approach, the Sustainability Study was restricted to interviews with a select number of participants from each collaboration. While participants provided valuable insight into the sustainability of multidisciplinary care in their services, the study overall is reliant on the self-reported perceptions of a small number of participants in each collaboration. Mostly the perceptions of different participants within the same collaboration were the same or complementary, but there were occasional differences in views. For example, the interview participants from Collaboration 1 had different views regarding the adequacy of psychosocial discussion during MDC case conference meetings.

The majority of interview participants were based at major urban sites, and information about rural sites was reliant on these participants having an understanding of rural site

activities. Information about rural sites within the collaborations was sometimes less detailed and may not be as reliable as the information about the urban sites.

Conclusions

The *National Multidisciplinary Care Demonstration Project* established that MDC case conference meetings could be established and/or improved, and new strategies could be successfully implemented by collaborations of health services to improve the provision of MDC for women with breast cancer. The Sustainability Study demonstrated that the changes implemented could be sustained in the longer term, particularly when the benefits of changes are widely recognised and they are supported by dedicated funding and personnel.

The Sustainability Study highlighted the positive changes in communication and relationships between disciplines that can arise as a result of MDC strategies, with positive changes to culture around clinical decision-making within health services. MDC case conferences and other approaches to MDC were found to have been applied to the management of other cancers and other diseases.

Implications for health care services seeking to provide sustainable MDC can be drawn from the factors identified as contributing to the sustainability of strategies. Sustainability of MDC strategies in the longer term is dependent on:

- allocating dedicated funds and personnel to maintain, support and improve MDC strategies
- ensuring MDC case conference meetings are held routinely, so that meeting preparation and participation become habitual for participants
- ensuring that MDC team members perceive the MDC strategies to be beneficial for patients and/or themselves
- encouraging commitment to participation in MDC case conference meetings by participants, through demonstration of the benefits

- enlisting a ‘champion’ – usually a well-respected clinical opinion leader – to drive the MDC strategies, particularly in the early stages, although this also needs to be supported by team ownership to ensure sustainability in the longer term

- developing contingency plans to allow for changes in personnel and organisational structure.

The outcomes of the Sustainability Study have important implications for health care services seeking to implement sustainable multidisciplinary care.

References

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