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## Health System Barriers to the Discussion of Breast Reconstruction Options in Australia: Improving Access Through Appropriate Referral

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## ABSTRACT

**Background:** This study aimed to document referral-based barriers impeding Australian women's informed decision-making about breast reconstruction (BR) and to propose a designated BR referral pathway to help overcome these barriers.

**Methods:** Semi-structured, in-depth interviews were conducted with ten women previously treated for breast cancer, 9 breast and reconstructive surgeons and 6 health professionals [n=25] who had identified problems with referrals for BR.

**Results:** Referral-based barriers to BR discussion were identified at three different levels: from a public or private screening centre to a General Practitioner (GP) or breast surgeon; from a GP to a breast surgeon; and from one breast surgeon (without BR skills) to another breast or plastic reconstructive surgeon (with BR skills). A lack of designated referral pathways has meant that clinically eligible women who are interested in considering immediate BR have been denied this opportunity.

**Conclusions:** Streamlining referral processes, along with patient and clinician education, would help to ensure that women are at least seen by the most appropriate clinicians to discuss BR options and to maximise their opportunity for BR should they choose that option. Designated referral pathways could also be useful in ensuring that preference-sensitive treatment decisions are facilitated in settings with varying degrees of resources and in a range of clinical conditions.

### Introduction

The importance of clear patient referral pathways is often overlooked and is an under-researched health policy issue. Referral practices should aim to provide the patient with prompt referral to a full range of high quality services that are best suited to address the patient's needs. This case study of breast reconstruction (BR) practices in Australia documents the impact of inappropriate referral systems and suggests policy mechanisms to

overcome them. These recommendations have wider relevance for different health conditions and a range of practice settings.

There is growing evidence of the significant quality of life (QoL) benefits of breast reconstruction (BR) following mastectomy.<sup>1-5</sup> Reflecting this solid evidence base, offering BR to all clinically eligible women undergoing mastectomy for breast cancer has been acknowledged as best practice in guidelines and recommendations in many developed countries.<sup>6-9</sup> BR may be performed at the same time as mastectomy – immediate BR (IBR), or deferred to a separate surgical procedure at a later date – delayed BR (DBR). Cancer Australia, the peak Australian government cancer advisory body, has stated that it is “not appropriate to perform a mastectomy without first discussing with the patient the options of immediate or delayed breast reconstruction.”<sup>10</sup> Yet in Australia, the latest estimate of the national IBR rate

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is 18.3%.<sup>11</sup> This compares with 27.4% in France,<sup>12</sup> 26% in the United States of America (USA)<sup>13</sup> and 21% in the United Kingdom (UK).<sup>14</sup>

Over 18,000 Australian women were newly diagnosed with invasive breast cancer in 2018<sup>15</sup> and around 40% were expected to require or choose mastectomy as their surgical treatment.<sup>10</sup> Not all are medically suitable for BR. It may be contraindicated in women with extensive disease and relatively contraindicated in those with significant comorbidities or risk factors for complications (such as diabetes, smoking and morbid obesity). BR is a preference-sensitive treatment option, with women citing a wide range of reasons for their choice.<sup>16</sup> Not all women who are clinically eligible will choose this option. It is estimated that overall around 50% of women would choose BR if given the opportunity.<sup>17,18</sup> Among women who do choose BR, there are pros and cons for IBR versus DBR and decisions will be influenced by personal assessments of what each individual values. From a health services position, the most important consideration is that all women are aware of all options and can make an informed decision about BR, including the option of no BR (NBR). This discussion does not always happen.

A National Mastectomy and Breast Reconstruction Audit (NMBRA) of over 19,000 women was conducted in England using prospectively collected data over a 15 month period in 2008-2009.<sup>14</sup> It found that of women undergoing mastectomy only, 35% felt they had not received the right amount of information about BR.<sup>14</sup> A 2015 survey of Breast Cancer Network Australia (BCNA) members, reported 61% of participants having an initial discussion about BR prior to mastectomy (meaning IBR was still not an option for 39% of these women).<sup>19</sup> A more recent study of BR in Australia provided clear examples of the impact of unmet informational needs.<sup>20</sup> Furthermore, the link between inadequate information and low BR rates has been confirmed in two studies: a study from the Netherlands revealed that being informed about IBR increased the odds of receiving IBR fourteen-fold,<sup>21</sup> while a Malaysian study concluded that their low BR rate of 20.6% “can be attributed to the low referral rate.”<sup>22</sup>

In Australia, general and breast surgeons are trained to perform resectional breast cancer surgery, such as wide local excision, simple mastectomy and axillary surgery, but not BR. Oncoplastic surgeons are qualified to both remove the cancer and reconstruct the breast with local pedicled flaps or breast implants, and to perform symmetrisation surgery for the other breast. Free-flap BR, which requires vascular anastomosis, is mostly performed by plastic reconstructive surgeons who are generally not trained to surgically remove breast cancer and associated lymph nodes. Hence, the type of surgeon a woman is initially referred to may make a difference to their reconstructive options.

There are four potential pathways for a woman diagnosed with breast cancer to be referred to a surgeon. BreastScreen Australia, the national public breast cancer screening body in Australia, determines breast cancer screening policy and invites women aged 50-74 to attend free biennial mammographic screening (women aged 40-49 or 75 years and older are also eligible to participate on request, but are not invited to participate). In 2015-16, the participation rate was 55% of women aged 50-69.<sup>23</sup> There is no mandated national policy for referral for treatment when cancer is diagnosed, so while BreastScreen Australia sets the national policy, each state or regional jurisdiction implements the policy in different ways.

A second potential pathway is for a woman to be diagnosed through a private breast cancer screening centre. While there is a Medicare rebate for screening mammograms, many private imaging clinics charge more than the Medicare Schedule Fee, so that women must pay out-of-pocket costs. Data are not available to quantify the amount of private screening.<sup>23</sup> Reasons for women choosing to have a mammogram outside BreastScreen Australia include faster results, convenience, the availability of ultrasounds or a lack of awareness that they would be eligible for free screening through BreastScreen Australia.<sup>24</sup> General Practitioners (GPs) may also choose to refer their patients to private centres because they are unclear of the eligibility criteria for public screening, they have links with private radiology clinics or because they believe the service quality is superior in the private setting where ultrasound is also available.<sup>23</sup>

The third pathway is for women presenting with symptoms of breast cancer, who are investigated by their GP outside the screening program. Once a diagnosis has been made, the GP will make a surgical referral in consultation with the patient. GPs have a major role to play in directing women who require mastectomy to surgeons who will offer, at a minimum, information about breast reconstruction options. Referral may be to a breast surgeon who has undergone varying levels of specialist training in breast surgery, to an oncoplastic breast surgeon who has undergone oncoplastic training in addition to their specialist breast training, or to a general surgeon who performs breast surgery but has not undergone any additional specialist breast training. In metropolitan or large regional centres, there are likely to be several surgeons to choose from. In more remote or rural areas, there will be fewer choices.

The final pathway is referral between surgeons. Some general and breast surgeons who do not perform BR will discuss the options with women prior to mastectomy and refer women interested in BR to other surgeons who can offer that expertise.

This article aims to document the referral-based barriers impeding Australian women's informed



decision-making about BR. It also proposes a designated BR referral pathway to help overcome these barriers.

**Methods**

This research is part of a larger qualitative study of 90 participants interviewed for the Improving Breast Reconstruction Equity of Access through Stakeholder consultation and Translation into policy and practice (I-BREAST) study (see Appendix 1 for further information on the I-BREAST participants and interview processes).

This article is based on responses from a sub-set of 25 I-BREAST participants (28%) who described instances where lack of appropriate referral has acted as a barrier to informed choice. The interview schedules did not specifically ask about referral processes, but this issue emerged as one of interest from the interviews with 10 women treated for breast cancer, 9 surgeons and 6 health professionals. Written consent was obtained from all interview participants.

*Data management and analysis*

Interviews were digitally recorded and de-identified. They were uploaded and transcribed verbatim for data analysis by an independent transcription company that had signed a confidentiality

agreement. Each participant was assigned a sequential reference number, with a prefix of W for women, HP for health professional and S for surgeon to ensure confidentiality. Responses from interviewees were classified into broad topic-based categories, agreed on by all authors, to reflect the range of views on particular issues. Where data was considered to be relevant to more than one topic, it was included in all relevant categories. This sub-set of interviews were specifically analysed to investigate referral barriers, which are fundamental to the issue of informed patient choice. Data for this sub-study are based on participant responses to the “BR discussion”, “Patient choice”, and “Decision-making” categories (see Appendix 2).

*Ethics statement*

Ethics approval was obtained from the Human Research Ethics Committee (HREC) of St Vincent’s & Mater Health, Sydney, Australia, in April 2015 (14/181).

**Results**

Discussion of BR options may be compromised in all four referral pathways. Table 1 provides examples, supported by participant quotations, of the first and second pathways outlined above: initial referral following screen-detected breast malignancy

**Table 1.** Initial referral following screen-detected breast malignancy (public or private)†

Examples	Quotes
<p><i>Referral from public screening centres (Pathway 1)</i> Patients referred to a surgeon from the public BreastScreen service are able to choose which surgeon they see. There is a risk that surgeons who attend BreastScreen clinics (who may not perform BR) might channel newly diagnosed women to their own private practices or those of their colleagues (who may not discuss or offer BR). One oncoplastic surgeon commented:</p> <p>Another oncoplastic surgeon working in a different state noted:</p> <p>ABCN working in an Inner regional area commented:</p> <p><i>Referral from private screening centres (Pathway 2)</i> Women at private centres may be seen by a breast physician who will refer them to a surgeon. One BCN noted that the breast physicians:</p> <p>A 40 year old woman attending a private screening clinic for investigation of a breast lump was diagnosed with two small, low grade invasive cancers in one breast. She was sent a list of ten surgeons by the clinic and told to contact one of them for an appointment. With no further information provided, she chose a surgeon who worked in a public hospital nearby as she could not afford the additional costs associated with surgery in a private hospital, despite having private health insurance. This surgeon told the women she required a bilateral mastectomy and did not offer BR. The woman asked:</p>	<p><i>I mean, there was a lot of fuss – and I’m sure it’s the same in other states – about surgeons using BreastScreen as an opportunity to obtain private work. [S10, Major city]</i></p> <p><i>BreastScreen – my experience with it is you go and they say, “It’s up to you to go and find a doctor,” or “Your GP will refer you,” but that’s not how ours is run ... I spoke to three [GPs] that said if their patients go to BreastScreen, if they get a positive result or recall or need something else done, they never see the patients again [until after treatment]. [S15, Major city]</i></p> <p><i>...there’s one breast surgeon that actually works for BreastScreen, and [s/he] of late has been getting a lot of referrals. I’m not quite sure how that works. One or two of the surgeons have been quite frustrated with that fact. [HP24, Inner regional]</i></p> <p><i>...know the surgeons. And I’m sure they share it around, but if the patient says she wants to go privately, then nine out of 10 will be coming here. [HP30, Major city]</i></p> <p><i>“Can I, should I be seeing a plastic surgeon about a reconstruction?” And he said, “No, let’s deal with this first and then I can recommend you to someone afterwards.” [W21, Major city]</i></p>

†Regions classified according to the Australian Statistical Geography Standard (ASGS) 2016. Australian Bureau of Statistics. 1270.0.55.005 - Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2016. Latest issue 16/03/2018 <http://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.005> [accessed 12 April 2019]. BCN = breast care nurse; BR = breast reconstruction; GP = general practitioner.

**Table 2.** Initial referral following diagnosis of symptomatic breast malignancy by a GP (Pathway 3)<sup>†</sup>

Examples	Quotes
Three metropolitan oncoplastic surgeons from different states suggested that not all GPs are aware of where to refer women:	<p><i>But the same way that breast surgeons and plastic surgeons need to learn about the changes in breast surgery, well GPs need to learn that as well. [S7, Queensland]</i></p> <p><i>I think the general practitioners need to be better educated as to who is reputable and who is not ... All the GP knows is I've got a woman with breast cancer; I'll refer her off to Joe Blow. [S24, South Australia]</i></p> <p><i>The general practitioners, the referrers have to understand who they're inviting to manage their patients. And many a time, the referrer is happy to just get the patient off their hands. They don't always think through the entire ramification of that referral. [S5, NSW]</i></p>
A BCN commented on the need for more GP education:	<p><i>... we do need to do some more education around the breast nurse service, and that has been on our books for a little while to actually go around and speak to GPs and educate [them] about what we can provide, so that's also an opportunity to talk about what kinds of surgery are available, because most of them wouldn't know. [HP4, Inner regional]</i></p>
This may be a particular problem in rural and remote areas, where there is a high GP turnover:	<p><i>... this is classed as remote and they do their six months stint ... it's very hard to get a GP for longer than a year up here. [W13, Outer regional]</i></p>
Conversely, more stable GP practices may rely on long-established referral patterns:	<p><i>We would have a large number of male Anglo-Saxon 55 to 65 GPs in X, so I think they get a bit stuck in their referrals. [HP7, Metropolitan]</i></p>
One regional GP even refused to refer a woman to a non-local surgeon:	<p><i>He refused to give me the referral and told me that I shouldn't think I should be treated any differently and told me I should remain locally. I then went back to the breast surgeon and ... I demanded a referral. [W14, Inner regional]</i></p>
A potential problem for GPs is the lack of reconstructive surgeons who work in the public system in some regional areas, meaning there is nowhere locally to refer public patients for BR. This issue was described by a public patient who was told by the general surgeon:	<p><i>"You are an ideal candidate for immediate reconstruction, because you don't have to have chemo. You don't have to have radium [sic] and you don't have to have cancer drugs." I was getting very excited. And, then he said, "Unfortunately, we're not offering that service anymore here ... because the surgeon left in February ... You have to go private if you want it ... He said, "There's a seven-year waiting list now [in the public system]" and that was with a surgeon, and now, we haven't got a surgeon. [W22, Outer regional]</i></p>

<sup>†</sup>Regions classified according to the Australian Statistical Geography Standard (ASGS) 2016. Australian Bureau of Statistics. 1270.0.55.005 - Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2016. Latest issue 16/03/2018 <http://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.005> [accessed 12 April 2019]. BCN = breast care nurse; BR = breast reconstruction; GP = general practitioner.

either through the publicly-funded BreastScreen Australia (pathway 1), or through private screening or radiology practices (pathway 2).

Table 2 outlines the referral processes when a diagnosis of symptomatic breast malignancy has been made by a GP (pathway 3). Table 3 provides examples of secondary referrals from one breast surgeon who does not perform BR to another breast or plastic reconstructive surgeon who does perform BR, as well as incidences of 'non-referral' where the initial surgeon does not refer their patient on (pathway 4).

In metropolitan areas, it is common for high volume oncoplastic-trained breast surgeons to work with a few highly skilled plastic surgeons who do free flaps to provide a full reconstruction armamentarium [S1, S19]. In other settings, breast surgeons may work routinely with plastic surgeons [S23, S30], and

even have regularly-scheduled combined operating lists [S27]. Such settings allow for a full range of BR options to be discussed and implemented.

For women living outside major cities, difficulty in obtaining referral to appropriate services is exacerbated. Our interviews have demonstrated that some breast surgeons appear reluctant to refer the patients to other surgeons or collaborate with them to increase the range of options for their patients. In these cases, either no BR may be offered or the type of reconstruction offered may be limited to what a particular surgeon can do (see Table 3).

In response to the referral issues raised by women, surgeons and health professionals, we have proposed an optimal BR referral pathway (see Figure 1). This suggested pathway will not disadvantage women who are satisfied with the current referral arrangements, but will benefit the women who have

**Table 3.** Secondary referrals from a breast surgeon who does not perform BR to one who does (Pathway 4)<sup>†</sup>

Examples	Quotes
Some health professionals working in areas where public BR is not available, may be tempted not to refer their patients for this service. A BCN reported that BR is rarely raised by the breast surgeons s/he works with. If the patient brings it up, the BCNs will say:	<i>"We need to mention that at this first meeting. We need to start working it out from here." But it wouldn't be something that's routinely mentioned. ... I think because it's not available in the public system in X ... it's just not on the horizon ... because it's not there, it's not mentioned. [HP5, Major city]</i>
A breast physician commented:	<i>... in the end, because there was nobody doing them [Brs], I didn't even refer people. So, then there was the vast volume of people that weren't registered as on the waiting list, but were. So, now what I do is I refer everybody that wants to go so that they can't - the bureaucrats can't say that there's no waiting list problem. [HP36, Outer regional]</i>
Yet, one woman from a rural town stressed the importance of patients considering options outside their local area:	<i>I think they need to have the ability to know that there is a second opinion ... you feel like you really should stay with your small country town because that's the right thing to do ... [were the surgeons reluctant to refer you?] That was not even an option ... There was no option at all. [W16, Inner regional]</i>
"Non-referral" patterns are not confined to rural or remote areas where there are fewer plastic breast reconstructive surgeons, but also occur in major hospitals in largely populated areas. For example, a BCN working in one capital city confirmed the reluctance of some surgeons to refer their patients on: [Once a surgeon has a referral, do they tend to pass them on?]	<i>"No, they don't, no, very, very rarely, and particularly if they're referred privately." [HP7, Major city]</i>
A private patient attending a general surgical practice in a major city, on hearing she needed a mastectomy, asked:	<i>"Well, what about reconstructive surgery?" and he just said, "Well, we don't offer that here" and went on to try and book me in to go ahead with the mastectomy ... And that's all I had offered. [W1, Major city]</i>
Two metropolitan surgeons – one oncoplastic and one plastic – mentioned the adage that "if all you have is a hammer, every problem looks like a nail." [S8, S13]. This view is supported by a private patient who reported:	<i>I feel like the surgeon gave me the option that he thought would be best for me, and when I said, "I really don't want that, what's the second option." He gave me that but it's still his speciality. I would have liked him to say, "This is the full range of options – this is what, out of those, I think would be best for you and these are the reasons why." [W5, Major city]</i>
One plastic surgeon who worked in both public and private sectors commented:	<i>... the reality is, in this capital or corporate world that we live in, if you're a breast surgeon and the patient is undecided and they're private, then you're probably going to push them towards an implant breast reconstruction because you make more money, than sending it to someone else and then they make the money. So, in the private world, it's very fraught with danger because of the conflict of interest with payment. [S30, Major city]</i>
The reverse is also true for some plastic surgeons whose preference may be to do autologous BR only. This may lead to pressure on patients to have surgical options they do not want:	<i>So I've had a discussion with him. I still really would just like to have simple implants. But I know that the gold standard for me is an autologous breast reconstruction with probably a DIEP, which I'm not keen on. It's such big surgery. [W15, Inner regional]</i>
Even when plastic reconstructive and breast surgeons are co-located in the same hospital, there is the possibility of non-referral, as noted in this oncoplastic surgeon's comment:	<i>Or I'll say to the patient "Look, time is the issue, it's unlikely we're going to get a plastic surgeon to coordinate all of this within the next few weeks. Therefore, we're going to go with the cancer first." So that's where offering them an implant buys me time. [S5, Major city]</i>
One woman reported that she had to forcefully request a transfer to a different hospital in the same city where she could have IBR:	<i>I wasn't being encouraged in any way, shape or form to even consider reconstruction. [W18, Major city]</i>
Another woman in the same initial hospital reported that she:	<i>... was not allowed immediate reconstruction because I had to have chemo and radiotherapy and I had to have nodes removed from the left side. [W19, Major city]</i>
One oncoplastic surgeon with access to autologous BR in their local area still chose to refer patients to a more dedicated and consistent out-of-area service:	<i>... it has to be coordinated with everything else. So, I've found that it hasn't been the case here and that is why I think a lot of the time I actually do refer my patients to places I know in X. It's a shame but they have to go interstate to get that service. [So, more plastic surgeons working in the public system] will be a welcome thing in the context that they actually work in collaboration with the breast surgeons. [S28, Major city]</i>

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BCN = breast care nurse; BR = breast reconstruction; DIEP = deep inferior epigastric perforator flap; IBR = immediate breast reconstruction.

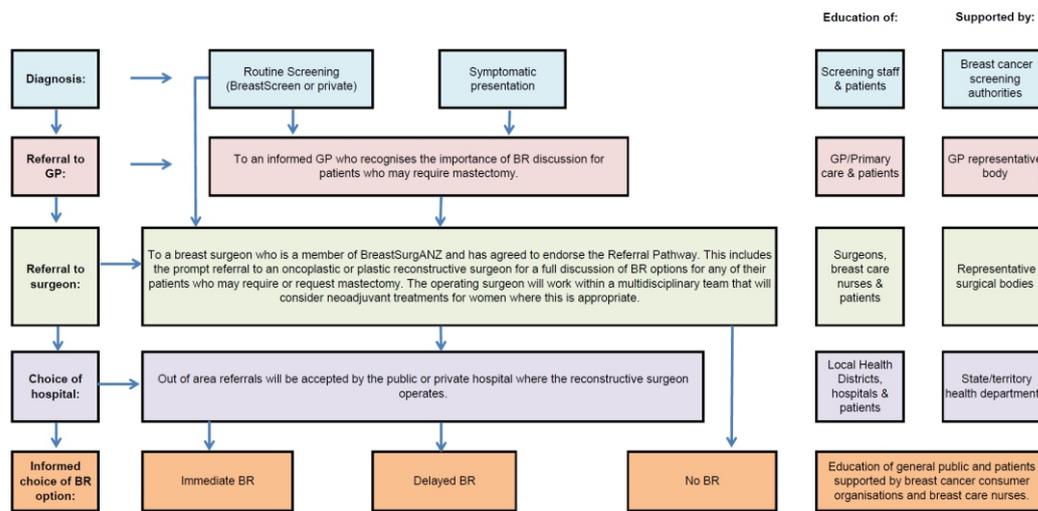


Figure 1. Ideal breast cancer referral pathway for potential mastectomy patients.

not been able to access fully informed discussion of BR options, a pre-requisite for informed decision-making.

### Discussion

Although current referral pathways are effective for many women, these interviews have provided examples of the different ways that non-designated referral patterns may block informed discussion of BR options, with severe outcomes for some individuals.<sup>20</sup> While BreastScreen Australia's policy respects a woman's autonomy of choice, it does not provide advice about how a woman should choose her treating team. A brief discussion of the possibility of BR for those women likely to require mastectomy would help to make a more informed choice. There are opportunities, before the referral is made, for the consultant surgeon, breast physician or breast care nurse/counsellor to raise the idea of BR with general treatment information at this time. If women are aware that BR exists as an option, it may empower them to raise it in discussions with their GP or chosen surgeon.

Similarly, women who undergo screening at private screening centres and/or women who do not have a regular GP should be equally entitled to discuss their surgery options with a surgeon who is either part of a team that can provide all options, including implant-based and autologous BR, or is prepared to refer women elsewhere for this discussion. Simply handing a woman pathology reports stating they have breast cancer, and then sending them off to choose their own surgeon without some form of guidance, as happened with W21 (Table 1), seems grossly inadequate. Arguably, it is little better than directing women to surgical colleagues who do not offer a full range of options for women who may require mastectomy as part of their breast cancer treatment and are unwilling to refer that patient on to those who do, as illustrated by the

experience of W14 (Table 1), who had to demand a referral from one surgeon offering only mastectomy to another capable of performing BR.

The term 'postcode lottery' has been used to describe the haphazard way in which where you live determines access to health services.<sup>11</sup> Important medical decisions and treatment opportunities may be influenced by the 'luck of the draw' unless more dedicated, systematic and equitable procedures are introduced. For example, some hospitals where BR is performed will not accept 'out of area' referrals, so that women living outside those hospital catchment areas may have extremely long waiting times, as noted by W22 (Table 2).

These Australian experiences appear to align with those of the UK, where Potter and colleagues concluded that "women's experiences of BR seem to be largely determined by the centre to which they are initially referred for breast cancer diagnosis and treatment, and the resources and skills of the surgeons practicing at that centre."<sup>24</sup> The designated referral pathway we have developed (Figure 1) aims to overcome referral barriers and embodies principles of equitable access. The adoption of this, or a similar pathway, would improve a woman's chances of making a fully informed choice about breast cancer surgery as an evaluation of the English NMBRA noted.<sup>14</sup>

One of the challenges is how to make the initial referrer aware of the range of services offered by local surgeons and what 'appropriate referral' means for their patients. It is difficult for GPs to predict which patients will require or choose mastectomy, and hence when access to BR is a relevant consideration. This is particularly problematic as women who present with symptoms (and go through the GP rather than the BreastScreen pathway) are most likely to have more extensive disease requiring mastectomy. There can be sensitivities and subtleties in determining appropriate referral, so further education of health professionals



about these nuances is essential.

One surgeon interviewed [S30] raised the issue of ‘conflict of interest’ as a barrier to women’s choice. Potential conflicts of interest may arise when clinicians place their own desire for performing surgery (and obtaining the fee) ahead of the patient’s need for optimal reconstruction in cases when this would require onward referral to another surgeon. As noted earlier, it is usually the initial surgeon who controls what BR options a woman is offered. While some are happy to refer their patients to other surgeons for full discussion of all options, our study has shown this is not always the case. Screening services may also facilitate potential conflicts of interest by encouraging referrals to surgeons who work at the screening service.

In 2015, Cancer Care Ontario produced a breast cancer treatment pathway map, which covered all aspects of breast cancer including prevention, screening, diagnosis, treatment and post-treatment issues. It mandated that all women with operable breast cancer requiring mastectomy be referred to a plastic surgeon, who performs all BR procedures in Canada, to discuss BR options prior to the mastectomy.<sup>25</sup> In response to this mandate for BR discussion as part of the treatment pathway, an updated overview of BR procedures has been published to specifically inform primary care physicians and their patients about BR options, outcomes and complication rates.<sup>26</sup> There is the potential for Australia to follow a similar referral pathway and produce its own educational information relevant to the Australian setting.

For example, a publication by the National Cancer Expert Reference Group, titled *Optimal Care Pathway for Women with Breast Cancer*<sup>27</sup> has been endorsed by Cancer Australia and the Cancer Council Australia. Each state and territory has been invited to adopt and co-badge its recommendations for local use. In relation to BR, this document states: “Women should be fully informed of their options and offered the option of immediate or delayed reconstructive surgery if appropriate.”<sup>27</sup> These recommendations specify the training and experience required of the breast and plastic surgeons performing BR and state that breast surgeon referrals should be directed to members of Breast Surgeons of Australia and New Zealand Inc. (BreastSurgANZ).<sup>27</sup> However, this document stops short of suggesting changes to current referral processes to support the practical implementation of this recommendation.

This recommendation to refer women to members of the representative surgical group may provide the simplest way of increasing the likelihood that the topic of BR is at least discussed prior to mastectomy, as the Cancer Australia statement recommends.<sup>10</sup> BreastSurgANZ, as the national professional body representing breast surgeons and training oncoplastic surgeons, strongly supports

Cancer Australia’s statements, and encourages the discussion of all BR options with clinically eligible and interested patients prior to mastectomy. BreastSurgANZ members, many of whom are trained in implant-based BR, must also be prepared to promptly refer women who are interested in autologous/free flap BR methods to other breast reconstructive surgeons. Monitoring compliance with this endorsement is difficult, but setting expectations for members is likely to be useful. Figure 1 provides a possible optimal referral pathway in terms of BR.

In addition, there are several parallel policy and practice changes that should be considered including: credentialing and appointment of surgeons attending BreastScreen to ensure they provide BR or work in a multidisciplinary team that does; encouragement of general discussion at BreastScreen about BR as a possible component of future treatment; the development of a GP awareness program about ‘what to look for in a breast cancer surgeon’; a greater focus on BR as part of breast cancer patient support and education for women facing mastectomy; further engagement with breast cancer advocacy groups such as Breast Cancer Network Australia<sup>28</sup> and BR-specific groups such as Reclaim Your Curves,<sup>29</sup> which promote and empower women to ask their surgeons about BR opportunities; and multidisciplinary team discussion of local access issues (surgeon availability, refusal to accept ‘out of area’ referrals and hospital resources that impact on waiting times) so that local solutions may be developed. The increasing use of neoadjuvant chemotherapy (chemotherapy before surgery) provides an opportunity for patients to take more time exploring their BR options. Distance does not need to be a barrier to discussion of BR options, as a list of discussion prompts could be emailed/posted to the patient in advance of a telephone/internet-based discussion, from the GP’s office if it is not available in the patient’s home.

This research has some limitations that should be acknowledged. This study has used a convenience, purposive sampling method that may not be representative and is subject to selection bias. Participants were from metropolitan, regional and rural areas across mainland Australia, so the responses represent different geographical settings. The location of surgeons interviewed was informed by an earlier survey of BCNs, so we had some information on where possible problems with referral procedures existed and were able to focus on those geographical areas. While not comprehensive in its coverage, we believe this study provides a useful snapshot of current practice.

Our focus in this article on negative examples of BR referral practices may be considered a potential limitation, as we have not presented any commentary from respondents who thought the current system



worked well. While we acknowledge that many GPs and surgeons are already performing best practice in terms of BR referral, the purpose of this article is to highlight the difficulties women face in accessing BR when this is not the case. Secondly, as we have argued in the Discussion, the current referral processes work well for some women, but by documenting instances where they have not worked well for other women, we hope to have demonstrated the somewhat random outcomes which we believe are inequitable and need to be addressed.

It is possible that some practices may have changed since 2015 when the first interviews were conducted. Recall bias may also be an issue for patients sharing their stories about events that happened several years before.

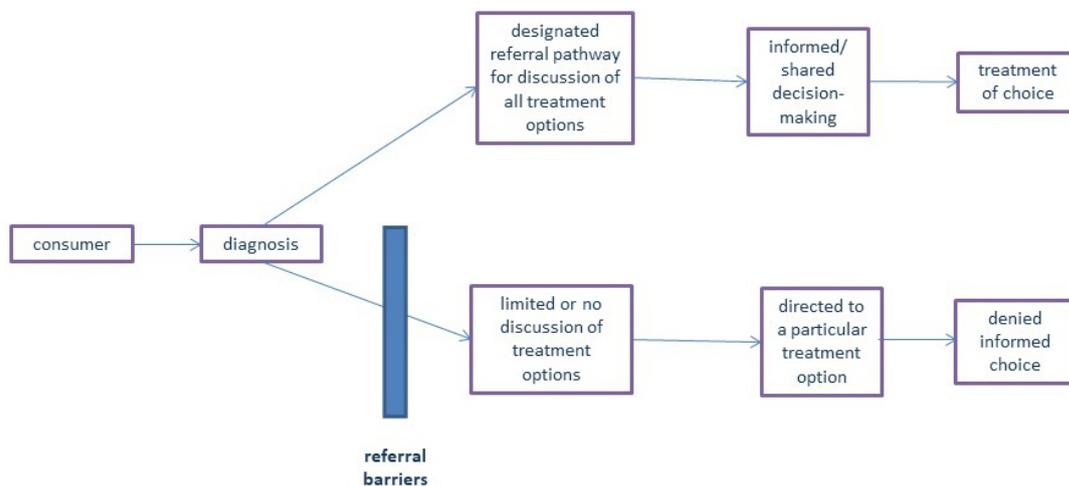
In conclusion, worldwide evidence-based guidelines strongly recommend women undergoing mastectomy have a pre-operative discussion about breast reconstruction (BR) while immediate BR is still an option. Inequity in accessing fully-informed BR discussion in Australia has been previously documented.<sup>19</sup> This article is the first to report on the role referral processes play in perpetuating that inequity.

Designated referral pathways are required to overcome barriers to BR in Australia. GPs and surgeons should be aware of the advantages of BR for eligible women, as well as the relatively few contraindications to BR. Streamlining of the referral processes, along with patient and clinician

education, would go a long way towards ensuring that women are at least seen by the most appropriate clinicians to discuss BR options and to maximise their opportunity for BR should they choose that option.

This study found instances, even in metropolitan areas that are well staffed and resourced, where women were referred to surgical practices who did not even discuss options for immediate BR with their patients. A lack of designated referral pathways has meant that clinically eligible women who are interested in considering immediate BR are denied this opportunity, because of lack of adequate information about their BR options, paternalistic attitudes by their surgeons who believe they know what is best for their patient, or a refusal to refer women on to other surgeons because of a fear of losing their patients.

We have argued that these surgeons have an ethical responsibility to refer women to other services or practices that do offer a discussion of BR options, even if these women do not live near available services. The introduction of designated referral pathways for BR would provide practical support for informed decision-making to help redress this issue in Australia. A similar optimal pathway approach could be adapted by different countries with varying degrees of health system resources and for a range of clinical conditions. Figure 2 illustrates a generic version of an optimal referral pathway for preference-sensitive treatment options.



**Figure 2.** The importance of designated referral pathways for preference-sensitive treatments

### Conflict of Interests

AS is former President of Breast Surgeons of Australia and New Zealand.

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