Delivering Breast Reconstruction Information to Patients: Women Report on Preferred Information Delivery Styles and Options

La transmission d'information sur la reconstruction mammaire aux patientes : rapport des modes et des possibilités de transmission d'information que préfèrent les femmes

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Abstract

Purpose: To discover missed opportunities for providing information to women undergoing breast reconstruction in an effort to decrease regret and improve patient education, teaching modalities, and satisfaction. **Method:** Thirty- to 45-minute semi-structured interviews were conducted exploring patient experiences with information provision on breast reconstruction. Purposeful sampling was used to include women with a variety of reconstruction types at different time points along their recovery. Using grounded theory methodology, 2 independent reviewers analyzed the transcripts and generated thematic codes based on patient responses. BREAST-Q scores were also collected to compare satisfaction scores with qualitative responses. **Results:** Patients were interested in a wide variety of topics related to breast reconstruction including the pros and cons of different options, nipple-sparing mastectomies, immediate breast reconstruction, oncological safety/monitoring and the impact of chemotherapy and radiotherapy, secondary procedures (balancing, nipple reconstruction), post-operative recovery, and long-term expectations. Patients valued accessing information from multiple sources, seeing numerous photographs, being guided to reliable information online, and having access to a frequently asked questions file or document. Information delivery via interaction with medical personnel and previously reconstructed patients was most appreciated. Compared with BREAST-Q scores for satisfaction with the plastic surgeon (mean: 95.7, range: 60-100), informational satisfaction scores were lower at 74.7 (50-100), confirming the informational gaps expressed by interviewees. **Conclusions:** Women having recently undergone breast reconstruction reported key deficiencies in information provided prior to surgery and identified preferred information delivery options. Addressing women's educational needs is important to achieve appropriate expectations and improve satisfaction.

Résumé

Objectif: Découvrir les occasions ratées de transmettre de l'information aux femmes qui subissent une reconstruction mammaire afin de réduire les regrets et d'améliorer l'éducation, les modalités d'enseignement et la satisfaction des patientes. **Méthodologie:** Les chercheurs ont effectué des entrevues semi-structurées de 30 à 45 minutes sur l'expérience des patientes à l'égard de la transmission d'information sur la reconstruction mammaire. Ils ont utilisé un échantillonnage par choix raisonné pour inclure des femmes qui avaient subi divers types de reconstruction à différents moments de leur convalescence. À l'aide de la méthodologie de la théorie à base empirique, deux analystes indépendants ont examiné les transcriptions et produit des codes thématiques en fonction des réponses des patientes. Les chercheurs ont également colligé les scores BREAST-Q pour comparer les scores de satisfaction aux réponses qualitatives. **Résultats:** Les patientes s'intéressaient à des sujets très variés liés à la reconstruction mammaire, y compris le pour et le contre des diverses possibilités, les mastectomies épargnant le mamelon, la

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reconstruction mammaire immédiate, la sécurité et la surveillance oncologique et les effets de la chimiothérapie et de la radiothérapie, les interventions secondaires (équilibrage, reconstruction du mamelon), la convalescence après l'intervention et les attentes à long terme. Les patientes aimaient avoir accès à de l'information provenant de multiples sources, voir de nombreuses photographies, être orientées vers de l'information fiable en ligne et avoir accès à une foire aux questions en ligne ou sur papier. Elles préféraient les interactions avec le personnel médical ou des patientes ayant déjà subi une reconstruction pour obtenir l'information. Par rapport au score BREAST-Q de satisfaction envers le plasticien (moyenne de 95,7, plage de 60 à 100), les scores de satisfaction informationnelle étaient plus faibles, à 74,7 (plage de 50 à 100), ce qui confirme les lacunes exprimées par les répondantes. **Conclusion :** Les femmes qui avaient récemment subi une reconstruction mammaire ont rendu compte de lacunes clés dans l'information qui leur avait été transmise avant leur opération et ont précisé les modes de transmission de l'information qu'elles privilégiaient. Il est important de se pencher sur les besoins d'information des femmes pour bien répondre à leurs attentes et accroître leur satisfaction.

Keywords

breast reconstruction, information transfer, decision-making, patient satisfaction, quality of life

Introduction

Offering breast reconstruction is an important part in the management of women who are diagnosed with breast cancer. Breast reconstruction can provide significant psychosocial benefits to mastectomy patients, improve their quality of life, and reduce mastectomy-related morbidity.¹⁻³ Although breast reconstruction has become more readily available over the last 2 decades, it continues to be underperformed in many patient populations.⁴ In 1998, the United States Congress passed the Women's Health and Cancer Rights Act mandating that all health insurance companies cover breast reconstruction following mastectomy, and further legislation penalizes them for not complying.⁵ In 2016, the American Congress passed the Breast Cancer Patient Education Act legally requiring patients with breast cancer be offered plastic surgery consultations and information about breast reconstructive options prior to oncologic surgery.⁶

Although the surgeon has a duty to explain various reconstructive options and detail the associated risks and benefits, it is unclear what gaps in information patients perceive and how those might best be met. Targeted patient education endeavours should be evidence-based and ideally focus on individual goals and concerns in order to effectively prepare them for the reconstructive experience.^{7,8} Herein we briefly report on the information gaps that were perceived by our study participants while more deeply discussing the preferences in information delivery that these patients expressed. There are many information sources available on breast reconstruction but only targeted information delivered in a manner that is most likely to be accessed by the patient in a meaningful way will meet the goals of both patients and surgeon educators in enhancing patient education.

Methods

Study Design and Patient Recruitment

Institutional ethics review was undertaken through A pRoject Ethics Community Consensus Initiative in accordance with

local guidelines for quality improvement initiatives. Informed consent was obtained from all patients included in the study. Patients were recruited using purposeful convenience sampling from a single surgeon practice. Inclusion criteria were met if patients were over 18 years of age, had previously undergone breast reconstruction, and were fluent in English. Purposeful recruitment identified and selectively recruited participants in order to draw from a wide range of reconstruction types, complications, and lengths of time since surgery in order to garner responses from a wide sampling of experiences. Participants in this study each had a minimum of two 45-minute pre-surgical breast reconstruction consultations with the plastic surgeon and were given written material to take home explaining breast reconstruction. A research assistant also e-mailed patients a pdf file and an electronic video link with breast reconstruction information. Patients were offered a peer consultation with a previously reconstructed patient if they were interested.

Data Gathering and Analyses

A mixed methods research methodology utilizing quantitative and qualitative instruments was employed in this study. This methodology offers more comprehensive and extensive insight into research questions than might be possible with reliance on a single approach⁹ and can demonstrate gaps in knowledge that the quantitative results may not pick up.

Quantitatively, patient satisfaction with information, surgeon, medical team, and office staff was assessed using 4 modules of the BREAST-Q post-operative breast reconstruction scale. This information satisfaction questionnaire asks about various aspects of the information-giving process by the plastic surgeon. Patients rate each of various domains on a scale of 1 to 4 from very dissatisfied (1) to very satisfied (4). All modules were scored using Q-Score, the instrument's accompanying scoring tool that produces a score between 0 and 100. Higher scores indicate greater overall patient satisfaction. Mean scores from the Breast-Q were analyzed by their type of reconstruction (implant or flap-based reconstruction) using an analysis of variance test with SPSS Statistics 23 software (IBM, Armonk, New York).

Qualitatively, each patient participated in a 30- to 45-minute face-to-face semi-structured interview conducted by a researcher experienced in qualitative research and interviewing. Participants were either interviewed alone or were accompanied by a relative or friend. Strategies such as the interviewer's attempt to project a non-judgmental interested demeanor, encouraging participants to retell the story of their reconstruction journey at their own pace, and using non-leading prompts were utilized to avoid as much recall bias as possible. The views of these accompanying individuals were included in the interview transcripts, and each individual gave consent for their responses to be analyzed as part of the study data. The interview instrument was organized around 3 primary foci—sources, content, and delivery of breast reconstruction information. With regard to sources of information, patients were asked to recall where or from whom they received breast reconstruction information and to assess the value and their level of trust in each source. For content of information, queries focused on the information participants received or would have liked to have received on various aspects of the breast reconstruction process, options and procedures, and recovery and long-term adjustment to breast reconstruction. In the area of information delivery, issues related to each individual's information tolerance level and processing style were explored as well as desired options for appropriate types and timing of content delivery. Inquiry was also made with regard to whether caregivers, partners and/or spouses, and family members should receive specific breast reconstruction information or support and whether they should actively participate in the information provision and acquisition process.

All interviews were audio recorded and transcribed verbatim. Using thematic analysis,¹⁰ interviews were reviewed by 2 independent researchers throughout the data collection and coding period in an ongoing and iterative fashion in order to identify themes and refine codes. Particular attention was taken to identify themes within the 3 primary foci while also being attentive to areas of patient concern or experience that might fall outside of these domains but still prove to be of importance.

Results

A total of 19 patients who met the inclusion criteria agreed to participate in this study. The mean patient age was 54 years, with a range between 38 and 69 years. Diagnoses precipitating breast reconstruction included 2 prophylactic mastectomy patients with BRCA positivity, 7 with ductal carcinoma in situ, and 10 patients with invasive breast cancer. A total of 17 participants had immediate reconstruction and 12 had unilateral reconstructions. Two patients had autologous reconstructions with deep inferior epigastric perforator flaps. Alloplastic reconstructions were performed in 14 patients (6 two-stage expander/implant, 1 direct-to-implant with acellular dermal matrix, and 7 direct-to-implant using the patient's own dermal tissue as a sling). In 3 patients, a combination of alloplastic and autologous techniques were performed (1 thoracodorsal artery perforator flap with implant and 2 latissimus dorsi flaps with

implants). The preponderance of alloplastic reconstructions represents current trends in immediate breast reconstruction.¹¹ The mean length of time between the initial reconstructive surgery and post-operative interview participation was 108 days (ranging: 15-286 days).

Seventeen patients completed the BREAST-Q information satisfaction questionnaire for breast reconstruction. Scores ranged between 50 and 100. Mean scores for information satisfaction (mean: 74.7, range: 50-100) were statistically and clinically significantly lower than scores for the quality of the plastic surgeon (mean: 95.7, range: 60-100), medical team, or office staff,¹² confirming informational gaps expressed in interviews.

Qualitative data from comments made during the interviewing process provided the patients' perspectives on breast reconstruction and flushed out where inadequacies in information transfer lay. The individual patient comments were used to extract 12 general themes before reaching thematic saturation. Eight themes related directly to the content of information desired, whereas the remaining 4 themes related to information delivery. This article will deal with the information delivery themes and their relevance to more adequate information transfer between health professionals and patients.

Multiple Information Resources

Most informants indicated that they valued and consulted multiple information resources. Sources consulted by patients included the breast surgeon, plastic surgeon, family doctor, printed materials, online resources, Breast Reconstruction Awareness (BRA) Day, and other reconstructed patients. They recognized that since often "the decisions have to be made so quickly, good information is paramount" and they welcomed some guidance.

Consistently, the plastic surgeon was the most valued source of information. Informants noted that the plastic surgeon had extensive first-hand experience with all pre-, intra-, and post-operative aspects of the breast reconstruction journey and could offer experienced advice. Further, informants noted that the plastic surgeon was a trusted source to guide patients to trustworthy online or print sources, thus supplementing the information transfer that takes place during the consultation process and allowing patients to confidently, and at their own pace, consult outside sources.

Informants also emphasized the importance of bringing a companion to health-care appointments. Companions were seen as highly valuable to "help remember and ask questions," given that breast reconstruction consultations often include a great deal of information that the patient must consider as she makes a surgical choice. To this point, patients also expressed an appreciation for 2 preoperative consultations that provided an opportunity to go "home and [think] about it" before having to make a final decision. Companions were also seen as important with regard to information regarding the post-operative period. It was not uncommon for an interviewee to express that "after surgery my mind isn't as clear as usual and it's easier to

forget things or not remember what you were told.” Information given carefully and clearly to the post-operative caregiver directly was considered very important to the study participants.

Written information in the form of pamphlets, brochures, books, and online resources was also generally welcomed, although tolerance for the amount of information varied. For some participants, the amount of material given to them by various medical staff and clinics became overwhelming—“I needed the information they were giving me but I was also finding myself really overwhelmed so I only wanted the information I absolutely needed to know and not a lot of other stuff to consider.” Others stated “the more information the better! I would welcome anything” and “you’re a bit of a sponge when you go through this so anything that was sent to me I did read it.” Strategies to deal with the amount of information received were offered—“When I first got my diagnosis I was given a big folder of information. I started out reading it all but I was getting overwhelmed. I made up my mind to just deal with each aspect one at a time and not worry about what was coming until it was time to deal with it.” A centralized point where one could access trustworthy print and online resources and could take or leave written material was a wish list item for several informants.

Patients also noted that breast health nurse navigators seemed to be ideally positioned to be sources of accurate information on breast reconstruction. Unfortunately, participants expressed dismay that this was often not the case. Informants who had had various nurse navigators repeatedly told the researchers that “she [the nurse navigator] never told me anything about breast reconstruction.” The disconnect between mastectomy and reconstruction was acutely felt because the nurse navigators “focused on the breast cancer and nothing on breast reconstruction” so that “all of a sudden I felt like I was in plastic surgery and I was all on my own.” Lack of information from breast health nurse navigators was repeatedly cited as a deficit by informants. Nurse navigator integration into the breast reconstruction aspect of breast cancer care seems a clear opportunity to provide improved information delivery.

Further, it was apparent that an individualized approach to information provision, in terms of the type and quantity of information, as well as the delivery method, is necessary to adapt to different learning styles, personality types, and information tolerance levels. As noted by 1 informant “what works for one person may not work for another. Each person is unique. The way one person processes things or reacts may not be at all how it will be for you.”

Finding Reliable Information Online

In a world where consulting “Dr Google” is a reality and where online information seeking is ubiquitous, many women will look for online resources. Finding reliable information is critically important and concern over the veracity of such sites was a common concern among informants. Patients wanted to have

good online resources for breast reconstruction with reliable details that they could trust. “I did go looking on the Internet and that was okay. Most of it reinforced what I had already heard and when it didn’t feel right I would just dismiss it. I feel, though, that I got better information [at the clinic] than I did online. It was hard to find sites that you thought were really really good.” The concern over the veracity and applicability of information came up regularly in the responses given by respondents—“There are some reputable sites, but there are also lots that are not. Plus the patient may encounter things that frighten them and that have nothing to do with their own case so they get upset for no reason.”

Nevertheless, recognition that the Internet seeker may view material that may be frightening had both positive and negative ramifications for some—“I think I freaked myself out a little bit because I, of course, found myself looking at the reconstructions gone bad videos which was probably not the smartest move. But at the same time . . . I was educated; I knew the good and the bad of what could happen with any of the choices.” Interestingly, informants often used the Internet in a somewhat dialectic manner comparing and contrasting the online material with what they learned from their plastic surgeon. For some, after being given information by their plastic surgeon, they then “went to the web site to confirm.” Others brought information from the Internet to their plastic surgeon and said “‘would this work?’ and she would tell us.” Several women found that comprehensive breast reconstruction information was often lacking online and that much of it was associated with American plastic surgeons’ offices, a fact that led these Canadian women to question their objectivity.

Seeing Numerous Photographs

The importance of being able to view numerous photographs of breast reconstruction was a dominant finding of this study—“sometimes you don’t process what it’s going to look like unless you see pictures.” Women felt they did not have access to enough before and after pictures, images of scars, immediate post-operative images, or photographs of reconstructive complications. It was felt that photographs were much better at communicating than diagrams or written materials. Upon viewing photographs, some reported that “you have an idea of ‘this is normal; this is the way it’s supposed to look like’ and I’m okay with that.”

When it came to the post-operative healing period, informants wanted “photos of what you will look like immediately after the surgery—with the incisions and drains and everything. It would be nice to know what you will look like so you can prepare.” Photos were also thought to be a tool to alleviate concerns—“information on what normal incisions look like would be very useful. I took off my Steri-strips and had, what looked like, a lip and I was freaked out wondering if it would stay that way and if that was normal.” Informants also indicated that photographs of complications would be helpful in terms of knowing whether to be concerned or not and what was “normal” and what was not—“since I did have some skin die,

I'd have liked more information on what to watch for and how I should handle it. Photos of these things would be helpful."

Final outcome photos were also of importance. Scarring concerns were common—"What that is going to look like. Where are the scars going to be? What will they look like?" Women were also concerned "'cause I was scared and I was afraid and I didn't know the outcome" and found that photos of final results were comforting. Of note, our informants indicated that they thought it was "just as important for a husband or partner to see" photographs as it was for the patient. One of the partners who participated in this study noted that access to photographs "was certainly helpful for me" to the extent that when no one was able to "show us pictures of lumpectomy, that was case closed for me. If I couldn't see pictures of that I went the other way, the reconstruction way."

Another important point made by informants was that they wanted a wide variety of photographs available to demonstrate a variety of outcomes and a variety of body types represented—"I would have liked a lot more pictures of reconstructions and I'd have liked pictures of different results on different types of bodies. None of the bodies I saw looked just like mine."

The Importance of Peer Connections

The importance and influence that previously breast reconstructed peers have on women tasked with deciding their own path should not be underestimated and is regularly sought out by patients during the decision-making process. For some women, they seek these encounters out through their own circle of acquaintances, but others appreciate having such encounters arranged for them through the surgeon's office. The opportunity to speak with patients who had gone through different types of reconstruction is another avenue for information gathering toward decision-making—"I was very indecisive of whether to go the route of the tissue expanders or the Alloderm and having the opportunity to speak to a couple of patients... that was really helpful. That certainly helped me in my decision in terms of which route I wanted to go so that was great." Informants regularly spoke of how reassuring it was not only to speak with someone who had been through the experience but to also have the opportunity to see results—"she just kind of shared a bit of her recon and then showed me what they looked like and then I wasn't as afraid." The unhurried and down-to-earth personal nature of these encounters is especially appreciated.

Not everyone wants to meet in person and some of our informants chose to connect by telephone or online through discussion boards, but the attractiveness of the concept of speaking with someone who "had been there" remained. It is important to note that interviewees also expressed that, though they valued these encounters, they used their own judgment and were not simply sponges—"I think it was very important for me to have someone to talk to but you always have to bear in mind that every person and every experience is different. You can't take someone else's experience and think yours will

be exactly the same." The peer connections was a complement to the other information delivered by the surgeon.

Breast Reconstruction Awareness Day,¹³ an annual international event educating the general and medical community about breast reconstruction as a choice, also offered several informants an appreciated opportunity to liaise with peers and surgeons outside of a private consultation. Breast Reconstruction Awareness Day involves surgeon presentations, small group discussion tables with physicians and previously reconstructed women, and "show and tell" lounges where previously reconstructed women share their experience and show their results. For some attendees, the event is very powerful and has "helped formulate my own direction." For 1 woman who had had a biopsy the same day as attending BRA Day, she noted that "it really gave me the information... because I'd met people who had had breast cancer and those who'd done it prophylactically and because I had been biopsied that day I thought I could be either way cause I'd met ladies who'd done both and it was really affirming to me." Breast Reconstruction Awareness Day, like the peer connections, offers information that may not be covered in a physician's consultation and offers an alternative information delivery style and enhanced content.

Identifying Frequently Asked Questions

Participants felt that it would be nice to identify frequently asked questions (FAQs) since often breast reconstruction is completely uncharted territory for them—"You don't know what questions to ask because you don't know. You can't ask a question if you don't know what to ask yet." Having resources that address common questions can help prepare patients and ease the burden of uncertainty that is associated with breast reconstruction. Even patients who characterized themselves as active information seekers recognized how daunting it can be to acquire and assimilate the necessary information to make an informed decision—"I've often thought that if I had not been so proactive on gathering information, I'd have been really overwhelmed and unprepared." Informants suggested development of an FAQ to help patients in decision-making and self-care during the reconstruction process. "Things to put on it would be things about whether silicone is safe and what are the pros and cons of silicone and saline. Another thing that should go there is about post-surgery and what you can do and when you can do it." They noted that having such a document compensates for the post-surgical period when "my mind isn't as clear as usual and it's easier to forget things or not remember what you were told." Several informants noted that BRA Day events were particularly helpful as they allowed them to speak with women who had had reconstruction and to have an opportunity to discuss reconstruction with surgeons outside of a clinical setting.

Discussion

Undergoing ablative surgery for breast cancer can be a traumatizing experience that can leave women feeling significantly

distressed. Breast reconstruction improves body image, psychosocial well-being, and breast-related quality of life in women of all ages,¹⁴ yet decision-making in breast reconstruction is not a straightforward process for patients. With an abundance of implant/expander types, autologous free flap options, prophylactic choices, skin-sparing and nipple-sparing techniques, individual preferences for breast sizes, immediate and delayed procedures, and a myriad of extrinsic factors influencing breast reconstructive choices, decisions can be difficult to make.¹⁵ Evidence suggests that lower patient satisfaction with information and increased depression are associated with increased decision regret when it comes to breast reconstruction.¹⁶ Reconstructive surgeons need to do a better job of informing patients effectively to meet their information needs. Patients considering breast reconstruction need to be provided with relevant information in a way that is most useful to them in order to make well-informed decisions.^{17,18} As such, the plastic surgeon is integral to providing patients with quality information that is clear, relevant, and important to the patient to permit informed decision-making.^{19,20} The majority of participants indicated that their plastic surgeon was the primary source of information. Patients were frequently surprised by the number of reconstructive options presented to them. Their sentiments demonstrate that breast reconstruction requires considerable information transfer and that the consultation process can often be quite extensive and informative, yet still not target every individual's particular needs.⁸ The decision-making process in breast reconstruction requires that patients be provided with the information they need in an understandable form along with sufficient time to work through knowledge acquisition and processing,^{21,22} which can be challenging in the context of immediate breast reconstructions where oncologic safety warrants surgical expediency. Patients appreciated time to consider options, digest the information they had been given, and consider how it applies to their own lives, preferences, and values. Offering an opportunity to formulate informed questions can be beneficial.^{14,17} As such it may be unreasonable to expect patients to make a decision in 1 preoperative consultation, and 2 such consultations might be a sounder practice in terms of recognizing the complexity of this decision and the interaction necessary to enhance decision satisfaction.²³⁻²⁵

Information delivered in a variety of formats cannot ensure patients are adequately educated about their options, but it does improve the likelihood that different learning styles and comfort levels are accommodated for. The verbal information transfer that makes up much of the physician consultation appointment can be augmented by incorporating photographs that illustrate a variety of body types, procedures, and outcomes. Experienced surgeons will likely have a collection of such images of their own patients that could be utilized. We would also encourage the development of an organized image library in hard copy or encrypted and password-protected online repository that could be accessed by multiple physicians for educational purposes. Physicians can also augment their consultation process by offering print material and web site URLs, including video sites, to help patients with different

learning and knowledge acquisition styles and preferences to have access to timely and accurate materials.²⁰

Even with efforts to provide multiple and varied information sources, it must be acknowledged that patient information tolerance and willingness or desire to utilize the information provided can be a challenge for even the most conscientious physician. In an ongoing decision aid utilization study by 2 of the 3 authors of this study, a significant number of the study participants never access the decision aid even though they have agreed to do so as an integral component of their participation in the study. This illustrates that information provision is only a part of the equation and that even when patients assert willingness to review the information, actual patient practice may vary. Nevertheless, it is our belief that by increasing the range of formats for patient information acquisition, the probability of patients utilizing some form or other increases.

This is also where utilization of peer volunteers is a creative and appreciated method of information transfer.^{14,19,20} In the practice of the surgeon in this study, a cadre of volunteers have been recruited to speak with new patients when the patient agrees to this. Volunteers are matched according to various criteria and contacted by the research coordinator and given the new patient's first name and phone number. The volunteer reaches out to the new patient and offers to speak with them. Often these telephone meetings develop into in a person get-together where a "show and tell" takes place. After these encounters, patients often come to their second consultation feeling much more assured in their decision, possibly in part because this form of information transfer actively engages women in evaluating and considering other information they have been given.¹⁴ Where such a system is not available, BRA Day, though a once per year event, offers information transfer in multiple formats for large groups of people and is more comfortable for some women who may not want the more intimate one-to-one experience.

Nurse navigators help organize a patient's care and can be a central source of information and support.¹⁴ They are often highly trusted and appreciated by the patients who interact with them.¹⁴ In this study, although nurse navigators play an important role from the surgical oncology perspective, their training and scope of practice does not include breast reconstruction. As such, this central resource in a woman's breast cancer journey may not be able to guide or support her when it comes to breast reconstruction. There is an opportunity to expand the role of such a nurse navigator through educational initiatives and training to include breast reconstruction as part of the patient's cancer care management plan.

Conclusions

Women having recently undergone breast reconstruction reported key insights in their information delivery style preferences and needs. Comments from reconstructed women were grouped into 4 thematic categories that represented their feelings on information provision about breast reconstruction. Ultimately, we can use this knowledge to improve patient education endeavours, develop teaching modalities to tell

women about various aspects of breast reconstruction, decrease regret with well-informed decision-making, and improve patient satisfaction with the reconstructive process. This mixed methods study adds to the evidence base regarding informational gaps in women undergoing breast reconstruction.

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