

the complication risk as a whole, which may necessitate the development of a separate risk assessment model for this procedure in the future.

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Development Of A Tailored Web-based Decision Aid And Risk Calculator To Improve Patient Decision-making For Breast Reconstruction

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PURPOSE: Women considering breast reconstruction following mastectomy must choose from an array of surgical procedures with different risks and benefits. Inadequate knowledge and uncertainty about the type of breast reconstruction may lead to poor psychosocial outcomes and patient appraisal of the decision-making process. Patients report relatively low satisfaction with information regarding breast reconstruction before and after undergoing reconstruction. Furthermore, women who report lower levels of satisfaction with information are also more likely to report higher decisional regret with their reconstruction decision postoperatively. To improve the decision-making process for women considering reconstruction and to disseminate evidence-based findings from the Mastectomy Reconstruction Outcomes Consortium (MROC) study, we sought to develop a tailored web-based decision support program to improve patient knowledge and experience with the decision-making process for post-mastectomy breast reconstruction.

METHODS: Semi-structured focus groups with women who previously underwent various types of breast reconstruction and surgeons who regularly perform these procedures were conducted to identify important aspects of procedure selection and postoperative and long-term experiences.

A web-based decision aid [The Breast Reconstruction Informed Decision Advisor (BRIDA)] was developed with iterative feedback sessions with patients on the usability and functionality of the program. Using data obtained from the MROC study, we built an individualized risk calculator for postoperative complications that considers patient comorbidities and the intended procedure type. Additionally, we incorporated long-term patient-reported outcomes from the MROC study such as satisfaction with breast, psychosocial well-being, sexual satisfaction, and physical well-being for different procedures into the program. BRIDA also features video vignettes of structured interviews with women who had undergone various types of breast reconstruction and a values clarification exercise to clarify patient values and preferences in the context of their surgical options for reconstruction.

RESULTS: During feasibility and usability testing with 13 women who had previously undergone reconstruction, 100% reported that they would recommend the website to others, 83% reported that the amount of information included was just right, 92% reported no issues navigating the website, and 100% reported that the time it took to complete was just right. Thus far, BRIDA has been tested in 17 women who are considering breast reconstruction following mastectomy in a randomized pilot study assessing impact on breast reconstruction knowledge and perceived experience with the decision-making process for these procedures.

CONCLUSION: BRIDA is a tailored web-based decision aid that aims to clarify patient values and preferences in the context of reconstruction, to enable an interactive side-by-side comparison of different procedures, and to generate a personalized list of considerations to discuss during preoperative consultations. Lessons learned from the development BRIDA include the importance of collaborating with a multidisciplinary team of experts in decision-making research, engaging patients and providers in focus groups for feedback on development and functionality of the program, and incorporating clinical and patient-reported outcomes for reconstruction. Preliminary findings from an ongoing pilot study of BRIDA on patient knowledge and experience with the decision-making process for breast reconstruction will provide the basis for a larger multi-institutional trial.

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