Project Title: Managing expectations and reducing morbidity after surgery for breast cancer.

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Level: PhD

Background to the project: Breast cancer remains the most common cancer diagnosed in women worldwide and is the third most common cause of cancer death in women in the UK [1]. Mortality from the disease is decreasing and earlier detection and developments in treatment have led to an increase in survival rates [2] with survivors of breast cancer making up the largest population of all cancer survivors [3]. Thus, more women and their families are living with the consequences of breast cancer treatments for increasingly prolonged periods of time [4]. Research into women’s experience of breast cancer and its treatment has highlighted the important role played by their partners and other family members [5, 6] so it is likely that women, as well as their families, need support from diagnosis onwards.

Our research team within the INHR have investigated the impact and extent of the musculoskeletal consequences of LD flap breast reconstruction surgery on women who have had a mastectomy for breast cancer. Our findings suggest that whilst women recover well, there is some morbidity especially regarding shoulder function [7, 8, 9], which supports findings from the large National Mastectomy and Breast Reconstruction Audit (n = 8636) [10]. We have identified that (i) the surgery has an impact on both the women who have undergone the surgery and other family members who are involved, and (ii) there is an unmet need regarding a perceived lack of preparedness for both the women and their families, specifically regarding their expectations in terms of the post-operative pain and timelines of recovery. We also identified a lack of consistency from Trust to Trust in terms of pre- and post-operative management of the musculoskeletal aspects of the surgery. Therefore, there is a need to provide support to women and their families before, during, and after their surgery for breast cancer, with the aim of (i) increasing their preparedness and (ii) reducing morbidity.

The support will be provided via an online platform, LifeGuide (https://www.lifeguideonline.org), which is a multidisciplinary initiative led by a team at the University of Southampton. The LifeGuide research programme allows intervention designers with no experience of programming, to create interactive web-based interventions to support healthy behaviours.

Aim:
To develop and test an on-line intervention to support women and their families, as they prepare for, and recover from, surgery for breast cancer, i.e. mastectomy and breast reconstruction.

Methods to be used:
Two literature reviews will (i) identify current practice, best practice and guidelines around preparation for and recovery from the musculoskeletal consequences of

1 LD flap: one type of breast reconstruction using the Latissimus Dorsi (LD) muscle whereby the muscle is separated from its attachments on the posterior trunk, and is brought anteriorly to create a breast-shape following mastectomy for breast cancer.
surgery for breast cancer, and (ii) enable the PhD student to understand the theoretical basis underpinning expectations, and how these may be managed in a health care setting. The findings will inform the content of the LifeGuide intervention.

Following the literature reviews, there will be a small qualitative study (1:1 interviews or focus group) to explore the barriers and facilitators to online support for a chronic condition such as breast cancer. The findings will inform the construct and interface of the LifeGuide intervention.

Finally, a multi-methods study involving iterative qualitative testing as well as quantitative evaluation will create, test and evaluate the two-strand LifeGuide intervention:

Strand One: online support to improve preparedness for women and their families regarding the impact of surgery and the timelines for recovery

Strand Two: online support to encourage rehabilitation after surgery for breast cancer and reduce musculoskeletal comorbidity.

Objectives of the research:
- Understand the context in which this work will be undertaken (literature reviews)
- Identify the barriers and facilitators to online support in a healthcare situation
- Create, test and evaluate a two-strand support (using the LifeGuide platform) that aims to: (i) improve preparedness of women and their families before, during and after surgery, in relation to surgery and recovery, and (ii) reduce morbidity as a result of surgery

Skills required of applicant:
This DEL/VCRS project is suitable for a graduate in health sciences.

References:
