

Introduction

Problem

- 2.8 million breast cancer survivors in America in 2013
- 20-40% will develop breast cancer related lymphedema (BCRL)
- BCRL occurs when the lymph flow is disrupted
- Lymph flow is damaged or disrupted in lymph node removal
- Axillary node dissection, radiation, and mastectomy contribute to BCRL onset
- BCRL affects the arm and chest wall with swelling, discomfort and skin changes
- Once BCRL develops it is a chronic condition with no cure at this time
- Complete decongestive therapy (CDT) phase 1 is performed by lymphedema therapists
- CDT phase 2 involves manual lymph drainage, compression and skin care by the patient
- Daily self-care is required to prevent complications such as infection

Clinical Question

For patients who have breast cancer surgery or treatment, would the patient increase BCRL self-care activities if provided a personalized self-care algorithm for BCRL versus being provided education materials without a personalized algorithm over a period of 6 months?

Review of Evidence

Synthesis of Research and Clinical Guidelines

The literature reviewed were 7 primary research articles and one BCRL guideline. There is strong evidence for CDT initial phase and less information about the maintenance phase of CDT. Exercise and weight reduction provide a decrease in symptoms and a decrease of arm volume. Providing BCRL information increases risk-reduction activities, yet limitations of self-care are many. Studies are few and sample sizes small regarding self-care in CDT phase 2. Self-care involves daily manual lymph drainage (MLD), compression, and skin care. Psychosocial concerns were identified including, decreased social activity,

Conceptual Framework

The Chronic Illness Trajectory Framework by Corbin and Strauss (1991), consists of concepts for understanding the management, perceptions, reciprocal impact and goals of the trajectory, or course, of a chronic illness. The trajectory of BCRL is unpredictable thus making it unique to each patient. Nurses are in a position to support the patient's journey along the trajectory.

Objectives

1. The reader will achieve knowledge of the risks and prevention of BCRL.
2. The reader will understand the Chronic illness Trajectory Framework by Corbin and Strauss, and its application to BCRL.
3. The learner will gain knowledge about the nurse's role in the support of patient self-care activities through the use of the BCRL Self-Care Algorithm.

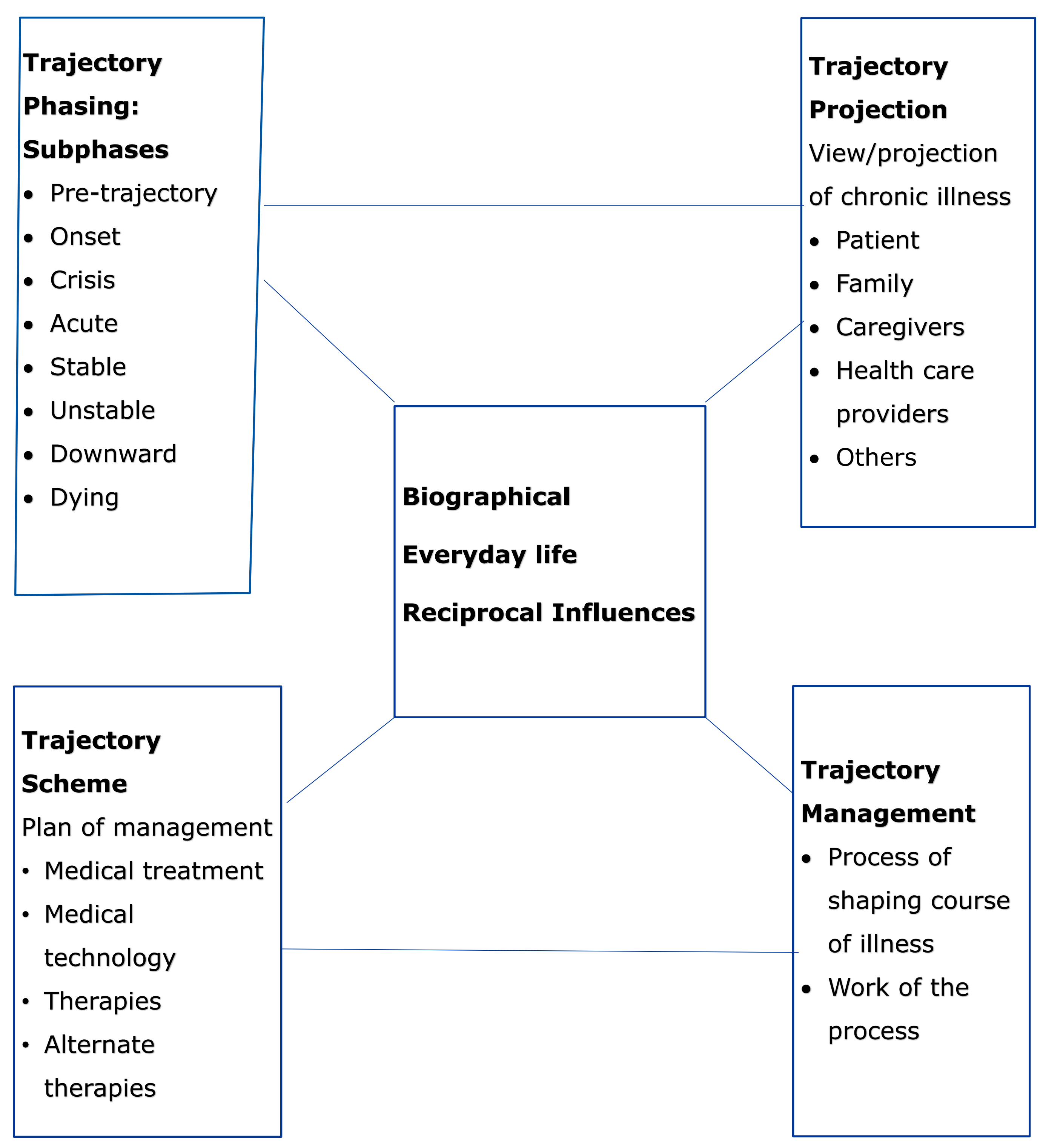
References

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Guiding Framework

Chronic Illness Trajectory Framework Model Corbin and Strauss



Corbin, J., M., & Strauss, A. (1991). A nursing model for chronic illness management based upon the Trajectory Framework. *Scholarly Inquiry for Nursing Practice: An International Journal*, 5(3), 155-174.

Nursing Implications

A BCRL self-care algorithm will support the patient at risk and who has BCRL in the home setting. The algorithm will guide multidisciplinary team members in individualized patient care. Nurses are efficient in exploring patient goals for illness management, educating patients about prevention and chronic disease management, and understanding the work of chronic illness regimens on patient's lives. Communicating with the patient and a multidisciplinary team to identify: goals, limiting factors, burden of treatments and self-care, are nursing roles. More specifically, assessment of the BCRL phase and identifying self-care needs, could possibly avert hospitalization or BCRL onset. A BCRL algorithm will provide multidisciplinary guidance for the patient throughout the trajectory of BCRL.

Translation to Practice

Protocol to Guide Practice

BCRL Self-Care Algorithm

Pre-trajectory (prior to BCRL)

1. Measure both arm circumferences
2. Provide education about risk factors
3. Maintain ideal weight
4. Maintain daily exercise
5. Daily skin care
6. Set BCRL prevention goals

BCRL Onset (signs and symptoms present)

1. Continue Pre-trajectory activities
2. Refer to LE therapist /CDT phase 1
3. Identify treatment team
4. Set goals for BCRL onset
5. Assess for biographical, everyday life, and reciprocal influences

Stable (symptoms controlled by regimen)

1. Continue pre-Trajectory activities
2. Perform CDT phase 2
3. Set goals for CDT Phase 2
4. Evaluate barriers to meet goals
5. Assess for biographical, everyday life, and reciprocal influences

Unstable (symptoms not controlled by regimen)

1. Continue Pre-trajectory activities
2. Refer to LE therapist for CDT phase 1
3. Set goals for CDT phase 1
4. Identify barriers to patient goals
5. Assess for biographical, everyday life, and reciprocal influences

Crisis (life-threatening complication of BCRL)

1. **Seek emergency care for:** (Infection)
 - Temperature $\geq 100.4^{\circ}$ F
 - Skin of the affected arm is: red, hot, hard or mottled
 - Malaise or flu-like symptoms
 - Numbness or tingling in hands or arm not previously noted
2. **Call healthcare provider for:** (Injury)
 - Animal bite to affected extremity or area
 - Insect bites of significance
 - Injury to affected arm or burns, rashes, cuts, puncture wounds

Summary

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An individualized BCRL algorithm framed by The Chronic Illness Trajectory Framework will guide the breast cancer survivor through the changing trajectory of their risk and/or development of BCRL. Information increases self-care activities. Nurse Practitioners and nurses are most effective in assisting patients to manage chronic illnesses and provide education. Few studies have been performed about CDT phase 2 and the following of patients throughout their lifetime of risk or onset of BCRL.