

# Lean Practices for Resource Use, Timeliness, and Coordination of Care in Breast Cancer Navigation

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**BACKGROUND:** Cancer care is described as insufficiently patient-centered, requiring improved accessibility and coordination. Breast oncology nurse navigators may help provide timely patient care by improving care coordination.

**OBJECTIVES:** This study evaluated a breast cancer navigation (BCN) program in a large ambulatory healthcare system. It examined measures related to quality and value, including timely service delivery, appropriate use of resources, and care coordination.

**METHODS:** Using Lean methods, a BCN program focused on women receiving a breast biopsy was developed at a pilot site and later implemented throughout the healthcare system. Study data evaluated timely disclosure of biopsy results, prompt scheduling of initial consultations, outpatient use of cancer specialists, and coordination between primary care and oncology practices.

**FINDINGS:** After implementing the BCN program, more timely biopsy results were delivered to patients. Patients were more likely to complete an initial consultation within two weeks of biopsy and made fewer outpatient visits. Referrals to cancer specialists within a month of biopsy increased, and primary care encounters with patients decreased.

## KEYWORDS

nurse navigation; care coordination;  
Lean quality improvement; breast cancer

## DIGITAL OBJECT IDENTIFIER

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**CANCER CARE CAN BE DESCRIBED AS A SYSTEM** in crisis because of secular trends, rising costs, and persistent challenges in delivering high-quality, high-value care (Institute of Medicine, 2001). Cancer care can lack a patient-centered focus, which requires improved accessibility and coordination (National Cancer Policy Forum, 2013). Patient-centered care is defined as care that respects and responds to individual patient needs, values, and preferences, ensuring that the patient's values guide clinical decisions (Institute of Medicine, 2001). Health systems can address inadequate staffing, increase patient coordination, and measure clinical outcomes, which can build incentives and efficiencies to improve patient-centered cancer care delivery. These improvements require healthcare providers to systematically organize and execute complex workflows ranging from cancer screening and treatment to patient follow-up.

First developed at Toyota in the 1980s (Ohno, 1988; Shingo, 2008), Lean management, or Lean, involves a set of principles, practices, and tools to assess and redesign work processes for quality improvement. When applied to a healthcare setting, Lean aims to create a culture of continuous improvement while standardizing best practices to address healthcare-specific challenges, including rising costs, concerns about patient safety and care quality, and wasted time and resources (Womack & Jones, 2003). A key principle of Lean is maximizing value while minimizing waste. Value in health care is defined as anything that achieves desired outcomes for patients, such as increasing access to care and expediting service delivery. Waste is defined as anything that does not provide value to patients, such as long wait times for appointments, delays in time from door to diagnostic evaluation or treatment, failure to receive follow-up care, or dissatisfaction with care received (Tlapa et al., 2020).

Only a few studies to date have examined the use of Lean in oncology (Duncan et al., 2021). One area that remains unexplored is the use of Lean workflow redesigns to support care navigation. Navigation for patients with cancer has been shown to improve access to services, disease management, and care experiences, while reducing health disparities (Bush et al., 2018; McKeivitt et al., 2018). Nurses or lay navigators can manage care provided by multiple clinicians and cancer care specialists. For complex illnesses such as breast cancer, coordinated care relies on highly standardized work processes to enhance the effectiveness of treatment and increase survival rates (Riley & Riley, 2016; Rocque et al., 2017). The purpose of this study was to evaluate the quality and value of care in a breast cancer navigation (BCN) program, measuring timely delivery of services and appropriate use of medical resources.