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# Optimal utilization of a breast care advanced practice clinician



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## Abstract

**BACKGROUND:** Incorporation of “lean” business philosophy within health care has the goal of adding value by reducing cost and improving quality. Applying these principles to the role of Advance Practice Clinicians (APCs) is relevant because they have become essential members of the healthcare team.

**METHODS:** An independent surgical breast care clinic directed by an APC was created with measurements of success to include the following: time to obtain an appointment, financial viability, and patient/APC/MD satisfaction.

**RESULTS:** During the study period, there was a trend toward a decreased median time to obtain an appointment. Monthly APC charges increased from \$388 to \$30,800. The mean provider satisfaction score by Press Ganey was 96% for the APC and 95.8% for the surgeon. Both clinicians expressed significant satisfaction with clinic development.

**CONCLUSIONS:** Overall, initiation of an APC breast clinic met the proposed goals of success. The use of lean philosophy demonstrates that implementation of change can result in added value in patient care.

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In the healthcare environment of today, providing higher value by increasing quality while lowering cost challenges the structure of how care is organized and delivered.<sup>1-3</sup> Increased demands on healthcare systems and providers from the Affordable Care Act, resident work hour restrictions, and the influx of 80 million older adults from the “baby boomer” generation add additional pressure on a system already known primarily for excessive expense

and inefficiencies.<sup>4,5</sup> In cancer care alone, data from the National Cancer Institute and Association of American Medical Colleges project that while the number of patients needing care for cancer will increase by 48% between 2005 and 2020, the corresponding increase in the physician oncology workforce will increase by only 14%.<sup>6,7</sup> Proposals are abundant and change imperative to accommodate healthcare evolution and to maximize productivity while improving the value of health care.<sup>8</sup>

Advanced Practice Clinicians (APCs) have become more an essential member of the healthcare team. Research has shown that the addition of APCs across multiple specialties can add continuity, increase patient satisfaction, improve compliance, and often provide more affordable care.<sup>9,10</sup> Specifically in the area of breast care, British

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literature dating back more than 20 years documents the role and value of nurse practitioners in breast oncology and provides good evidence that there can be a high degree of both patient and provider satisfaction when these “physician extenders” are incorporated into a breast-focused practice.<sup>11–13</sup> Although a recent report from the Institute of Medicine endorsed including APCs in a team approach to cancer care, a combined review from California and Michigan concluded that employment of APCs in breast cancer care remains modest, especially among surgeons.<sup>14,15</sup>

As part of an institution-wide philosophy that emphasizes healthcare delivery based on adding value by increasing quality while reducing cost, we designed a study to optimize the role of a clinically skilled APC, in this case an Advanced Practice Registered Nurse, working as a member of our surgical breast cancer team. The initial goal was to establish an independent breast clinic run by an APC with back up by a well-established breast surgeon in a collaborative practice model for the future. The primary goal of this study was to broaden the APC scope of practice, thus allowing her to work at the top of her license. Based on our assessment of other specific needs with measureable outcomes, we established the following secondary goals of this new APC dedicated breast care clinic: a 50% reduction in time to obtain an appointment for a new patient in the breast clinic; positive financial benefits; and improved patient, surgeon, and APC satisfaction.

## Patients and Methods

To facilitate this effort, we chose to use an approach following “Lean Principles” previously well documented as successful in maximizing “change for the best” or “Kaizen” in medical care.<sup>16–18</sup> Based on these principals, we assembled a team that comprised 2 breast surgeons, 2 APCs, a Master of Business Administration trained administrator, a surgical resident, and a research nurse. All participants underwent basic training in lean principles in an institutionally run course. The lean principle of “Gemba” (“going to the real place”) was followed by the team members visiting the breast care clinic for an on-site evaluation and needs assessment. From this preliminary appraisal, a focused problem statement was developed: “the surgical breast clinic is a perfect environment for an independent APC practice.” Regular team meetings were held and a progress map was developed and refined that outlined the current state of the surgical breast clinic, the noted limitations, possible changes, and proposed outcomes.

The entire time period over which data were collected included the 4 months before establishing the APC clinic (October 2012 to January 2013) and the 11 months that followed (February 2013 to December 2013). Data were collected on those patients who were new to the system and the initial clinic visit was termed “new patient visit” (NPV). The variable was further described as the calculated time (days) to obtain this appointment with the value

determined by subtracting the date of the actual appointment from the date the call was made to obtain an appointment. Financial data included all charges billed and collections received by the APC through the study period. Patient satisfaction was determined by using Press Ganey scores (Press Ganey Associates, Inc., South Bend, IN), reporting the mean value for the care provider based on 10 specific questions.

After establishing the above parameters, an independent breast clinic run by an APC was established and the APC began to see patients in January 2013. Scheduling for the APC clinic was initially designed to accommodate follow-up patients or those likely to have benign conditions (eg, breast pain, history of cysts). With experience, the APC began initial evaluations of new referrals who were then presented to an attending surgeon. Additions to usual APC functions included the following: independent initial patient evaluations and follow-up, ordering and acting on diagnostic studies, and independent performance of minor procedures such as Port-A-Cath removals, breast injections for sentinel node procedures, and breast cyst aspirations.

Relevant data were collected in Microsoft Excel 2013 and analyses were performed employing IBM SPSS Statistics Version 21 (Chicago, IL). A *P* value of less than .05 was considered statistically significant. Data for Press Ganey scores are reported as an average. Values for time to appointment are reported as the median per month.

The study was submitted to our Institutional Review Board for review, and it was determined that oversight was not necessary to review or report these data and received an exempt status.

## Results

The total number of NPV in the surgical breast care clinic, including those seen by the surgeon and the independent APC, did not change from October 2012 to October 2013 (Fig. 1). Over this same period, the range of patients seen per month for the surgeon ranged from 10 to 44 and from 3 to 16 for the APC.

The median number of days between calling for an appointment to being seen for an NPV fluctuated over the study interval, but when the time for APC and the surgeon are combined (per month), the trend steadily decreased (Fig. 2). The widest range of time to get an appointment in a single month for the surgeon before the APC clinic (October 2012 to January 2013) was 1 to 53 days (median 11). In the 3 months after the APC clinic (February 2013 to April 2013), this narrowed to a low range of 0 to 16 days (median 6). The median time comparing 2 similar time periods for 2012 versus 2013 (February to October) is depicted in Fig. 3. The median time is statistically lower for 2013 as compared with 2012 (9 vs 16 days, respectively, *P* < .001; Mann–Whitney–Wilcoxon and Median testing).

The financial results of this independent APC breast clinic are seen in Table 1. The monthly charges billed by

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