

Establishing a Breast Care Network in a 9-facility Healthcare System

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In Virginia, HCA Richmond Health System provides care to more than 50 percent of its surrounding community, covering a 75-mile radius and serving almost 2 million people. This healthcare system includes five community hospitals (CJW Chippenham Medical Center, CJW Johnston-Willis Medical Center, Henrico Doctors' Hospital, John Randolph Medical Center, and Retreat Hospital) with five mammography departments, four outpatient imaging centers (Appomatox Imaging, Buford Road Imaging, Chesterfield Imaging, and Independence Park Imaging), and two ambulatory surgery centers. Patient referral patterns are determined by demographics north or south of the James River. In other words, regardless of a hospital's reputation or services, consumers often refuse to "cross the river" to receive cancer treatment. Armed with this marketplace knowledge, HCA Richmond Health System has strategically positioned medical services and programs with two hospital "HUBs"—one north of the river at Henrico Doctor's Hospital and one south of the river at CJW Johnston-Willis Medical Center—each with an established cancer center (see Figure 1).

Beginning in 2007, this network of hospitals and outpatient imaging centers collaborated closely to establish an integrated Breast Care Network (BCN) to provide a cohesive system for women undergoing screening mammography. The BCN links network facilities with an integrated approach to communications and processes with the goal of making each patient's experience seamless and supportive regardless of the care setting. Here is how the BCN was developed, implemented, and evaluated.

In 2006, The Cancer Center at Henrico Doctors' Hospital identified an opportunity to improve services and support to its breast cancer patients.

Since the first step in breast care continuum is breast imaging, The Cancer Center at Henrico Doctors' Hospital looked first at improving these processes. The breast care imaging and diagnostic continuum starts from the first screening and continues through call backs, support during diagnostic work up, and follow up to breast cancer surgery after definitive diagnosis. As part of the program improvement process, The Cancer Center conducted com-

munity focus groups to gather qualitative data about the range of emotions experienced and information women felt they needed at the time of an abnormal imaging finding on a screening mammogram. We developed a system to track every patient encounter in the breast care imaging and diagnostic continuum (see Table 1, page 40). These data became the framework for evaluating performance measures, such as call-back times, and implementing process improvement of the overall patient experience.

The performance improvement project at the Henrico Doctors' Hospital Cancer Center took 12 months to complete. About 6 months later, the decision was made to expand the performance improvement project system wide. Ultimately, the project evolved into HCA's integrated Breast Care Network (BCN) and expanded through HCA Richmond's nine facilities. The goal: to improve the breast imaging continuum experience and support patients in multidisciplinary treatment planning and clinics and throughout the entire breast cancer treatment continuum.

Putting the Team in Place

An oncology market service line team made up of administrators, clinicians, and senior leaders from all nine HCA facilities worked on the BCN's mission. For the HCA Richmond Health System, this meant effectively linking all of its inpatient and outpatient imaging and treatment facilities to provide a comprehensive and customizable solution for each patient. The first step was to put together a BCN Project Team composed of leadership representatives from all nine HCA locations. The team identified the following six operational tactics and processes:

1. Increasing continuity of care, and the efficiency and ease for patients—regardless of the care setting
2. Providing consistency and standardization across the breast care continuum
3. Decreasing response time to results, questions, and concerns
4. Improving patient and referring physician satisfaction with breast imaging and breast cancer diagnostic services
5. Providing personalized, supportive guidance and counseling via nurse navigators
6. Creating collaboration between all HCA facilities.

To achieve these goals, the BCN Project Team required administrative support from all facilities and an infrastructure to implement and support the necessary changes. The



Figure 1.

next step to making process improvement change was to assess *how* we were currently operating and *where* improvement could occur.

Assessing the Patient Experience

The BCN Project Team looked at referral patterns and the patient experience as a whole. Since our market is divided into north and south regions, we separated and evaluated data by these two regions.

The initial assessment measured the time it took for patients to progress through the imaging continuum (see Table 1, page 40). All nine facilities participated in this assessment. The results were highly indicative of the variation women were experiencing across our healthcare system. Variation existed in the time it took for patients to learn their results, the time to schedule return appointments, and in which professionals were accountable for patient coordination and communication. These variations contributed to delay of biopsy, confirmative diagnosis, surgical evaluation, surgery, and treatment onset. We attributed the overall variability to four factors:

1. A limited supply of mammographers
2. Differences in technology at our nine facilities
3. A lack of standardization in verbal and written communications
4. A lack of accountability for the whole patient experience.

Patient Volumes and Satisfaction

The BCN Project Team then reviewed monthly volumes at all nine facilities. We looked at data from the six months *prior* to the first BCN Project Team meeting and then again three months into our year-long performance improvement project. Specifically, we looked at 1) the total number of screening and diagnostic mammograms, 2) the number of patients leaving the healthcare system each month, and 3) the number of patients referred to our healthcare system.

We found that large numbers of people departing our healthcare system were offset by a constant influx of new patients (women turning 40 years), so the daily and monthly volumes were relatively flat. Still, with an aging society, increased life expectancies, and new patients being added to our existing base of annually returning patients, we believed our patient volumes should be increasing. Instead, patients were leaving our healthcare system due to the wait time for diagnostic services, a desire for same day or at least more

expedient results, and a preference for digital imaging.

To reverse this trend, each facility established manual logs to document the volume of patient-initiated transfers of their images and care to another healthcare system, with accompanying reasons (see Figure 2). The message our patients communicated was clear: quick turnaround times for return appointments and expedient answers. Accordingly, delays were a huge patient dissatisfier and often created unnecessary anxiety. Reviewing the reasons why patients left our healthcare system provided insight into market competition and helped us see what each facility needed to improve on and adjust, both individually and as part of the network, to make the BCN and our healthcare system stronger.

Referring Physician Satisfaction

Each facility generated volume reports with previous year variances for the top 20 to 40 referring physicians, depending upon facility size (see Figure 3, page 39). Looking at the data we tried to answer such questions as: *How do patients choose among the various facilities? Which referring physicians used which facility? What are the physician preferences in terms of follow-up communications and procedures and/or surgeries?* We used the answers to these and other questions to identify how we could improve patient and referring physician satisfaction.

After analyzing all of the data and information gathered during this assessment process, the BCN Project Team and HCA Richmond Health System leadership agreed that a comprehensive, multidisciplinary approach to breast cancer awareness, diagnosis, and intervention, enhanced by the ability to provide expedited results and return appointments would best benefit our patients. Several programmatic decisions helped create the framework for this system-wide multidisciplinary approach.

Creating Advanced Diagnostic Breast Centers

Recognizing that not every facility needs to offer every service and building on the health system's existing HUBs, health system leadership decided to establish two Advanced Diagnostic Breast Centers (ADBCs), one at each HUB. The health system's two dedicated breast mammographers fully encouraged and supported this decision, and these breast mammography specialist radiologists were designated as the

Figure 2. 2008 Market Mammography Form: Monthly Tally of Patients Leaving This Location for a Non-HCA Facility

Purpose: 1) Keep track of how many patients are leaving this location for a non-sister facility. 2) Why patients are leaving. 3) Trends in physicians sending patients.

Location: _____

Month/Year: _____

Submitted By: _____

Date	Referring Physician	Number of Patients by This Physician	Sent to Which Non-HCA Location(s)	Why? (Reasons)

Total Number Of Patients Who Left This Facility: _____

“lead” breast imagers, one at each HUB. With the designation of the two ADBC’s, the other seven facilities—three hospitals (CJW Chippenham Medical Center, John Randolph Medical Center, and Retreat Hospital) and four freestanding imaging centers (Appomatox Imaging, Buford Road Imaging, Chesterfield Imaging, and Independence Park Imaging)—were designated primarily as screening centers.

ADBC direction, development, strategy, and communication were developed as the two lead mammographers worked strategically with the BCN Project Team, physician leaders, and the other breast imaging radiologists. For example, this group considered immediate versus batch reading. The decision was made to *not* provide same-day screening results because immediate readings and interpretations result in a higher call-back rate, unnecessary additional testing and related costs, and increased and often unnecessary anxiety and burden to patients.^{1,2} However, because “same-day reads” are often used by our marketplace competitors, we make a point to explain the consequences of this type of interpretation to all of our patients.

Each HUB established multidisciplinary teams comprised of a surgeon, a medical oncologist, a radiation oncologist, a mammographer, oncology nurses, a clinical trials nurse, and oncology social workers. These teams were given established spaces at the ADBC’s for patient conferences and treatment planning.

Employing Breast Care Navigators

The next step was to create a breast care nurse navigator position at the southern HUB. (The northern HUB at Henrico Doctor’s Hospital had implemented a patient navigator position during its initial performance improvement project.) Today, we have two FTE patient navigators at each HUB. In terms of the imaging and diagnosis care continuum, our approach was to institute a breast care nurse navigator at the positive (i.e., abnormal imaging finding) call-back point to ensure that all patients were immediately connected to the healthcare system. The nurse navigator is responsible for improving communication, coordination,

and efficiency between patients, referring physicians, and the HCA Richmond Health System. The breast care nurse navigator also serves as the coordinator of the multidisciplinary team, collecting patient information from each member and ensuring that staff has the necessary results and reports for treatment planning. The navigator stays with patients through the breast care imaging continuum and, if necessary, into cancer treatment.

In brief, here’s how our navigation program works. Within 24 hours of the screening mammography, our mammography software system captures the radiologist reading and generates daily a report of patients who require additional views or testing. This generated list is the trigger for the breast care nurse navigator to become involved.

All facilities in the healthcare system use the same software system, so breast care navigators at the Advanced Diagnostic Breast Centers can access the call-back list for all screening facilities. Patients screened outside of the two HUB’s who require additional views are called back by a breast care nurse navigator and sent to either the north or south HUB. For patients whose previous films are not yet available for comparison (because they were taken outside of our healthcare system), this time frame may take longer. For these patients, the nurse navigator works with the appropriate facility to ensure an expedient return.

If there is a positive imaging finding, the breast care nurse navigator calls patients within 24-48 hours of their screening mammogram. (The expectation is that call-back phone conversations occur the day after the radiologist dictates his or her report; all reports are dictated within 24 hours of the screening mammogram. The nurse navigator simultaneously informs the referring physician practice of the call to the patient. See “Reaching Out to Referring Physicians” section on page 40 for more.) The nurse navigator explains the findings and educates the patient about the low number of findings that ultimately lead to a cancer diagnosis. The breast care nurse navigator also schedules appointments for any additional testing.

In direct response to patients’ expressed desires and suggestions, our goal is to offer patients their return appoint-

Figure 3. Monthly Top Physician Referral Volume Reports and Variances

Purpose: To keep track of referring physicians for quick identification of significant changes.

Facility: _____

Submitted By: _____

	Physician	Number of referrals	Variance (Difference of this physician's referrals compared to this month last year. Positive or negative number.)
Rank	Name (Last, First)		
1			
2			
3			
4			
5			
	Total:		

ments within 48 hours from the time they are called by the breast nurse navigator.

Building Consensus

Once the breast care nurse navigator positions were instituted, the BCN Project Team focused on standardizing processes to ensure seamless care at every patient and physician encounter point along our healthcare system. The entire BCN project required nine months to operationalize, with the first two months devoted to building consensus and support. As the BCN Project Team implemented the BCN across the health system, it became clear that the health system's primary screening facilities did not want to guide patients to the Advanced Diagnostic Breast Centers. This resistance was based on several factors:

1. Fear that patient volumes at the screening facilities would drop
2. Worry that the screening facilities would not be able to retrieve the large percentage of patients who are ruled out for breast cancer
3. Concern that the ADBC's would not "push out" screening patients to the peripheral facilities as their diagnostic volume grew.

Achieving buy-in required the endorsement of *all* senior leadership across *all* hospitals, imaging centers, registration departments, support services, etc. Fortunately, the assessment that the BCN Project Team had carried out earlier helped bring all nine facilities to consensus. As each member of the BCN Project Team described how patients moved from one imaging test to the next at each facility, leaders diagramed who patients encountered and what steps were necessary for additional testing. These detailed "patient flow" diagrams resulted in a list of 15 challenges/obstacles patient and/or staff encountered when trying to get the next recommended test (see Table 2, page 42). These challenges/obstacles occurred at many of the facilities and highlighted numerous opportunities for frustrations—to

both patient and staff. Even worse, these challenges/obstacles represented a potential for the healthcare system to lose a patient. The BCN Project Team came to understand that if the healthcare system was this cumbersome for staff to navigate, it could only be more challenging and stressful for patients to navigate. Once consensus was reached, the BCN Project Team began to problem-solve the identified challenges and obstacles related to standardization of forms and processes, patient scheduling, and referring physicians, among others.

Standardizing Orders and Scripting

With input from the lead breast imagers at the two HUBs, the BCN Project Team standardized how patients are moved through the screening and call-back process across the healthcare system. Follow-up letters informing patients about results and recommendations (and required for MQSA certification) were also standardized across the healthcare system.

Some processes could not be standardized because they had multiple options that needed to be retained in order to promote patient choice. Instead, these processes were "scripted" to guide the multiple staff involved at these "crossroad" points. These scripts assured that patients were connected to downstream appointments and facilities, and included the mention of the BCN and collaborative multi-facility approach. Mentioning the network and sister facilities not only educated patients about potential options, it prepared patients to have an appointment or service offered at another location. These scripts, initially drafted by the BCN Project Team, were reviewed by a physician group and then finalized by the Executive Marketing Director (see Table 3, page 43).

Streamlining Scheduling

Next the BCN Project Team looked at patient scheduling. At HCA Richmond Healthcare, imaging scheduling is conducted through a centralized scheduling office. While

Table 1. Time to Return Appointments Prior to Establishing the BCN (Baseline September 2007)

Imaging Facility	Patient Called Back Yes/No	Who Calls Back & Schedules Diagnostic Work	When is Phone Call Made	When is Letter Sent	Time for Return for Additional Views	Time to Ultrasound Appointment
Northside Facility A (HUB)	Yes	Mammography quality assurance staff member	Day 5	2-3 days	2-3 days	2-3 days
Northside Facility B	No	Referring physician	N/A	2-3 days	7-30 days	7-30 days
Northside Facility C	Not Operational	Not Operational	Not Operational	Not Operational	Not Operational	Not Operational
Southside Facility D	Yes	Nurse	Days 1-2	1-2 days	1 day	1 day
Southside Facility E	Yes	Mammography quality assurance staff member	Day 5	2-3 days	2-3 days	2-3 days
Southside Facility F	Yes	Mammography quality assurance staff member	Day 5	2-3 days	2-3 days	2-3 days
Southside Facility G	Onsite, same day	Supervisor	Same day	1-3 days	Same or next day	Same or next day
Southside Facility H (HUB)	No	Referring physician	N/A	1-2 days	2-3 weeks (plus)	2-3 weeks (plus)
Southside Facility I	No	Referring physician	N/A	1-3 days	4 days to 3 weeks	4 days to 3 weeks

each facility has a different phone number, all calls go to the same central scheduling office. Schedulers respond to calls as they arrive and arrange tests for whatever facility is designated by the patient or referring physician—without any “steering” or guidance to one facility over another.

The scheduling director, who was very active throughout the BCN planning process as a member of the BCN Project Team, offered invaluable guidance. For example, the scheduling director helped identify the messages patients needed to be given to guide them from one facility to the next, while still maintaining the patients’ right to choose. The BCN Project Team also considered the call-back rates for each radiologist and facility. Higher rates result in more patients requiring diagnostic work and contribute to a busier schedule.

To meet our goal of scheduling diagnostic testing at one of the two ADCBs within 48 hours of the patient navigator’s call-back, flexibility and change were necessary. Schedulers were given “scripts” that correlated with the information being sent to the referring and receiving facilities and the test(s) being performed. These scripts ensured that schedulers were repeating the same messages as the breast care nurse navigators at the two HUBs and at all screening locations.

Today, schedulers are actively involved with the breast care nurse navigators, speaking with them daily to respond to patients returning for additional testing within the

48-hour time frame. Understanding the mission of the BCN has helped schedulers create a balance and understanding of when certain times should be “protected” for potential diagnostic patients and when unfilled openings should be “released” to screening patients. Including schedulers in the BCN’s early planning stages provided the infrastructure for the efficient movement of patients from one facility to the next in short time periods.

Reaching out to Referring Physicians

Recognizing that referring physicians would need to approve and support our navigation model, our next step was to educate these physicians about our new program. Each facility in our healthcare system generated a list of their top 20 referring physician groups. Working with the appropriate HUB, the BCN Project Team reviewed these lists to identify overlap, physician concerns, and their “usual” referral patterns. Sales force professionals from the HCA Richmond Health System, with knowledge of the nuances of the marketplace and competition, were critical in these planning sessions. Together, HUB directors and leaders, HUB nurse navigators, and the HCA Richmond Health System sales force, met with each individual physician group. The purpose of these meetings was three-fold: 1) to introduce the nurse navigator, 2) to explain the navigation and BCN program, and 3) to learn how and where

Time to MRI	Time to Biopsy	Time to Diagnosis	Time to Surgical Appointment	Time to Surgery	Screening Order Needed Yes/No
Unknown	3 days to 2 weeks	6 days to 3 weeks	3 days to 2 weeks	10 days to 3 weeks	No
Unknown	2-3 months	2-3 months	2-3 months	2-3 months	No
Not Operational	Not Operational	Not Operational	Not Operational	Not Operational	Not Operational
3-4 days	2-4 days (if mammo-grapher is onsite) 7-10 days (otherwise)	Within 1 day of biopsy	2-3 weeks	1 month	Yes
Unknown	3 days to 2 weeks	6 days to 3 weeks	3 days to 2 weeks	10 days to 3 weeks	No
Unknown	3 days to 2 weeks	6 days to 3 weeks	3 days to 2 weeks	10 days to 3 weeks	No
Unknown	Unknown	Unknown	Unknown	Unknown	Yes
2-3 weeks (plus)	Unknown	Unknown	Unknown	Unknown	No
Unknown	Unknown	Unknown	Unknown	Unknown	No

we could improve for the referring physicians and their patients. Inherent in these discussions was the understanding that the referring physician would direct *all* decisions for referrals for biopsy, surgery, or any other procedure.

Most physician groups agreed immediately to the new process for the breast care nurse navigator to call the patient while simultaneously letting the referring physician practice know that the call had been made. The physician groups who initially chose not to use the nurse navigator model are gradually coming around to the idea of breast care nurse navigators and the BCN program—based in no small part on positive feedback from their peers and patients. Ongoing communication between the Advanced Diagnostic Breast Centers and physician practices continues so that we can respond quickly to physician input.

Launching the BCN

As Henrico Doctors' Hospital had initiated both the performance improvement project and the patient navigator position, the BCN Project Team decided to first operationalize the BCN at the northside HUB. This decision allowed for a smaller, controlled program launch and, ultimately, made it easier to roll out the BCN program at the southside HUB.

During the first week of launch, we held end-of-day conference calls between the BCN Project Team, the referring or screening facility, and the appropriate

ADBC. These daily calls allowed us to:


- Make expedient adjustments and fine tune the program to achieve the greatest success
- Increase the ease of patient transfer between the two ADBC's and the peripheral screening centers
- Alleviate any potential patient delays due to the new processes
- Avert problems before they could occur.

Marketing efforts were aimed at creating awareness about the BCN to both the patient and physician community. Our marketing team highlighted the unique aspects of each screening facility, such as easy parking, same-day screening appointments with close proximity of sites to work or home. Close collaboration and tight connections to the HUBs' Advanced Diagnostic Breast Centers was also emphasized in print and sales efforts. Finally, our marketing team also developed and disseminated information about the breast care nurse navigators and how these professionals were available to guide, inform, and support patients, while maintaining close communication with their referring physicians.

Evaluating the BCN

As with the launch of any new program, our final step was to conduct a formal evaluation of the BCN. Table 4 shows

Table 2. Challenges and Issues for Easy and Collaborative Patient Flow

1. How will 6-month follow up screenings be handled?	for initiating the film transfer and assuring receipt?	performed in the imaging centers be stored once they are forwarded to the hospital for any diagnostic work?
2. Where will patient go? a. If initial visit was at hospital? b. If initial visit was at imaging center?	8. What do imaging centers do if a woman shows up for a screening and: a. Has no signs or symptoms but is labeled diagnostic? b. Has a lump, peau d'orange, inverted nipple, or drainage? c. Has pain? d. Has a lump?	12. Is parking and access easy at the diagnostic centers? Does it need improvement?
3. How is an implant patient categorized? a. Diagnostic or screening?		13. How do we handle physicians who require screening orders for their patients?
4. What do we do with women who want to stay in their current site? a. For diagnostic? b. For screening?	9. How do we inform women from the beginning (at time of screening) that if additional views are needed they will be contacted by a nurse and "guided" into one of our two comprehensive breast care centers?	14. Images on PACS that are marked by radiologist aren't showing up, so we still need the analogue film. What should the process be to get this film? How do we pay for film replication and courier costs?
5. What denotes a history of breast cancer? a. Is it only in the last 5 years? b. Is it once diagnosed, always a (+) history?	10. What written and verbal communication needs to be standardized for 6-month follow ups?	15. How do we standardize quality control on PACS?
6. How will films be transported to the receiving facility?	11. Where will analogue films	16. How do we interpret ACR Guidelines for determining screening versus diagnostic patients: implant, pain, signs, mastectomy, lumpectomy? 
7. Which facility is responsible		

the evaluative measures used to reassess the baseline measures and project goals. Marked improvement was noted in a reduction in patients leaving the healthcare system, volume growth, and increased patient satisfaction. Overall, we were able to improve the quality of our services by expediting the timeliness of providing patients and physicians with test results and enhancing the communication of all involved on behalf of the patient. In addition to individual facility volume growth, further analysis showed an increase in the volumes of screening mammograms and a decrease in diagnostics at the peripheral screening centers. Concomitantly, the diagnostics are increasing at the Advanced Diagnostic Breast Centers secondary to capturing the peripheral volume, but also due to the draw of being part of a marketed Breast Care Network (BCN) program.

Lengthy turnaround times improved immediately once the breast nurse navigators became involved and assisted in coordinating appointments for patients (see Table 5, page 44 for post-BCN data. Pre-BCN data can be found on Table 1, page 40). The drastic decrease in length of time for return appointments was immediate and was felt by all involved. Surveyed women are responding positively to the idea of being guided by a nurse navigator in a large supportive Breast Care Network with specialists working closely together. Another example of increased patient satisfaction: our referring physicians are reporting fewer calls from patients anxious over the call-back letters or requesting access to a different facility that could expedite their

diagnostic work. Instead, patients who have requested all of the necessary diagnostic services on the same day are clearly voicing their high satisfaction to their referring physicians. These improvements have resulted in physicians shifting patient referrals to our Breast Care Network.

Physician response to the BCN and the breast care nurse navigator has been overwhelmingly positive. Anecdotally, physicians have lauded the breast care nurse navigator for being available to patients for any assistance and for contributing to improved communication between imaging facilities and referring physicians.

Having a designated lead breast imager at the two Advanced Diagnostic Breast Centers has also been a satisfier to physicians. Today, physicians direct clinical questions regarding their patients, as well as surveillance recommendations regarding their high-risk patients, to these two highly trained professionals.

Nurturing the relationship between the BCN and the referring physician group requires time and attention, such as tracking monthly variances and asking for regular feedback. The physician groups are well aware of the competitive marketplace and appreciate our sales force, managers, and nurse navigators visiting as a group to talk about the BCN.

A final bonus: Employee satisfaction has increased as staff at each imaging facility becomes familiar with their "sister" network facilities. Regularly scheduled meetings have promoted a collaborative and less accusatory approach to problems or kinks in the healthcare system. Staff has

Table 3. BCN Patient Scripts

For Patients Labeled “Diagnostic” With No Reason:

Thank you for visiting us. We noticed that you are scheduled for what is called a “diagnostic” mammogram that has more views and pictures taken. This is usually only done after a screening mammogram shows some questions needing additional views. Have you had a screening mammogram already or found an issue?

For Patients Labeled “Screening” But Who Have Signs:

Thank you for visiting us. I see on the response to your questions that you have a (lump, or dimpling, or drainage). Because of this, we would like to take some additional views at the time of your mammogram. Once our radiologist has reviewed your tests, our Breast Care Nurse Navigator will call you and let you know the results and if we’d recommend any additional testing.

For the Patient Who Wants to Stay in Current Site for Diagnostic Views:

We are happy to accommodate you. We suggest having your additional views at (fill in appropriate HUB) because it is one of our Advanced Diagnostic Breast Centers where the Radiologist specializes *only* in breast imaging. The Radiologist

there, Dr. (fill in appropriate name), would look at your additional views as soon as they are done and will be able to tell you then what he or she saw.

You can certainly have your additional views performed here, but we want you to understand that it may take a day or so for you to hear from our staff about the results of the additional views. And, if additional studies are needed for more information, you will need to return again, as opposed to having them done at the Advanced Diagnostic Breast Center as soon as your additional views are completed.

For Patients Who Want to Stay in Current Site for Screening:

We are happy to accommodate you and are pleased that you would like to have your test performed here. In case you might need the Radiologist who specializes in breast imaging, you might like to have your additional images performed at one of our Advanced Diagnostic Breast Centers where our Breast Specialist is onsite and will be able to talk directly with you.

For Patients Who Want to Stay at an ADBC after Being Cleared:

Now that your additional testing has been cleared, if it is more convenient, I can make an appointment

for you at your original testing location. But we are happy to accommodate whatever your preference may be.

For Patients Who Show Up at the Wrong Location:

Thank you for coming. In our system, I see that your appointment was scheduled at our (fill in name) location. I would be happy to fit you in here. It looks like I might be able to do so in about (___) minutes. Or if you’d prefer, we can reschedule your appointment for another day.

For Schedulers to Guide Patients to First Available Appointment:

Thank you for calling. We have 9 locations in the HCA Breast Care Network. Do you have a preference of locations or would you like me to look for our first available appointment? Wonderful. It looks like our first available appointment is at (fill in time) on (fill in date) at (fill in location). Is that convenient?

For Schedulers to Offer Patients a Choice of Appointment Location:

Thank you for calling. We have 9 conveniently-located centers in our HCA Breast Care Network where you can receive your testing. Is there a particular center or area of town that would be more convenient to you? ☺

responded well to sitting down and brainstorming new processes as needs change because of the expected turnaround times. Face-to-face meetings have led staff to pick up the phone and make a call rather than letting issues go along unresolved. In fact, the collaborative working relationships that have resulted from this project are the cornerstones for the Breast Care Network. ☺

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(continued on page 45)

Table 4. BCN Evaluation Measures

1. Significantly decrease time for return appointments (average 14 days to 48 hours)
2. Decrease number of patients leaving the system (up to 50 percent at some facilities)
3. Improve patient satisfaction (looking for a 20 percent increase)
4. Improve referring physician satisfaction
5. Grow patient volume across the healthcare continuum
6. Improve employee satisfaction, communication, and collaboration.

Table 5. Time to Return Appointments After Establishing the BCN (October 31, 2008)

Imaging Facility	Patient Called Back Yes/No	Who Calls Back & Schedules Diagnostic Work	When is Phone Call Made	When is Letter Sent	Time for Return for Additional Views
Northside Facility A (HUB)	Yes	Nurse navigator	1-2 days	2-3 days	1 day
Northside Facility B	Yes	Nurse navigator	1-2 days	2-3 days	1-2 days
Northside Facility C	Yes (nurse navigator)	Nurse navigator	1-2 days	2-3 days	1-2 days
Southside Facility D	Yes	Mammography quality assurance staff member	Next day	Same day as call	1-2 days (some on same day)
Southside Facility E	Yes	Nurse navigator	1-2 days	1-2 days	7 days (central schedule)
Southside Facility F	Yes	Nurse navigator	1-2 days	1-2 days	1-2 days
Southside Facility G	Yes (nurse navigator)	Nurse navigator	Next day	1-2 days	1-2 days
Southside Facility H (HUB)	Yes	Nurse navigator	1-2 days	1-2 days	1-2 days
Southside Facility I	Yes (onsite, same day)	Supervisor	Same day	1-3 days	Same or next day

Screening Mammography, Callbacks, and the MQSA

Annual screening mammography is recommended by the American Cancer Society. Beginning at age 40 (or earlier for women assessed to be at greater risk for breast cancer), this annual screening is reimbursed by payers. Physician orders are not needed for screening, so patients can self-refer. For further diagnostic work of ultrasound, MRI, or biopsy, a physician order *is* needed. Because of self-referral rules and regulations, radiologists cannot order the follow-up diagnostic testing.


In 1995, the Food and Drug Administration (FDA) passed the Mammography Quality Standards Act (MQSA) and initiated an inspection program. While these regulations are intended to ensure that all women have access to quality mammography for the detection of breast cancer, MQSA requires a radiologist to interpret only 240 mammograms in the six months prior to the MQSA survey. Accordingly, interpretation of mammograms is performed by both clinicians

specializing in breast imaging and by general radiologists. However, lower, more accurate call-back rates and improved rates of cancer detection are associated with specialists and those who interpret large mammogram volumes.^{1,2}

Approximately 10 percent of screening images result in a “positive clinical finding.” These patients then receive a request to return for additional breast views/images or a callback.^{4,5} MQSA only requires that the patient is informed within 30 days, but does not say by whom or in what format. Often, the referring physician performs the callback. In situations where there is no formalized system for callbacks or contacting the patient, women can receive a letter from the imaging facility *before* they have heard from their referring physician. In some cases, referring physicians may not even be aware of the callback until after their patient contacts them alarmed, trying to understand what the callback letter means. Obviously, these scenarios are not optimal for patients or referring physicians.

Of the 10 percent of patients who return for additional views, about 25 percent will be recommended for ultrasonography of the suspicious area.⁶ About another 25 percent who are undergoing ultrasound will require a

Time to Ultrasound Appointment	Time to MRI	Time to Biopsy	Time to Diagnosis	Time to Surgical Appointment	Time to Surgery	Screening Order Needed Yes/No
1 day	1 day	2-4 days	Within 7 days	2-3 days (9-12 days total)	Within 2 weeks after seeing surgeon	No
1 day	1 day	2-4 days	Within 7 days	2-3 days (9-12 days total)	Within 2 weeks after seeing surgeon	No
1-2 days	2-4 days	2-4 days	Within 7 days	2-3 days (9-12 days total)	Within 2 weeks after seeing surgeon	No
Same day	3-4 days	1 day (for ultra-sound guided) 1-13 days (for stereotactic, offered every other Tuesday)	1-14 days	2-3 weeks	2-4 weeks	No
1-7 days	N/A	1-2 weeks	11-18 days	Unknown	Unknown	No
1-3 days	N/A	7 days	9-10 days	16-17 days	Unknown	No
1-2 days	2-3 days	3-7 days	Within 7-10 days	Within 7-14 days	Within 2 weeks after seeing surgeon	No
1-3 days	N/A	2-7 days	Within 7-10 days	Within 7-14 days	Within 2 weeks after seeing surgeon	No
Same or next day	3-4 days	1-13 days	1-14 days	2-3 weeks	2-4 weeks	No

biopsy. The rate of positive cancer diagnoses per 1,000 screenings ranges from 3 to 9 percent.⁵ 

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