



# HHS Public Access

Author manuscript

*Med Care*. Author manuscript; available in PMC 2017 February 01.

Published in final edited form as:

*Med Care*. 2016 February ; 54(2): 147–154. doi:10.1097/MLR.0000000000000458.

## The Challenge of Improving Breast Cancer Care Coordination in Safety Net Hospitals: Barriers, Facilitators, and Opportunities

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### Abstract

**Background**—Minority breast cancer patients tend to have higher rates of adjuvant treatment underuse. We implemented a web-based intervention that closes referral loops between surgeons and oncologists at inner-city safety net hospitals serving high volumes of minority breast cancer patients to assist these hospitals to improve care coordination.

**Research Design**—Following intervention implementation, we conducted interviews with key personnel to improve our understanding of the implementation process and to identify barriers, facilitators, and opportunities for improvement. We used the constant comparative method of analysis to code interview transcripts and identify common themes regarding intervention implementation.

**Subjects**—We interviewed 64 administrative and clinical key informants from 10 inner-city safety net hospitals with high volumes of minority breast cancer patients.

**Results**—We found substantial barriers to implementing an intervention designed to support care coordination efforts, despite initial feedback that the intervention itself was both easy to use and in

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line with organizational goals. We also characterized facilitators and challenges of breast cancer care coordination in the safety net environment, as well as opportunities to improve intervention design to support increased quality of breast cancer care.

**Conclusions**—Coordination of care for women with breast cancer is extremely important, but safety net hospitals face considerable resource constraints from lack of time, support, and information systems. As safety net hospital networks grow across numerous care sites, the challenge of care coordination will likely increase, highlighting the importance of interventions that can be successfully implemented and used to promote better care.

### Keywords

Breast cancer; Coordinated care; Disparities; Safety net; Underserved populations

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## INTRODUCTION

Breast cancer is the second most common cause of cancer death in women [1]. Black women are less likely than white women to develop breast cancer but, they are more likely to die of the disease [1–5]. Some of this survival discrepancy is likely due to underuse of adjuvant therapies proven to increase survival [3, 5–11]. Breast cancer treatment often requires coordination among surgeons, pathologists, primary care physicians, medical and radiation oncologists [12, 13]. In New York City (NYC), black and Hispanic women who accessed care and underwent surgical treatment of their breast cancer were twice as likely as whites to experience underuse of proven-effective adjuvant treatment [8]. Disturbingly, one third of these underuse cases were episodes in which the surgeon recommended treatment, the patient did not refuse and yet, care did not ensue [8, 14, 15]. Underuse in these circumstances was attributed to system failures rather than to provider or patient factors [15].

Unfortunately, system failures more often impact minority women and women treated at hospitals serving predominantly minority patients [15]. These institutions, often called safety net hospitals, serve larger than average portions of low-income patients regardless of insurance status, and receive significant Medicaid and disproportionate share hospital (DSH) payments [16]. In addition, hospitals serving substantial numbers of minority patients often face greater financial uncertainty, making it more difficult for them to invest in patient navigator programs or updated electronic medical records that prompt care. Thus, the need to identify and enable implementation of simple and cost-effective methods to improve the delivery of effective cancer care is imperative to reduce racial disparities in cancer outcomes.

To target these system failures at ten NYC safety net hospitals that serve predominantly minority patients, we developed and implemented a web-based Tracking and Feedback Registry intervention to facilitate monitoring of oncology appointments post-surgery. Prior to creation of the registry, follow-up was exclusively the responsibility of the patient, with little communication, electronic or otherwise, between the surgeon and the oncologist. This registry intervention provided a way to close the referral loop, offering greater support to the patient in obtaining post-surgical care. As part of this study, we visited each hospital to learn

about how the intervention was perceived, and gain insight about how the intervention was able to address care coordination issues for breast cancer patients.

## **METHODS**

### **Study Design**

As part of the larger project, we conducted a qualitative study to examine the experiences and perceptions of users of a web-based Tracking and Feedback Registry intervention implemented in 10 inner-city safety net hospitals. We conducted key informant interviews at each site post-implementation to both understand the impact of intervention implementation, and, more broadly, to identify barriers and facilitators of follow-up care for breast cancer patients in this environment.

### **Conceptual Framework**

Our study utilized the complex innovation implementation framework developed by Helfrich and colleagues [17] to guide both the implementation of our intervention in the larger project, and the analysis described here. This model defines complex innovations as those that are perceived as new by the adopters, and sufficiently complex that they require coordination by multiple members. Evaluations then focus on the level of consistency and quality of implementation during the transition period between the decision to adopt and sustained use. Using this model, implementation effectiveness is viewed as a function of management support and resource availability, through which organizational policies and practices can impact the implementation climate of the organization. In addition, the organization can influence the implementation climate by encouraging innovation champions, by aligning the innovation to the users' values, and by promoting a sense of shared benefit from the intervention.

We chose this conceptual model because it allowed us to examine the process of implementing the Tracking and Feedback Registry intervention separate from examining the impact of the intervention itself. Using this framework enabled us to structure our interview process to learn how users viewed challenges and facilitators of the intervention and the implementation process, as well as to consider opportunities for improvement in future implementations.

### **Intervention Study Population**

We recruited hospitals in the NY Metropolitan area that serve large proportions of minority women with breast cancer to participate in a long-term study testing a tool that closed referral loops between surgeons and oncologists. These hospitals' Disproportionate Share Hospital Patient percent ranged from 0.50–1.08. Institutional Review Board approval was obtained at all sites.

In recruiting sites for this study, we also determined whether they had tumor registrars, electronic medical records, navigator programs and the average number and type of surgical, medical and radiation oncologists at each facility. Sites with navigators received grant funding to support their navigator programs. All hospitals had an electronic medical record

(EMR) in place; only 1 hospital had an EMR with prompts. None had a method to track care delivered by other specialists or to feed that information back to the referring physician, nor did any site provide feedback to their surgeons or oncologists about rates of adjuvant treatment.

Inclusion criteria for patients in the Tracking and Feedback Registry included all new patients with stage I-IIIa breast cancer who required adjuvant treatment. Patients who had already connected with oncology and those with metastasis or a recurrent cancer were excluded from the study.

To date, a total of 389 participants have been enrolled in the Intervention study. Average age of patient participants at the time of post-implementation interviews was 59.0 years and the majority were black.

### Tracking and Feedback Registry Intervention

As part of implementation, each hospital identified a site Principal Investigator (PI), usually a surgeon, who was responsible for overseeing intervention implementation at that site, and a site point person who would assist with implementation. The intervention then involves the following three major steps:

1. *Registry Patient Identification:* a) following definitive surgery, pathology report review triggers the office point person to verify patient study eligibility and determine the status of a follow-up visit to her oncologist. This information is entered into the Tracking and Feedback Registry to track patient follow-up oncology appointments; b) for patients with a follow-up oncology appointment, no further interaction with the patient is required.
2. *Follow-up Tracking:* a) patients without a scheduled follow-up oncology appointment are contacted weekly by study team to determine whether appointment has been scheduled. If no appointment is scheduled by 6 weeks post-surgery, study team initiates the feedback intervention described below; b) once an appointment is scheduled, the day following the scheduled oncology appointment an email is sent to the office point person to ascertain whether the patient connected with the oncologist; c) if patient connects with oncology, the surgeon is notified that patient connected with oncology and the case is closed; d) if patient did not connect with oncology, the point person ascertained whether a new appointment date was set and entered the new date into the feedback tool to restart follow-up tracking; e) if the patient did not connect with oncology, and a new appointment date was not set, the feedback intervention is triggered.
3. *Feedback Intervention:* a) results of the oncologist contact were relayed to surgeon via telephone and a printed letter mailed or delivered directly to the surgeon; b) if patient did not connect with the oncologist, surgeons are told they will be called in 1 week to ascertain actions taken in response to the information provided; c) point person called surgeons a week later to ascertain actions taken including: scheduling another appointment with oncology and ensuring patient is aware of appointment; speaking with patient reinforcing importance of additional treatment with

oncologist; scheduling an appointment with the surgeon to discuss additional treatments; unable to reach patient; patient declined treatment; other; d) surgeons receive weekly phone calls for 3 weeks to ascertain actions taken; e) feedback is considered complete when patient connected with oncologist or surgeon received 3 feedback calls.

### Post-Implementation Key Informant Interviews

After intervention implementation, site PIs were contacted to identify key informants in their institutions who could speak about their experience with the intervention specifically and about care coordination for women undergoing treatment for breast cancer more generally. Interviewees included the site's PI and point person who were both familiar with the study and intervention that had been implemented, as well as hospital leaders and directors including those in charge of cancer care and quality of care, and clinician specialists and staff who helped ensure breast cancer patients obtained needed care in their institutions. No individual contacted refused to participate.

We interviewed 64 key informants (45 clinical, 14 administrative, and 5 clinician-administrators) across the 10 sites. Interviews focused on use of the Registry intervention and the provision of follow-up care in a safety net hospital. Interviews lasted 30–60 minutes and were recorded and transcribed verbatim.

### Data Analysis

Using the constant comparative method of qualitative data analysis based on grounded theory development [18], we coded interview data using both a priori and emergent codes. Our coding team was led by a senior qualitative investigator, and included the study principal investigator and a research assistant. We first developed a preliminary coding dictionary of a priori codes, based on broad topics from the key informant interview guide. This coding dictionary defined categories based on domains of interview questions such as “Current Process for Coordinating Breast Cancer Care,” “Barriers to Handoffs and Tracking,” and “Implementation Challenges and Facilitators.” Using this coding dictionary, our three-member coding team each coded the same three transcripts to ensure consistency in understanding of coding definitions and application of codes. Next, team members proceeded to individually code all interview transcripts to break the qualitative data into manageable and meaningful segments for further analysis [19].

Our team met regularly throughout the coding process to discuss decisions about codes and emerging themes. During these meetings we discussed the development of in vivo codes based on the terms and concepts discussed by key informants [19], and these emergent codes were added to the coding dictionary. Frequent discussions enabled us to reach consensus about coding, and followed the standards of category development for rigorous qualitative analysis [19].

The final analytical step involved in-depth analysis and used an iterative approach to examine and characterize themes we found in the data [19]. Salient themes included reported benefits and challenges associated with the intervention itself, as well as barriers and facilitators of breast cancer care coordination, as we present next.

## RESULTS

Across these safety net hospitals, we found factors related to the Tracking and Feedback Registry intervention that interviewees identified as benefits and challenges, as well as barriers and facilitators of care coordination inherent with attempting to deliver care in the safety net environment. Below we discuss these factors by type, categorizing benefits and challenges as either intervention-level or health system-level.

### Intervention-level Benefits and Challenges

*Intervention-level benefits* were specific factors of the intervention, which contributed to the success of the intervention. Three noted facilitators were *push notifications*, *cross-system functionality*, and *the focus of the intervention* on identifying gaps in care coordination (Table 1). For instance, a care coordinator who particularly liked the push notifications reflected, “I liked how it alerted me- it would say, ‘Patient’s supposed to have an oncology appointment,’ and then I would go check.” Additionally, because the intervention was implemented at different systems and was web-based, patients could be tracked regardless of the EMR of the hospital in which they received care. One breast surgery director explained this intervention-level facilitator saying, “They use a different medical record system than ours, so that’s information we kind of have to go digging for. So, this just makes it simpler on them.” Interviewees also felt that the intervention did highlight previously unrealized gaps in care, which could then be addressed.

*Intervention-level challenges* were those factors of the intervention that reportedly hindered implementation and might present opportunities for improvement. These included *technical issues*, *EMR integration issues*, and the fact that *the intervention applied only to the portion of the patient population enrolled in the research study*. With respect to technical problems, some hospital systems had issues because the web-based intervention was incompatible with institutional firewalls. As a Patient Navigator stated, “I just had a lot of problems opening it up. Like opening a regular website. So I had to do a lot of cutting and pasting. I guess it’s something with our network.” As the intervention was not incorporated into the hospitals’ EMRs, this posed a challenge in many institutions. One surgeon explained, “Unless you make it seamless where the, you know, when she’s scheduled in our EMR, the web-based system clicks into place, and when she no-shows, it immediately throws something into my inbox that she was a no-show without involving a human being...” Further, the intervention was not flexible when patients changed their appointment times. A care coordinator noted that if the patient changes her appointment, the web-based system may not be updated and will still flag the original appointment as being missed; in reality, she explained, “Most times it was just their appointment had changed.” In addition, because the intervention was designed for a particular treatment plan and patients had to speak either English or Spanish, the intervention was not available to all patients. As one nurse explained, “patients who didn’t speak English [or Spanish] were excluded. ... Now when you’re talking about a place like this, you’re leaving out pretty much the population that would miss appointments.” Being part of a research study also limited the potential reach of the intervention when patients declined to participate. As one interviewee summarized, “Some patients are reluctant, they think it’s some kind of a weird research study.”



We also identified system-level challenges that hindered implementation such as competing priorities and the difficulty of workflow changes. Across sites, staff had competing priorities such as a high patient volume, which more urgently demanded their time. One physician assistant said, “I think you need a dedicated person who’s going to spend that time. Because as long as we have this patient load, it’s a system that’s failing.” In addition, it was difficult to incorporate the web-based intervention into the existing staff workflow. Many staff already had workaround tracking systems in place, such as paper printouts of the schedule, excel spreadsheets, and access databases. The intervention thus was almost a duplication of their work. As one surgeon explained, “if it has an automatic thing that pops up as something that I have to look at every day, like the EMR, then that’s beneficial. But if I have to go someplace else to see the information, then that became a lot less helpful.”

### Facilitators and Barriers to Care Coordination in the Safety Net Environment

**Health system-level facilitators** were broader system factors that facilitated breast cancer care coordination in the safety net hospital environment. We identified four main facilitators in this category: *involvement of the whole care team, a unified EMR, a strong follow-up policy, and co-location of services* (Table 2). First, involvement of the entire care team was perceived to be a key piece of coordinating care. A patient navigator described the nature of teamwork in one hospital saying, “We have a great working relationship. So, between the social worker, the genetic counselor, the other navigator, and myself, we know what’s happening with the patients.” Second, not surprisingly, a unified EMR also reportedly facilitated communication and coordination. One radiation oncologist shared, “We write our notes in the electronic medical record. And we see their notes, they see our notes. If I see a need for discussion, we’ll call each other.” A strong follow-up policy also facilitated care coordination. A Chief Operating Officer explained their policy: “So at the end of the clinic, the staff assess what patients did not show up for their appointment. They then would reach out to them via phone. And if they can reach them by phone, they’ll reschedule them. If they can’t reach them by phone, they will send them a letter.” Lastly, co-location of services facilitated communication and care coordination. As a medical oncologist noted, “I think the fact that the surgery and medical oncology clinics are on the same day, we all share the same sort of office area, I think it makes it very easy to coordinate care.”

**Health system-level barriers** were a major factor influencing implementation success. Safety net hospitals pose unique challenges to care coordination, including *inadequate staffing levels, resource constraints, and a challenging patient population*, and we found evidence that these three issues created barriers for our intervention. First, staffing was a large barrier. As one radiation oncologist noted, “Staffing is always an issue. I’m just saying, you never got enough staff.” Resource constraints were also a barrier. A case manager articulated this issue plainly: “Well, there’s always an issue of resources. You know, we’re a safety net hospital. We have more than 50% Medicaid population. So, there’s always a question of resources.” Given resource scarcity, the safety net hospitals in our study noted that they often depend on grants or other charitable funding sources to support the navigators who helped coordinate care for breast cancer patients. One medical oncologist lamented, “Well, if I didn’t get a grant, I think they [hospital administration] should buy a navigator, okay? I don’t think it should only be up to me to get a grant to have these

activities. I think they're essential." Finally, interviewees commented about how the safety net patient population itself also presents barriers to care coordination. A surgeon summarized this issue: "Patients fall through the cracks because their [telephone] numbers are wrong, their addresses are wrong, so we cannot reach them. They do not keep their appointments, and there's no way to communicate with them, or contact them. So it happens. It does happen." In sum, if a patient does not want to be tracked, she may be lost to follow-up.

## DISCUSSION

While interviewees who used the Tracking and Feedback Registry tool found it useful and aligned with their goals to improve breast cancer care coordination, implementation success appeared limited. We found that despite use of the tool, very little had changed in most of the hospitals we studied with respect to how they tracked patients or how they attempted to improve the quality of breast cancer care coordination. Because eligible study patients represented only a portion of patients, the tool was not applicable to the entire hospital population and was therefore neither widely embraced nor routinely used. Instead, interviewees appeared to prefer the status quo and existing processes to track patients. They perceived the intervention as "one more thing to do" and would have preferred a system that could be used with all of their patients and was more integrated into their existing EMR.

More generally, our study highlighted current gaps in coordination of breast cancer care, as well as the opportunities for interoperable EMR systems and improved communication between hospital departments and systems to increase the quality of care delivered. Consistent with the results of previous research, interviewees in our study reported facing resource, staff, and funding barriers that were perceived to hinder optimal care delivery, and potentially led to disparities in the care provided by these hospitals. In practice, issues such as EMR implementation, tumor registry tracking, and dealing with high patient volumes leave little time for staff to incorporate additional activities such as new patient follow-up processes or research projects. System factors may be especially problematic at these hospitals that serve predominantly minority patients [15], and hospital-level barriers may make innovation implementation particularly difficult at safety net hospitals.

While the tracking and feedback intervention we implemented was designed to address care coordination issues, for most interviewees it was perceived as yet another task that required staff time and effort without solving the coordination problem. Notably, opportunities exist for improvement. When introducing new tools into a health care setting, integration with existing workflows can improve efficiency and decrease resistance on the part of providers [20] [21]. Thus, a hospital-level opportunity identified in our study, for instance, would be to enable hospitals to take advantage of care coordination systems already in place so that the intervention would be perceived as supplemental rather than competing with existing workflows and workarounds.

For hospitals that have disparate information technology (IT) programs for scheduling and the EMR, the tracking tool could connect these two programs to provide the automatic, single system notification interviewees suggest. For hospitals with a single electronic system



that includes both scheduling and EMR components, the tool could be adapted to bridge the two components and provide an automated message to the surgeon and staff that the patient did not connect with oncology. This tool can also bridge the lack of EMR interoperability across health care systems. Interoperability of EMRs presents significant barriers to effective coordination among providers from different health care system, and solutions to address this issue have been identified as key components of a complete EMR system [22] [23, 24].

Further, the intervention itself could be enhanced by permitting care coordination of all breast cancer patients as part of a quality improvement initiative rather than restricting participation by language or cancer stage. Functional enhancements could also be designed for the intervention including the ability to create a master patient list, query the tracking system, and track progress on care coordination goals. However, even if these are done, safety net hospitals will still require personnel time and accountability to act on the tracking data. As delivery systems reorganize and coordination is reimbursed by Medicare and Medicaid, such functions may be covered.

### Limitations

Our work is limited by both geographic region and sample size. The time and energy required for in-depth case studies creates significant challenges for large-scale, multi-region research, and limits our ability to generalize results across hospitals with different organizational structures and patient populations. At present, many hospitals lack the ability to assess levels of effective follow-up and transitions in care, let alone patient-centeredness and adequate system support [25–27]. Patient barriers to care, while very important, were not a main focus of this study. Unwillingness to participate in a research study also limited the effectiveness of our implementation, due to both patient and institutional factors [28].

### Conclusion

Coordination of care for women with breast cancer is extremely important, but safety net hospitals face considerable resource constraints from lack of time, support, and information systems. Efforts to implement interventions to address this issue face barriers and facilitators at both the intervention level and the hospital level. As safety net hospital networks grow across numerous care sites, the challenge of care coordination will likely increase, highlighting the importance of interventions that can be successfully implemented and used to promote better care.

### Acknowledgments

**Funding Disclosure:** This work was supported by the National Cancer Institute Grant R01-CA 149025.

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**Table 1**

## Barriers and Facilitators to Intervention Success

<b>Intervention-Level Facilitators</b>	<b>Representative Verbatim Comments from Key Informants</b>
<i>Push Notifications</i>	<ul style="list-style-type: none"> <li>As long as you make me put the information in, and as long as you make me check it – but if it has an automatic thing that pops up as something that I have to look at every day, like the EMR, then that’s beneficial. But if I have to go someplace else to see the information, then that became a lot less helpful.</li> </ul>
<i>Cross-system Functionality</i>	<ul style="list-style-type: none"> <li>You know, so it gives even further sort of follow up on the patients that it’s not just the breast clinic appointments, it’s further follow up and oncology appointments that they might not follow through with, or treatment follow ups that they don’t follow that are outside of the breast clinic.</li> <li>Well it’s been so much easier, you know there’s more information at our fingertips, there’s more people conveying new information, you know we’ve increased the number of, you know, in terms of follow up and people to be able to sort of communicate, it’s been easier on our practices I think as clinicians.</li> </ul>
<i>Ability to Identify Gaps in Care</i>	<ul style="list-style-type: none"> <li>It was an eye-opener to know that there are patients that do slip through the cracks, and that we really have to have a safety net to prevent these patients from just sort of going about their business without having followed up. Follow up is absolutely essential.</li> </ul>
<b>Intervention-Level Barriers</b>	<b>Representative Verbatim Comments from Key Informants</b>
<i>Technical Barriers</i>	<ul style="list-style-type: none"> <li>I just had a lot of problems opening it up. Like opening a regular website. So I had to do a lot of cutting and pasting. I guess it’s something with our network.</li> <li>Initially, it was difficult just to get IT to send us the medical record numbers.</li> <li>Yes, because you have to click and wait for the computer. You can’t rush the computer. You have to click and then when the computer processes it, then it’ll give you the next page. So, I find that, like, so annoying and so upsetting because it’s just a waste of time.</li> </ul>
<i>Not Integrated with EMR</i>	<ul style="list-style-type: none"> <li>So it’s a matter of opening up the systems individually if I need to check to see if a patient came or did not come. There is no prompt system that shows, okay this patient did not show up. It’s a matter of coordinating manually and checking to see.</li> <li>Yeah, because I have to print it in their computer even though it’s electronic, bring it here, and then I will get my nurse and type it all over again because I cannot transfer it from their system to my system, despite the fact it’s HHC [all a single health system].</li> <li>They use a different medical record system than ours, so that’s information we kind of have to go digging for.</li> <li>Currently—currently it doesn’t help so much, because our inpatient record and our outpatient record—we have three electronic medical records.</li> </ul>
<i>Intervention Not Inclusive of all Patients</i>	<ul style="list-style-type: none"> <li>Some patients just didn’t fit into the mold of what they were supposed to fit for your study.</li> <li>I don’t think—that it covered every single patient that would’ve been referred to radiation. So I think maybe somewhere along the lines, some patients were still missed.</li> <li>I know you were waiting for pathologies, but I kept seeing them- like, ‘Oh, this is not going to fit, this is not going to fit.’</li> <li>So, I found a lot of patients weren’t even eligible for this study because of [getting chemotherapy first].</li> <li>I remember specifically one neoadjuvant patient that didn’t follow up, and there was no caring about whether she followed up according to your system, which I’m assuming you’ll change at some point, and you’re just doing that, but there was no way to see that those patients followed up.</li> <li>It seemed like we were being asked to put the information based on the program rather based on what was going on with the patient. And so that kind of caused problems.</li> </ul>
<b>Hospital-Level Barriers</b>	<b>Representative Verbatim Comments from Key Informants</b>
<i>Competing Priorities</i>	<ul style="list-style-type: none"> <li>So that’s another challenge, because then we have to squeeze it in between clinics.</li> </ul>

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	<ul style="list-style-type: none"> <li>• And not only – and that’s not a problem because that’s what we’re supposed to be doing, but we’re actually trying to fit in our daily work in that day, so that it doesn’t go over to the next day. And then you still have that daily work in addition to that, so we’re actually working in a race – particularly me.</li> <li>• I think it’s important to have the person who’s doing it not feel like they’re just dumped upon.</li> </ul>
<p><i>Not Incorporated into Existing Workflow</i></p>	<ul style="list-style-type: none"> <li>• But to me, as long as it requires people putting in the data into the website and taking it out and making sure they check it, it has very little utility, in my mind, above and beyond what everybody does already.</li> <li>• You know, the time and effort that it takes for – you know, unless there’s a seamless thing...if it takes a human being to enter in when the appointment is into the web-based system as it does now, and then a human being has to track the web system and see who didn’t show.</li> <li>• Well, it doesn’t do everything that our multiple systems do.</li> <li>• You know, and it allowed for communication, because I would always send the letter do the doctor, and he...followed up with the medical oncologist, which I don’t think, unless they actually go to the computer, that they look at.</li> </ul>

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**Table 2**

## Facilitators of and Barriers to Care Coordination in the Safety Net Environment

Facilitators of Care Coordination	Representative Verbatim Comments from Key Informants
<i>Involve Entire Care Team</i>	<ul style="list-style-type: none"> <li>• I think that one—one thing that I know that they're trying to do here is to make certain that every breast cancer is discussed in a multi-disciplinary forum.</li> <li>• The other thing that started, probably around three years ago now, is the breast tumor board, which has been just outstanding and really has driven up the level of care. Maybe it's a little bit more than three years, but that has been instrumental, having an interdisciplinary-focused approach, where everybody's presented the cases.</li> <li>• We do meet weekly, that's also helpful. So we do discuss cases each week.</li> </ul>
<i>Strong Follow-up Policy</i>	<ul style="list-style-type: none"> <li>• Well, I mean, we've decreased our no-show rate tremendously because we put into a certain amount—we put into place certain policies. So one of the policies is that as long as the patient is in Allscripts [EHR], there is an automated message, reminding them of the appointment two days prior. In addition to that, we have a person who—a team of medical assistants, who, part of their job assignment at the end of each day, is to go through that same list the day before, and to make sure that, you know what, you got the automated message, now here's the personal message from the breast center asking you to come in. And then—the other part of their job though is the system will also do a no-show call, saying, "Hey, you missed your appointment," but then we also have the medical assistants call them as well right there.</li> <li>• If the patients have missed their appointment, they make a phone call. If they can't get in touch with the patient, they send a certified letter.</li> <li>• So the PCA who does the vitals and does whatever needs to be done before the patients are seen has a list of all the appointments for each clinic, and for those patients who don't show up they get a letter automatically, and a phone call at the end of each clinic.</li> <li>• So every day, every breast clinic section, the clerk prints out a list of people who were scheduled and did not show. She goes through that list, and sees if they rescheduled their appointment; sometimes patients on their own reschedule it.</li> <li>• And it's when they miss those appointments, we have a system in place where somebody actually gives the nurse practitioner a list, "Ok, these were the patients who were supposed to show up, and these are the people that didn't show up."</li> <li>• And if they don't show up, then I have to go through the list to make sure and call and see to see why they didn't show up.</li> <li>• Every clinic has a no-show policy; it's just, for whatever reason, like that Mary and Michelle, the nurse practitioners, or whoever was before them, or whatever, just- we've really taken it a bit more personally.</li> <li>• It is a policy that the patient gets a phone call that day.</li> </ul>
<i>Co-location of Services</i>	<ul style="list-style-type: none"> <li>• Actually, that's the number one benefit of being here. We're on one floor, one unit, literally just tap them on the shoulder, they're all terrific. I mean, I have to say, they're really—we have a nice, nice team here.</li> <li>• Well, I mean, I think the idea of having it all in one place – one place and everybody working together and it's so easy to do multidisciplinary care. I think that is really the thing. So, basically, you know, we're a multidisciplinary clinic and that makes a whole big difference.</li> <li>• The fact that they don't have to go anywhere else is like one stop shopping.</li> <li>• You know, the beauty is that the format that we have here, their offices are right here. Sometimes, I think the patients get free visits, because as a doctor walks by, and that's their doctor, they engage in a conversation.</li> <li>• So, it's – sometimes it's just even a curbside consult.... Usually, we get them to see them as part of the day – not necessarily scheduled, but you can just walk them down there because we're all here.</li> </ul>
Barriers to Care Coordination	Representative Verbatim Comments from Key Informants
<i>Short on Staff</i>	<ul style="list-style-type: none"> <li>• We just don't have an appropriate staff for the level of patients that we see on a daily basis.</li> </ul>



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	<ul style="list-style-type: none"> <li>• We don't have enough patient navigators. Okay, we have a lot of patients, but not enough navigators to manage them.</li> <li>• So, there is no patient navigator here that does that....</li> <li>• Well, you know, if I don't have enough nurses, then they send me help. You know, they will, but you have to beg. They will send you help, and they will- but the thing is, if you are not really from this clinic, it's kind of different.</li> <li>• I think everybody's being stretched as much as possible, as long as it works. That kind of thing. Until it becomes critical, then they will do something. ... [They] will not hire, so we're going to be stretched.</li> </ul>
<p><i>Resource Constraints</i></p>	<ul style="list-style-type: none"> <li>• We used to have a navigator, and the navigator had to leave; there was no funding for the navigator- we lost funding for the navigator.</li> <li>• If I said, 'Ok, fine. I think the best way to do this is to hire one extra person, you know, whose sole job would be to do this, like the coordination.' You know, then I would say, 'Ok, I need an extra salary line for that.' And then the next response would come down, 'Oh, there's no salary line.'</li> <li>• So, now, I'm here again with the no psychologist, or psychiatrist to see these patients, so that's very bad, you know? Because a lot of these people are in distress.</li> <li>• So we'll say we won't compete but the truth is we compete. [for resources]</li> <li>• I think that they are very dedicated, and they understand that there's quality of care that needs to be provided, and they absolutely want to do it, but—but the resource's limit—limited to what you can do.</li> <li>• No, things are not being cut- but it's not abundant, either.</li> </ul>
<p><i>Challenging Patient Population</i></p>	<ul style="list-style-type: none"> <li>• But we still have a tremendous community issue, I think, of either not trust, or not wanting to go follow up</li> <li>• A large majority of them are also undocumented; they do not like to be tracked, they do not like to be interviewed, and they don't actually share their official phone number on the chart.</li> <li>• I think it's more financial issues, because—or even—you know, coming, getting off of work, logistics of how to get here, not getting paid for the day, I think that'll contribute to them coming to clinic. They just don't want to take the time off.</li> <li>• So those are people that fall through the cracks because there's no way to get information from them and they're not responsive. There's only so much you can do. You can't physically go to people's house and bring them.</li> </ul>