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Postdischarge Calls in the ED: Improving Quality and Efficiency

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## Postdischarge Calls in the ED: Improving Quality and Efficiency

### **Chapter 1: Introduction and Microsystem Assessment**

In the United States there are 136.6 million Emergency Department (ED) visits annually (Centers for Disease Control and Prevention, 2011). These visits represent a significant number of health care users and lead to billions of dollars of unnecessary health care spending each year (Jiang, Russo, & Barrett, 2009). Overcrowding in Emergency Departments leads to inefficiencies in emergency care and much of the overcrowding seen in EDs is due to unscheduled return visits following discharge (Goldman et al., 2014). These are significant problems. A variety of interventions have been implemented in an attempt to reduce these costs, decrease the number of unscheduled return visits, and improve the care of ED patients. One such example is seen with postdischarge calls; they are practiced widely, but their efficacy is equivocal, depending on how they are implemented (Bahr et al., 2014).

In addition to the problem of frequent return visits and overcrowding, many patients who are discharged from the ED simply do not understand their discharge instructions, including their medications, home care, and follow-up instructions (Engel et al., 2012). Older adults are at particular risk for confusion regarding discharge instructions and subsequent early return to the ED (Lowthian et al., 2016). Younger patients are not exempt from these same difficulties; one third of all patients who are instructed to make follow-up appointments after discharge from the ED never do so and only 12% of ED patients who are advised to take a medication even have their prescriptions filled (Thomas, Burstin, O'Neil, Orav, & Brennan, 1996). These startling statistics emphasize the deep need for innovation surrounding the discharge process in order to optimize understanding of post-ED care instructions, decrease early return visits to the ED, and ultimately relieve overcrowding of Emergency Departments. One potential avenue for these

necessary changes could be follow-up calls for discharged patients. The purpose of this paper is to examine the current process for follow-up calls in the ED and, using the Structure Process Outcome Model as a framework, develop alternative processes that improve the quality and efficiency postdischarge calls.

### **Description of Microsystem**

According to Huber (2006) a microsystem can be defined as “a small group of people who work together on a regular basis to provide care to discrete subpopulations of patients” (p. 5). Microsystems have business aims and linked processes. They produce performance outcomes and they are often embedded in larger organizations (Huber, 2006). In the context of this assessment, the microsystem of interest is a 44-bed Level II Trauma Center ED embedded within the larger organization of a 378-bed acute care hospital in the Midwest. This hospital is also a member of a regional health system, which, in turn, is a part of an even larger organization: a large, national, non-profit Catholic health care system with 88 hospitals in 21 states. The regional health system serves the greater metropolitan area of a large Midwestern city, as well as many surrounding and outlying communities.

There are many reasons to scrutinize such a tiny piece of this extremely large organization; the most important reason is that an enormous organization – employing nearly 100,000 people – is only as good as the microsystems of which it is composed. The role of the Clinical Nurse Leader (CNL) is to maximize the potential of the microsystem so that the larger health care organization it comprises can provide the best care possible (Harris, Roussel, & Thomas, 2014). In order to achieve such a goal, every aspect of the microsystem must be observed, evaluated, analyzed, and reviewed with a focus on value and patient outcomes. Identifying and improving even one area of waste, one aspect of patient care that is not adding

value, or one process that is inefficient can lead to safer, more effective, and more affordable care for patients (Harris et al., 2014).

**Aim of the microsystem.** The vision statement for the ED microsystem is to provide excellent, efficient, patient-centered care that is compassionate, courteous, and respectful to every patient, every time. The larger health system relies on a number of core values and guiding behaviors. The guiding behaviors are particularly useful at the microsystem level, serving as a compass for the day-to-day business of the department. These behaviors are as follows: we support each other in serving our patients and communities; we communicate openly, honestly, respectfully, and directly; we are fully present; we are accountable; we trust and assume goodness in intentions; we are continuous learners. The CNL has an obligation to model these guiding behaviors in all interactions with both staff and patients. The ways in which the ED exemplifies these guiding behaviors will be described below.

**Key Microsystem Processes.** There are three main categories into which all ED microsystem processes fall: registration and triage, evaluation and treatment, and admission or discharge. Performing each of these as efficiently as possible is crucial for ED through-put. Minimizing the amount of time patients spend in the ED, known as their length of stay (LOS), in turn minimizes costs for both patients and the hospital and improves patient satisfaction (Centers for Disease Control and Prevention, 2011).

**Registration and triage.** The registration and triage processes are critical to a patient's experience in the ED. The staff members performing these processes are the ones who make a first impression on each patient and set the tone for the rest of his or her ED (and possibly hospital) stay. Additionally, accurate registration is important so that the patient and his or her insurance can be properly billed, so that the patient's loved ones can be contacted in case of

emergency, and so that the hospital can communicate with the patient after discharge for any pertinent test results or necessary follow-up (including postdischarge follow-up calls). Proper triaging is also necessary for the safety and care of each patient. There may be delays in necessary medical care for patients who are “mis-triaged.”

***Evaluation and treatment.*** The evaluation and treatment of patients is typically the lengthiest of all ED processes. A patient must be evaluated by a nurse and a provider (either a physician or a physician’s assistant) and this evaluation must be documented. Preferably this evaluation happens “jointly” with the nurse and provider assessing the patient together (simultaneously). The provider must then order any necessary diagnostics, which may include urine testing, blood testing, and radiological imaging, among other diagnostic tests. Clinicians also order any necessary treatments, such as medications, dressings for wounds, or splinting for injured extremities. Because of this, there are a number of components that must align to make a patient’s visit efficient and effective. Consequently, the nursing staff is responsible for ensuring that these procedures occur in an orderly fashion, to benefit both the patients and the staff (and to minimize patients’ lengths of stay).

***Admission or discharge.*** The final category of care processes for ED patients includes the admission or discharge of each patient, depending on their health care needs. Regardless of whether the patient is to be discharged home or admitted to an inpatient unit, this requires attention to the patient’s care needs after their ED discharge. For patients being admitted, a safe handover process with good communication is critical. It is imperative that this process happens efficiently because patients with prolonged ED lengths of stay are less satisfied and have worse outcomes compared to patients who are admitted quickly (Liew, Liew, & Kennedy, 2003; Rodi, Grau, & Orsini, 2006).

When a patient's evaluation and treatment is complete, the provider may instead order the patient's discharge to home. At that time, the ED Registered Nurse (RN) will provide the patient with written discharge instructions as well as a verbal explanation of their home care information. Special attention is paid to prescribed medications and any recommended follow-up. This is a time for the patient to ask questions regarding the discharge instructions, new medications, and the plans for follow-up care. It may also be a time to introduce the topic of a postdischarge follow-up call (Cochran, Blair, Wissinger, & Nuss, 2012).

Adequate discharge instructions are crucial for patients' understanding of – and compliance with – their plan of care. This is an identified area in this microsystem with opportunity for improvement. Nursing staff could potentially practice the use of educational approaches or methods (such as teach-back) to ensure that patients have adequately understood their instructions (Kornburger, Gibson, Sadowski, Maletta, & Klingbeil, 2013). Incorporating methods based on different learning styles (auditory, visual, etc.) would also improve the current discharge process.

**Key microsystem quality improvement indicators.** This ED has a variety of quality measures that are tracked and monitored to ensure that its patients receive the best – and safest – care possible. The department has an effective nursing leadership team to help manage these quality measures. These leaders include (but are not limited to) an ED Clinical Nurse Leader, an ED Clinical Nurse Specialist, a Trauma Clinical Nurse Specialist, a Clinical Informatics Specialist, a Stroke Coordinator, a Sepsis Coordinator, and a Nurse Manager. Each of these individuals play a role in tracking and improving the quality indicators described below.

For many of these indicators, the microsystem intersects with the larger health organization; managing these quality measures requires interaction, coordination, and

cooperation outside of the microsystem. This serves as a good reminder that the microsystem never functions in isolation (Nelson, Batalden, Godfrey, & Lazar, 2011). These quality measures affect patients, first and foremost, but they are also affected by Emergency Medical System (outside of the hospital setting), the ED staff (including nurses, nurse technicians, and providers), and inpatient staff. Communication regarding quality performance for most of these measures can be found on a “huddle board” where ED staff meets before each shift. This transparency allows staff to visualize areas in which they are succeeding, as well as areas with opportunity for improvement.

One quality indicator, of particular interest in this microsystem, is follow-up calls for discharged patients. Nurses in the ED are required to place follow-up calls to patients who were discharged from the ED on the previous day. The nurses must attempt to contact, on average, 80% of discharged patients in order to be eligible for annual merit based raises. Unfortunately, the process for placing these follow-up calls presents some challenges, leaving much room for improvement. Further details of this clinical problem are discussed below.

### **Clinical Practice Problem**

At the direction of the ED director, the ED nursing staff has been making follow-up phone calls to its patients for seven years. The process for follow-up calls was designed and outlined in a standard of work document that was written when the follow-up calls began under the guidance of the ED Director. This standard of work includes guidelines for staff and scripting for the calls. The written standard of work document and additional resources were compiled and placed in a reference binder to be kept in one of the nurses’ stations. At that time, the nursing staff received some initial education regarding the calls; however, the process has received very little attention since. New nurses learn the process through simple observation



with their nursing preceptors, but receive no formal training. As a consequence, there is great disparity between the standard of work and how the process is actually implemented day to day.

A flowchart depicting the follow-up call process can be seen in Figure 1.

**Standard of work.** Each morning the charge nurse is responsible for printing a list of the previous day's discharged patients. Patients who were seen after midnight must be crossed off the list and placed on "hold" until the following day. Additionally, non-English speaking patients must also be crossed off the list; only English speaking patients without hearing deficits are eligible for follow-up calls. This list must then be divided into approximately six groups and distributed to staff. Nurses from each of the four team stations, as well as the charge nurse, the "sorter", and the triage nurses are expected to place follow-up phone calls to the patients on their assigned list beginning at 0700, as time allows. These lists contain, on average, about 35 patients each, for a total of about 200 patients per day.

If a patient answers the phone when called, the nurses are to follow the script identifying themselves as nurses from the ED, inquiring about how the patient is feeling, and asking whether the patient has any additional questions. If the patient does not answer the phone, the nurses are to leave a message, based on the suggested scripting. In either case, the nurses must document the outcome of the call – along with any other significant findings – in the electronic health record (EHR).

The electronic form allows for the documentation of alternative results as well. For example, a patient may have the wrong number listed or their phone may be out of service. As long as the nurse has documented on the patient in some way (even if the patient is not reached) the call is considered to be "addressed." The nurse must also indicate the outcome of the call on the physical list of patient names by writing a brief note beside each patient's name. These paper

lists are collected by the charge nurse at the end of each shift and handed over to the night shift's unit secretary.

Once the unit secretary has all the paper lists for the day, an Excel template is accessed and the number of contacted patients, voicemails, wrong numbers, unanswered calls, out of service numbers, non-English speaking patients, admitted patients, "holds," and patients deemed by the nurse to be "inappropriate" for follow-up are entered. Using the entries in the spreadsheet, the secretary then calculates the percentage of patients "addressed" (which includes non-English speaking patients who were never contacted). The spreadsheet with the daily percentage is printed, stapled to the original list of patient names, and stored in a hanging wall file. At the end of each month, a night shift charge nurse collects the stapled packets, determines the average number of calls for the month, and posts for the staff to review.

**Current practice.** Currently there is a wide variation in how the follow-up process is actually implemented nurse to nurse. Based on interviews and observations, it is clear that some nurses closely follow the standard of work, while others have developed their own methods. According to protocol, all English speaking patients should receive a phone call. In reality, nurses frequently identify patients as "inappropriate" for follow-up based on a number of factors. Those excluded are typically patients with psychiatric complaints, alcohol related complaints, patients who were dissatisfied with their ED visit, complex care patients, and frequent ED users.

In addition to patients who are excluded entirely from the follow-up calls, many nurses choose not to leave voicemail messages for patients who do not answer, stating a variety of reasons for this decision. One of the most common reasons cited is the additional time required to leave messages. Another is concern for patient privacy. One nurse gave the hypothetical example of a patient in an unstable domestic violence situation who may not want her partner to

know that she visited the ED. Based on observation, those nurses who do leave messages do not always speak slowly or clearly enough to be understood; consequently, these messages may be ineffective and may not benefit the patients who receive them.

Though some nurses choose not to leave voicemail messages, others choose not to place follow-up calls at all. Despite the 80% call-back rate required for annual raises, nearly half of nurses surveyed responded that they rarely or only occasionally participate in follow-up calls. A common complaint from these nurses is concern for liability about giving medical advice over the phone. They feel uncomfortable advising patients to do anything other than “return to the ED” or see their primary care provider. Other nurses voiced concerns over the fact that in order to place follow-up calls they must open the EHR for patients who are no longer present in the ED, which they believe puts them at risk for disciplinary or legal action. Consequently, many nurses forgo the follow-up calls altogether.

For those who do make calls, the quality of the calls varies greatly between different nurses, depending on their commitment to the process and their ability to answer patients’ questions. Those with excessive concern for liability may instruct patients to call their primary care provider rather than answer patients’ questions. Those who do not feel comfortable reviewing patients’ charts for information regarding their ED visits are also unlikely to provide accurate information to patients.

Though there is some support in existing literature for the value of postdischarge calls, an unintended consequence of these follow-up calls is a dramatic negative impact on nurse satisfaction. During the microsystem assessment, nurses across the board identified the process for follow-up calls as their greatest job dissatisfier. When surveyed, only 22% of nursing staff felt that the calls were beneficial to patients; nearly three quarters of them did not feel that the

current standard of work adequately protects for patient privacy; and an impressive 94% of nurses did not feel that they had enough time during their regular shifts to complete these calls (see Table 1). With no direct evidence to support their efforts, the nurses find little fulfillment in this task.

**Future state.** Nurses making follow-up calls, while caring for patients in the busy ED setting, are not performing the task of follow-up calls efficiently due to frequent distractions and interruptions. Data from call tracking logs indicate that nurses spend as much as three times the number of minutes addressing follow-up calls compared with the amount of time actually spent speaking with patients on the phone. This “lost” time may lead to increased costs for the ED as nurses are not performing the task efficiently. Furthermore, the lack of ongoing education for the nurses placing postdischarge calls and the lack of standardization across staff members leads to further inefficiencies. Modifying the process for follow-up calls may decrease the amount of time necessary for patient call-backs and, consequently, save money.

A more efficient call-back process might also allow nurses more time to thoroughly provide patient education and discuss discharge instructions with patients in person, prior to their discharge from ED. Nurses could also introduce the follow-up call during the discharge process, which has been shown by Cochran et al. (2012) to improve patient satisfaction. Though there is no literature to indicate that follow-up calls alone improve understanding of discharge instructions or compliance with prescribed medications, there is literature supporting the use of educational tools, such as “teach-back,” during discharge to improve understanding of discharge instructions (Bahr, 2014; Kornburger et al., 2013). The subsequent follow-up calls may then provide an additional benefit to patients by encouraging outpatient follow-up with primary care

providers (Balaban, Weissman, Samuel, & Woolhandler, 2008; Baren et al., 2001; Cochran et al., 2012; Ritchie, Jenkins, & Cameron, 2000; Smith et al., 2004).

### **Introduction of the Literature**

There is inadequate research regarding the value of follow-up calls for patients discharged from ED and much of the evidence that does exist is inconclusive (Bahr et al., 2014; Johnson, Laderman, & Coleman 2013). Existing literature represents substantial evidence for the value of postdischarge calls for ED patients when combined with additional interventions, but only limited support for postdischarge calls alone (Balaban et al., 2008; Baren et al., 2001; Biese et al., 2014; Chande & Exum, 1994; Cochran et al., 2012; Ritchie et al., 2000; Smith et al., 2004). Limited evidence suggests that postdischarge calls improve patient satisfaction for ED patients (Locke, Stafano, Koster, Taylor, & Greenspan, 2011).

Locke et al. (2011) state that patient satisfaction initiatives impact staff satisfaction. As discussed, the current system for making follow-up calls is greatly dissatisfying to the majority of nursing staff. According to Andrews and Dziegielewski (2005), things that interfere with patient care and make nurses feel “overloaded” lead to decreased job satisfaction (p. 288). Diminishing job satisfaction in nurses may lead to poor rates of retention, which may result in a financial loss for the ED (Andrews & Dziegielewski, 2005; Newman & Maylor, 2002; Newman, Maylor, & Chansarkar, 2002). Consequently, improving the process for follow-up calls is vitally important.

### **Description of Project**

Despite inconclusive evidence in support of discharge calls, follow-up calls to discharged ED patients will continue to be a requirement in this clinical setting. Nurses have found a number of reasons to be dissatisfied with the current standard of work and, consequently, they

created a variety of “work arounds” to better suit their preferences. In order to better serve the ED nursing staff and their patients, a revision of the call-back process is required. If done correctly, these changes could save time – and consequently money – for the ED. It could also lead to more satisfied nurses, ultimately improving nurse retention (Andrews & Dziegielewski, 2005; Newman & Maylor, 2002; Newman et al., 2002).

The work of making follow-up calls to patients is time consuming and leaves nurses distracted from the more immediate demands of patients who are physically present in the ED seeking medical care. Nurses find the ED environment too noisy for placing follow-up calls and they feel ill-equipped to answer questions about patients for whom they did not provide care. Reviewing patients’ charts prior to placing follow-up calls, however, is time consuming and unrealistic based on the current practice model. In addition, the current process excludes, and consequently marginalizes, non-English speaking patients – a group already considered to be at high-risk for adverse medication reactions and low comprehension of discharge instructions compared with English speaking patients (Constantinos, Chathampally, & Kohilas, 2003; Wilson, Chen, Grumbach, Wang, & Fernandez, 2005). With the current standards, those most likely to have questions following discharge are not offered the opportunity to ask them.

In order to improve this process, a number of individuals and groups will need to be involved. Input will be requested from all relevant stakeholders including the existing CNL, the nurse manager, the nurse serving as a follow-up call “champion,” the night shift unit secretaries, the charge nurses, and the bedside nurses who currently place the calls. Further assistance from the Risk Management team, the Privacy Officer, and the chair of the Clinical Advancement Committee will also be sought. A key component of the process will include identification and inclusion of nurses who indicated willingness to participate in follow-up calls before their shift.

After achieving support from key stakeholders, a group of nurses who are willing to participate, will meet and develop a new standard of work (based on the Structure Process Outcome model) that better addresses both patients' and nurses' needs. Additional education will be provided to a select group of nurses who will then be responsible for making follow-up calls (rather than dispersing the task across all nurses). Ideally, these nurses will then receive "points" toward the Clinical Advancement System as incentive to participate. The purpose of this initiative is to improve the quality of the calls being placed, reduce the overall time spent on follow-up calls, and to improve nurse satisfaction.

## **Chapter 2: Literature Review**

At the direction of the ED director, the nursing staff has been making follow-up phone calls to its patients for seven years. Based on tracking logs maintained by nursing staff, these calls require up to 3.5 hours on average each day. These calls represent one of the most significant job dissatisfiers for nurses, yet they are not currently linked to improved patient outcomes in this specific ED setting. The purpose of this literature review is to determine whether there is any evidence in current literature to suggest that postdischarge follow-up calls have been beneficial to patients in other clinical settings.

### **Clinical Practice Problem**

The present standard of work for follow-up calls in the ED provides opportunity for improvement. As discussed previously, the current process excludes non-English speaking patients and any patients deemed "not appropriate" for follow-up calls by the nursing staff. The current system may not adequately protect patients' privacy. It is also time consuming and inefficient due to multiple concurrent demands on nurses' time in the busy ED setting. Many nurses have developed "work-arounds" for the process, which leads to variation in the quality of

the calls. Furthermore, the current system for making follow-up calls is greatly dissatisfying to the majority of nursing staff, which may lead to poor nurse retention and, ultimately, financial loss for the ED (Andrews & Dziegielewski, 2005; Newman & Maylor, 2002; Newman et al., 2002). Consequently, improving the process for follow-up calls is vitally important.

### **Review and Critique of Existing Literature**

Based on the PICOT format described by both Melnyk and Fineout-Overholt (2015) and Polit and Beck (2012), the clinical question is as follows: In ED patients who are discharged home, do follow-up calls (compared to no follow-up calls) performed by either registered nurses or physicians provide benefit to patients in the one month period of time following discharge from the ED. An electronic search was performed using the Cumulative Index to Nursing and Allied Health Literature (CINAHL) in order to find published evidence between the years of 1991 and 2016 using search terms “emergency,” “follow up,” “postdischarge,” and “call” to address the PICOT question described above. Despite the broad time frame, nearly all results were published after the year 2000. Due to the limited scope of literature addressing postdischarge calls for ED patients, evidence in support of follow-up calls for inpatient discharges was explored as well. This evidence is summarized Table 2.

**Postdischarge calls combined with other interventions.** There are five randomized controlled trials (RCTs) supporting the practice of postdischarge calls concurrently with at least one other intervention (Balaban et al., 2008; Baren et al., 2001; Biese et al., 2014; Ritchie et al., 2000; Smith et al., 2004). These additional interventions included one or more of the following: transfer of medical records to the patient’s primary care provider (PCP), PCP review of patient’s discharge plan, discharge medications provided to the patient at no cost, transportation vouchers for follow-up appointments, financial incentives, and nurse facilitation of home services,



scheduling of follow-up appointments, medication management, and any necessary referrals (Balaban et al., 2008; Baren et al., 2001; Biese et al., 2014; Ritchie et al., 2000; Smith et al., 2004). Each of these interventions, when combined with a follow-up call, yielded some degree of improvement in outpatient follow-up. Unfortunately, these studies provided no way to identify whether the observed benefit was derived from the call alone, the additional intervention(s) alone, or both together.

There was also a prospective randomized longitudinal study investigating patients discharged from an inpatient unit who received a series of postdischarge phone calls in addition to face-to-face medication reconciliation, a patient-specific pharmaceutical care plan, and postdischarge counseling (Phatak et al., 2016). The results of the study showed reduced readmissions and fewer ED visits in patients who received the intervention; however, these outcomes (like those from the RCTs described above) may be due to the adjuvant interventions – rather than the postdischarge telephone calls alone. Consequently, little can be concluded regarding the efficacy of postdischarge calls based on the wide variety of interventions studied and variability of study designs..

**Postdischarge calls alone.** Only four RCTs and one retrospective cohort study investigated postdischarge calls independent of any other intervention (Braun, Baidusi, Alroy, & Azzam, 2009; Chande & Exum, 1994; Goldman et al. 2014; Harrison, Hara, Pope, & Young, 2011; Racine, Alderman, & Avner, 2009). Of these studies, one RCT found that follow-up calls had no effect on the number of return visits to the ED and another found that follow-up calls actually increased return visits to the ED (Goldman et al., 2014; Racine et al., 2009). Another RCT found that the calls improved outpatient follow-up; but the study was conducted in 1994, included only pediatric patients, and the results were based on self-reporting of outpatient

follow-up; and there was no mechanism for verifying whether these visits actually occurred (Chande & Exum, 1994). Consequently, the value of this study is limited. The fourth RCT conducted by Braun et al. (2009) found that postdischarge phone calls for patients discharged from an inpatient unit improved patients' satisfaction with some aspects of their care, but there was no change in patients' satisfaction with their discharge instructions or with their nursing treatment while hospitalized. Additionally, a retrospective cohort study by Harrison et al. (2011) found that follow-up calls were associated with reduced readmission rates for patients discharged from an inpatient unit compared to those who did not receive calls. Since retrospective cohort studies represent a lower level of evidence in comparison to RCTs, this is moderate level evidence.

There were also two literature reviews addressing existing evidence on postdischarge telephone calls as a stand-alone intervention (Bahr et al., 2014; Johnson et al., 2013). These authors found existing evidence to be generally inconclusive. An integrative review of literature (including 11 peer-reviewed journal articles) by Johnson et al. (2013) found inconclusive evidence regarding the use of telephone follow-up to reduce readmissions. Additionally, a systematic review of 19 articles by Bahr et al. (2014) found inconclusive evidence for the use of phone calls to decreased readmission, decrease ED use, improve patient satisfaction, improve follow-up, or improve the physical and emotional well-being of patients. Based on these literature reviews and the RCTs described above, there is little conclusive evidence regarding the benefit of postdischarge calls as a stand-alone intervention.

**Postdischarge calls in the ED setting.** There were seven RCTs, one retrospective study, and one case study that examined postdischarge calls in the ED setting specifically (Baren et al., 2001; Biese et al., 2014; Chande & Exum, 1994; Cochran et al., 2012; Goldman et al., 2014;

Locke et al, 2011; Racine et al., 2009; Ritchie et al., 2000; Smith et al., 2004). The majority of RCTs found improved rates of outpatient follow-up after postdischarge calls compared to those who did not receive calls; however, the interventions did not decrease return visits to the ED, decrease hospitalizations, or improve medication compliance when compared with patients who did not receive postdischarge calls (Baren et al., 2001; Biese et al., 2014; Chande & Exum, 1994; Ritchie et al., 2000; Smith et al., 2004).

Furthermore, the RCTs had a variety of limitations, which renders their conclusions questionable. Four of these RCTs included multiple additional interventions along with the postdischarge call, making it impossible to determine whether the observed benefit was derived from the call alone, the additional intervention(s) alone, or both together (Baren et al., 2001; Biese et al. (2014); Ritchie et al., 2000; Smith et al., 2004). Six of the RCTs included only limited patient populations, such as older adults, pediatric patients, or patients with asthma, making it more difficult to apply the conclusions to the diverse patient population in this ED (Baren et al., 2001; Biese et al., 2014; Chande & Exum, 1994; Goldman et al., 2014; Racine et al., 2009; Smith et al, 2004). The seventh RCT had a small sample size (Ritchie et al., 2000).

It has been hypothesized that telephone follow-up after discharge can improve patient satisfaction. A retrospective study by Locke et al. (2011) examined how consecutive sets of Press Ganey satisfaction survey responses for pediatric ED patients differed from month to month and linked them to components of the EHR, including whether the patient received a postdischarge call. They found that postdischarge calls had a statistically significant impact on patient satisfaction; however, this association was weak compared with a number of other factors including wait times and the comfort of the waiting room (Locke et al., 2011). Additionally,

generalizability to the adult patient population is limited because the study only included pediatric patients.

A case study by Cochran et al. (2012) in some ways provides the best evidence in support of postdischarge follow-up calls for ED patients. Though a case study represents a very low level of evidence, the methods of this case study best align with the subject of this literature review. The authors examined the effects of a postdischarge telephone call placed 24 to 48 hours after discharge as a standalone intervention in a large health system. The study followed both patient satisfaction and clinical outcomes over the course of a year, making the sample size quite large. In this health system, the follow-up calls led to improved patient satisfaction (Cochran et al., 2012). The calls also identified a small population of discharged patients who needed escalation of care, which may have decreased medical expenses in the long term (Cochran et al., 2012).

In general, postdischarge calls for ED patients appear to improve outpatient follow-up after discharge from the ED. This conclusion is drawn with reservation, however, due to the methodology of the RCTs described above. Additionally, there is some low-level evidence to suggest that postdischarge calls as an isolated intervention may improve patient satisfaction. An evidence-based clinical practice guideline from the Agency for Healthcare Research and Quality (AHRQ) found that follow-up calls to discharged ED patients increased patient satisfaction, though the authors acknowledged that there was no control (Boonyasai et al., 2014). This same clinical practice guideline also found that follow-up calls improved management of asthma in pediatric patients and allowed the clarification of home care instructions in 43% of discharged patients (Boonyasia et al, 2014).

**Postdischarge calls in the inpatient setting.** Follow-up calls are frequently done after inpatient discharge. Two RCTs examined postdischarge calls in the inpatient setting (Balaban et al., 2008; Braun et al., 2009). One found improved rates of outpatient follow-up and the other found improved patient satisfaction, but no improvement in readmission rates was found in either study (Balaban et al., 2008; Braun et al., 2009). Postdischarge calls in the inpatient setting were further examined in two inpatient-specific literature reviews, one retrospective cohort study, and one randomized longitudinal study of patients discharged from an inpatient unit; however these studies were either inconclusive or they demonstrated only a modest reduction in readmission rates (Bahr et al., 2014; Harrison et al., 2011; Johnson et al., 2013; Phatak, 2016). Only the systematic literature review found evidence to suggest that postdischarge calls may improve patient satisfaction, but the evidence was limited (Bahr et al., 2014). This small body of evidence gives beginning support for postdischarge calls as a means to reduce readmission, increase outpatient follow-up, and improve patient satisfaction when combined with additional interventions, but finds no support for postdischarge calls as a stand-alone intervention.

The AHRQ developed an evidence-based “toolkit” for improving the discharge process in order to reduce readmissions (Jack et al., 2013). This “Re-Engineered Discharge” (RED) process consists of 12 “mutually reinforcing actions” shown to reduce postdischarge ED visits and hospital readmissions (Jack et al., 2013, p. 1). One of the 12 components is a postdischarge telephone follow-up call. AHRQ suggests that these calls should occur within 72 hours of a patient’s discharge and that the caller should review the patient’s “appointments, medicines, medical issues, and actions to take if a nonemergent problem arises” (Jack et al., 2013, p. 4). The authors specify that this is not a “social call” and assert that the caller must identify any problems or misunderstandings that the patient may have; the caller must also determine a course

of action to address these issues (Jack et al., 2013, p. 42). Based on their recommended discharge practices, AHRQ found reductions in 30-day readmissions, ED return visits, and cost (Jack et al., 2013). As with many other studies, however, it is impossible to determine how much of this benefit was derived from the follow-up calls compared with the other 11 discharge interventions.

### **Strengths and Weaknesses**

A significant strength of the existing literature is the large number of randomized controlled trials addressing follow-up calls for discharged patients. The application of many of these studies to the research question at hand is limited, however, by the obfuscation of the results due to additional interventions employed in combination with follow-up calls in the study design. These combined interventions appear widely across the literature, making it difficult to identify whether follow-up calls alone confer benefit to patients who receive them. The presence of multiple interventions combined with follow-up calls in nearly all relevant RCTs makes it nearly impossible to draw conclusions regarding the efficacy of postdischarge calls as a standalone intervention.

### **Summary**

The literature review revealed that there are very few studies that examine follow-up calls as a stand-alone intervention. Existing research represents substantial evidence for the value of postdischarge calls for ED patients when combined with additional interventions, but only limited support for postdischarge calls alone. Much of the evidence that does exist regarding postdischarge calls (without additional intervention) is inconclusive (Bahr et al., 2014; Johnson et al., 2013).

There is a body of evidence to suggest that postdischarge calls combined with additional nursing interventions (such as appointment reminders) may improve rates of outpatient follow-up after discharge (Balaban et al., 2008; Baren et al., 2001; Cochran et al., 2012; Ritchie et al., 2000; Smith et al., 2004); however, there is only limited evidence to suggest that postdischarge calls alone improve rates of outpatient follow-up (Biese et al., 2014; Chande & Exum, 1994). A randomized controlled trial by Racine et al. (2009) found that follow-up calls for patients discharged from the ED had no significant impact on the number of return visits to the ED. Another study found that postdischarge follow-up calls actually increased return visits to the ED. Furthermore, there is limited evidence to suggest that postdischarge calls improve patient satisfaction for ED patients (Goldman et al., 2014; Locke et al., 2011).

It is clear that follow-up phone calls provide a benefit to patients from both the ED setting and the inpatient setting when combined with other interventions (Balaban et al., 2008; Baren et al., 2001; Biese et al., 2014; Cochran et al., 2012; Phatak et al., 2016; Ritchie et al., 2000; Smith et al., 2004). These benefits include improved outpatient follow-up, reduced readmissions, and improved patient satisfaction (Balaban et al., 2008; Baren et al., 2001; Biese et al., 2014; Cochran et al., 2012; Phatak et al., 2016; Ritchie et al., 2000; Smith et al., 2004). The existing body of evidence for postdischarge calls alone, though inconclusive, leans toward the positive. Only one randomized controlled trial suggests negative consequences to placing follow-up calls, but that study had some significant limitations (Goldman et al., 2014). The follow-up calls were not performed by a health care provider and the study had an unusual design in which patients were contacted as frequently as 10 times in a 24-hour period (Goldman et al., 2014). Aside from this one errant study, all others found neutral or slightly positive

outcomes from postdischarge calls. Thus, the practice of place follow-up calls to discharged ED patients is assumed to at least mildly beneficial.

### **Addressing the Clinical Practice Problem**

The literature review performed here and the systematic literature review performed by Bahr et al. (2014) similarly found that postdischarge calls as a stand-alone intervention garner no improvement in patient satisfaction, no decrease in ED use, and no improvement in the physical or emotional well-being of the patients who received the calls. Additionally, Bahr et al. (2014) found that nurses were largely unable to manage the volume of calls required to maintain a system of follow-up calls for all discharged patients. Thus, these data support what has already been observed in this ED setting after 7 years of postdischarge calls.

Despite this the inconclusive review by Bahr et al. (2014), Cochran et al. (2014) provide a strong model for a successful follow-up call process. In this health care system, the postdischarge call is introduced prior to discharge from the ED; combined with additional nursing interventions, these postdischarge calls have led to a positive trend in patient satisfaction over 12 months (Cochran et al., 2014). Their success supports efforts to improve the standard of work in this ED as well. With revision, the follow-up call process in this ED could be more satisfying to nurses and provide a value-added service to patients.

### **Conclusion**

Though there is no strongly convincing evidence to suggest that follow-up calls are valuable for discharged patients in the ED setting as an isolated intervention, there is some evidence indicating that it may improve outpatient follow-up. In concert with additional interventions, follow-up calls may also improve patient satisfaction scores. These data indicate



that a revised standard of work for follow-up calls in this ED may prove beneficial to patients and, therefore, represents a worthwhile pursuit.

### **Chapter 3: Conceptual/Theoretical Context**

In 1966, Avedis Donabedian created a conceptual model that provides a framework for evaluating the quality of medical care (Best & Neuhauser, 2004). This model, which has come to be known as the Donabedian Model (or Structure Process Outcome Model), divides the measures of health care quality into three categories: structures, processes, and outcomes (Best & Neuhauser, 2004). Moore, Lavoie, Bourgeois, and Lapointe (2015) summarize this model succinctly: “According to Donabedian’s health quality model, improvements in the structure of care should lead to improvements in clinical processes that should in turn improve patient outcomes” (p. 1168). This model serves as an excellent framework for the clinical problem of follow-up phone calls in the ED because it provides organization and direction for process improvement.

#### **Description of the Theoretical Perspective (Structure Process Outcome)**

Various sources define the terms “structure,” “process,” and “outcome” differently, but in all cases the terms represent factors that affect the quality of care provided to patients, with a more recent emphasis on the last term: “outcomes.” Decades after Donabedian’s original work, Polit and Beck (2012) discussed the historical transition of focus from “having the right things” (structures) to “doing the right things” (processes) and now, currently, “having the right things happen,” which represents patient outcomes (p. 263). This focus on outcomes can be witnessed at every level of health care across the nation. With recent changes to financial reimbursements, “outcomes” are a top priority and Donabedian’s model is relevant now more than ever. The

clinical problem of follow-up phone calls in the ED is a prime example of how Donabedian's framework can be applied in the clinical setting.

**Structure.** According to Polit and Beck (2012), the "structure" from Donabedian's model is represented by broad organizational and administrative features such as the size of a care facility, the range of services it offers, the technology it utilizes, and the organizational structure and climate of the facility. They also include nursing skill mix and experience as an aspect of "structure" (Polit & Beck, 2012). Langley et al. (2009) define "structure" as the concrete aspects of an organization including financial structures, administrative structures, learning and control structures, information structures, and the physical structure of a facility. Langley et al. (2009) also identify another component of the model, which they call "operating rules." These are the values, customs, and habits of the staff; they are the guiding principles that both implicitly and explicitly shape behavior within a system (Langley et al., 2009).

Doran (2011) adapts Donabedian's model into what is referred to as the Nurse Role Effectiveness Model. Doran (2011) sees the "structure" element of Donabedian's model as a number of organizational variables that influence the processes and outcomes of care (including staffing and nursing assignment patterns as well as the nurses and patients themselves). The author acknowledges that the professional characteristics of nurses – including experience, knowledge, and skill level – can influence the quality of nursing care (Doran, 2011). Additionally, the patients' characteristics, such as age, type and severity of illness, and comorbidities, can also affect their care and achievement and of outcomes (Doran, 2011). Both Donabedian's original Structure Process Outcome Model and Doran's adaptation can be applied to this clinical problem.

**Process.** Polit and Beck (2012) describe “processes” as clinical management, decision making, and interventions. Langley et al. (2009) state simply that a “process” is the sequence of events necessary to accomplish a task. Doran (2011) elaborates further, stating that a “process” includes nurses’ independent, medical care-related, and interdependent actions. Independent actions do not require a physician’s order and they include the autonomous actions nurses initiate in response to patients’ problems. Medical care-related actions are nurses’ reactions to a physician’s order, but include clinical judgement and evaluation as well. The interdependent roles are seen best in care coordination and interdisciplinary communication (Doran, 2011).

**Outcome.** “Outcomes” are simply the clinical end result, according to Polit and Beck (2012). Doran (2011) breaks it down further, describing six different categories of outcomes including the prevention of complications, clinical outcomes, knowledge of disease and treatment, functional health outcomes, satisfaction with care, and cost. According to the model, each of these categories of outcomes is influenced by the structures and processes that precede them. Changes to the structure may affect both processes and (indirectly) outcomes, while changes to processes may affect outcomes directly.

### **How the Structure Process Outcome Model Guides Postdischarge Calls in the ED**

The clinical problem of follow-up phone calls in the ED is an area in which the Structure Process Outcome model can serve as an effective guide (see Figure 2). Research by Rademakers, Delnoij, and de Boer (2011) suggests that improvements in the process and structure aspects of health care leads to the greatest increase in patients’ overall perception of the quality of care received. This perception of care, measured by patient satisfaction scores, is identified by Doran (2011) as a nurse-sensitive patient outcome. More meaningful postdischarge

calls – representing process changes – will hopefully improve ED patient satisfaction scores, which is supported by the Structure Process Outcome model (Doran, 2011; Moore et al., 2015).

**Structures.** The framework described by Donabedian so many decades ago is still highly relevant in the clinical setting. Organizational features identified in Doran's (2011) adaptation as aspects of "structure," include work environment, workload, and staffing ratios; these are all factors that pertain to the postdischarge call process in the ED. Nurses identified the noisy ED work environment as a barrier to meaningful follow-up calls. Heavy patient loads and limited time available for placing calls were cited as additional obstacles. These are all examples of structural variables in the postdischarge call process. Modifying these variables (by providing a quiet space to place calls, for example), could enhance the call back process and, ultimately, improve the outcomes of these calls.

In addition to the work environment, workload, and staffing ratios, the education and experience of the nursing staff is another element of "structure" under Doran's (2011) adaptation. The education and experience of a nurse with regard to follow-up calls influences the quality of these calls, consequently impacting whether the calls provide meaningful support to ED patients following discharge. There is currently no standardized process for the education or training of nurses who place postdischarge calls. Providing training and educational resources to the nurses who place postdischarge calls may improve outcomes for the patients who receive them. Another area for growth would be the inclusion of translation services in the postdischarge call process in an effort to reach all discharged patients (not just the English-speaking ones).

**Processes.** For postdischarge calls, nurses' independent roles and interdependent roles are the most relevant features of "processes" according to Doran's (2011) explanation.

Independent roles include nursing interventions (Doran, 2011). Nurses placing follow-up calls may be called on to perform autonomous actions in response to potential problems that patients may reveal during a follow-up call. Survey results suggest that many nurses do not feel comfortable advising patients over the phone. This opportunity for nursing intervention is missed due to a weak process. Improving nurses comfort level surrounding telephonic nursing interventions (by modifying the current standard of work) may allow nurses to feel more comfortable functioning autonomously and assisting patients over the phone, which could then improve outcomes.

The interdependent roles of nurses during the placement of follow-up calls include coordination of care and team communication. This process is currently lacking as nurses largely do not communicate with the interdisciplinary team following these calls; modifying the standard of work could increase the potential for coordination of care and team communication. Providing a closed communication loop between ED and primary care providers would be one way to improve this process. Taken together, these changes could impact a great number of outcomes for discharged patients.

**Outcomes.** The outcomes identified by Doran (2011) that could be the most susceptible to structure and process changes would be patients' proficiency in self-care and symptom control postdischarge. Meaningful, high-quality follow-up calls could assist patients with any questions they may have and enhance their ability to follow the plan of care developed in the ED. Additionally, providing patients with an opportunity to ask questions and emphasizing nurses' concern for patients' well-being may also increase patient satisfaction scores and decrease return visits to the ED. The current process for follow-up calls has not yet made an impact on patient

satisfaction scores or ED return visits; however, new structures and processes have the potential to improve these outcomes – both important quality measures.

## **Conclusion**

The visual drawing in Figure 2 serves as a visual depiction of the Structure Process Outcome model. The elements of structure most relevant to the clinical problem of follow-up calls in the ED setting include nurse education and experience, workload, and work environment. Independent nursing interventions, interdependent team communication, and interdependent coordination of care roles represent the processes of ED follow-up calls. Self-care, symptom control, and patient satisfaction are the most pertinent examples of outcomes identified by the model.

The clinical nurse leader has many tools available for problem-solving in the clinical setting. Applying a conceptual model, such as the Structure Process Outcome framework, is one such tool. The example of follow-up phone calls for discharged patients in the ED is one in which the conceptual framework provides necessary organization and clarity. This tool also maintains focus on the end goal: improved outcomes for patients. By modifying the current structure and existing processes surrounding postdischarge calls, static outcomes (such as patient satisfaction) can experience marked improvement and growth.

## **Chapter 4: Clinical Protocol**

Nursing staff in the ED have been placing follow-up phone calls to discharged patients for seven years. When the calls were first initiated, the nursing staff received some initial education regarding the calls; however, the process has received very little attention since. As a consequence, there is great disparity between the standard of work and how the process is actually implemented day to day. Additionally, these calls are time consuming and inefficient.

Because nurses are busy caring for the patients who are physically present in the ED, they experience frequent interruptions while placing follow-up calls. These interruptions distract them from necessary tasks, create inefficiencies, and cause delays. Furthermore, the responsibility of placing the calls represents the single largest dissatisfier for ED nursing staff. The purpose of this Evidenced-Based Practice Protocol is to revise the current standard of work in an effort to optimally and efficiently utilize nursing time, save money, and improve job satisfaction for ED nurses.

### **Description of Protocol**

In order to modify the current standard of work for postdischarge phone calls, consideration must be given to the structures, processes, and outcomes pertaining to this clinical problem according to the Structure Process Outcome framework (Doran, 2011). Initial data must be collected along with input from key stakeholders (Langley et al., 2009). Outcomes of interest will include staff satisfaction (based on surveys administered before and after implementation of the intervention) and patient satisfaction (measured by the results of monthly Press Ganey surveys), with specific focus on the questions “degree to which staff cared about you as a person” and “information given about caring for yourself at home.” Additional outcomes of interest will be time to perform follow-up calls, number of total patients reached, and number of non-English speaking patients reached.

### **Plans for Implementation**

Based on input from stakeholders, a new standard of work will be developed and trialed, using a “Plan, Do, Study Act” (PDSA) technique to assess for improvement (Langley et al., 2009). These PDSA cycles will be repeated as necessary to achieve a workflow that is mutually beneficial for patients, nursing staff, and nursing leadership. Data will be collected continuously

throughout the trials in order to track improvement and identify which changes are most beneficial. Stakeholders will be updated regarding results throughout the process.

**Plan.** An initial meeting of key stakeholders will be the most important (and first) step. This meeting will include the Clinical Nurse Leader, the Nurse Manager, and possibly the Nursing Director. The meeting will also include a number of willing staff nurses representing a variety of experience levels, at least one charge nurse, and at least one night shift secretary. Future meetings may also include a representative from Risk Management, a Privacy Officer, and a representative from the Clinical Advancement Committee. The initial meeting will address the current state of the postdischarge call process, areas for improvement, and goals for a future state. A particular focus will be placed on the existing structure (including work environment and nurse education), processes (including nursing roles), and desired outcomes, such as improved nurse and patient satisfaction scores in accordance with the Structure Process Outcome model (Doran, 2011). Attendees will brainstorm potential changes for the first PDSA cycle and identify a time frame for reassessment and for the next meeting.

**Do.** Once there is a preliminary plan in place, information regarding the first trial will be communicated to all staff that will be affected. This communication will most likely occur during the “huddle” that occurs before each shift and includes the charge nurse, staff nurses, and nursing technicians. Additional communication may be disseminated to staff via email as needed. After necessary communication and education, the first trial will commence for a defined period of time, most likely one week. Feedback will be collected throughout (and following) the trial.

**Study.** Barriers to the new process will be identified throughout the trial. Feedback from key stakeholders will be taken into consideration. Data on time spent performing follow-up



calls, number of patients reached, and number of non-English speaking patients reached will be compared to previous data. Changes from baseline metrics will be evaluated for improvement or decline. The process will then be revised by the team as needed and alternatives to the initial process will be developed by repeating the steps outlined above. As the process improves, longer trials will be initiated to ensure that the new practice is sustainable in the long-term.

**Act.** These PDSA cycles will continue based on input from stakeholders until an acceptable standard of work is developed. At that point a new “standard of work” document will be drafted and submitted to the Nurse Manager and Nursing Director for approval. Staff will then receive communication and education regarding the newly adopted process. Staff will be encouraged to provide feedback on an ongoing basis and to communicate any additional barriers that arise. As data is collected from the new process, changes from baseline metrics will be communicated to staff and other stakeholders. The focus will then shift from implementation to sustainment.

### **Necessary Resources**

The most important resource for this project will be nursing time, which is currently already being utilized for follow-up calls. Some additional nursing time will be required for the meetings described above, but these meetings will likely occur during regularly scheduled shifts. Any supplementary education determined by the team as necessary will also require nursing hours, but most of this education will also not require time outside regularly scheduled shifts because it will be conducted during “huddle.” Parameters of the project are that it must be “budget neutral” and therefore will not receive any designated funds. The hope is that the financial gains from the improved process will exceed any expense associated with initiating the project.

Additional resources include basic office supplies – such as pens and paper – for tracking follow-up calls and the results of each PDSA cycle. White boards and dry erase markers may also be utilized during meetings. These supplies are readily available and do not need to be purchased. Computers and basic software – such as spreadsheets and word processing – are also present and available within the department.

The evidence base for this project is described in the literature review portion of this paper. No additional research is anticipated. The Structure Process Outcome model provides the framework for this project and similarly requires no additional resources (Doran, 2011).

### **Potential Challenges**

The most significant anticipated challenge will be reaching consensus with all the relevant stakeholders about how to best modify the existing standard of work. Any changes to the staffing model will require buy-in from bedside nursing staff as well as approval from the Nurse Manager. In order to address this challenge, all meetings will be facilitated with an agenda. PDSA cycles will be short to increase willingness to experiment with new processes and to allow for frequent feedback.

Another challenge will be ensuring that follow-up calls closely follow the modified standard of work during each trial. Frequent rounding will help guarantee that the standard of work is adhered to by all nurses who make postdischarge calls. Feedback forms will also be widely available so that staff can identify any aspects of the standard of work that does not follow the plan.

### **Cost-Benefit Analysis**

Ideally there will be very little financial cost associated with implementation of this protocol. There will be a minor investment in nursing time for those who participate in

developing the new follow-up call process. This initial investment in nursing time has an associated cost, but the goal is to ultimately save nursing time in the long term by optimizing the follow-up call process. Additionally there may be costs associated with training and education for the new follow-up call process. The goal is that following implementation of the protocol, postdischarge calls will take fewer minutes each day, leading to a long term savings in nursing time and, consequently a financial savings as well. The long term savings in nursing time should offset the initial investment needed to develop and test a new standard of work.

In addition to the time saved, the protocol may also increase patient satisfaction, an important quality measure linked to reimbursements. Additionally, a successful protocol would mean increased nurse satisfaction, which leads to increased nurse retention (Andrews & Dziegielewski, 2005; Newman & Maylor, 2002; Newman et al., 2002). Both of these goals, if achieved, could lead to a financial gain for the ED.

## **Conclusion**

Based on the anticipated costs and potential benefits of the project outlined above, implementing this protocol is a low risk intervention. It requires very few resources and very little financial investment, but the results have the potential to be highly rewarding to both patients and staff. Even if the protocol were to fail completely, only a small amount of nursing time will have been lost. In a more likely scenario, the cumbersome process for follow-up calls will be streamlined for increased efficiency and improved quality. The newly developed process will be more suited to the busy ED work environment and it will represent the combined efforts of both nursing leadership and bedside nursing staff. When completed, the nurses placing the calls should feel confident that their efforts are value-added and meaningful to patients and that their time is being used efficiently.

## **Chapter 5: Clinical Evaluation**

### **Evaluation of Protocol Implementation**

The implementation of this project did not precisely go as initially planned, but it did roughly follow the intended path, as well as the PDSA process. Changes to the planned protocol occurred due to parameters that were set by the nursing leadership, the realities of a busy and dynamic hospital environment, time constraints during the evaluation period, and one significant, unexpected barrier that will be described in more detail below. Though these obstacles inhibited exact application of the protocol, progress was made toward the ultimate goal of improving the postdischarge follow-up call process and valuable insights were gained; these insights will provide the basis for future projects, illustrating that these efforts were therefore beneficial despite the alternative pathway.

**Plan.** The initial meeting with key stakeholders was not a meeting in the traditional sense. However, the CNL student had discussions with the key stakeholders including the Clinical Nurse Leader, Nurse Manager, Nursing Director, a representative from Risk Management, and a Privacy Officer, as well as staff nurses of varying experience levels, charge nurses, and unit secretaries. Unfortunately, it was not practical to gather all of these stakeholders together at one time to discuss the project, so these conversations occurred in a more fragmented way than originally intended. There was one actual meeting that included both staff nurses and a charge nurse. This meeting was extremely fruitful. In addition to meetings, input from other staff was collected via observation, an email survey, and brief conversations in the ED during nurses' regularly scheduled shifts (as their time allowed).

By communicating with key stakeholders, a variety of goals were set regarding the new follow-up call process. As described previously, the original process for follow-up calls was

extremely time-consuming and the majority of nurses did not feel that the calls benefitted patients. As a result, the nurses decided to target specific groups of patients for follow-up calls and focus on quality over quantity for the process improvement project. By conducting follow-up calls for patients who had the greatest perceived need, the team hoped to confer the most benefit. In addition, the nurses wished to derive fulfillment from efforts that produced measurable results, and reduce the amount of time spent away from patients physically in the ED.

In order to focus on patients with the greatest need, the team identified criteria for flagging patients as "high risk," which would therefore trigger a follow-up call to those specific patients. The criteria included all patients over the age of 70 or under the age of 15, patients who were not primarily English speaking, patients identified by the nurse as having a great deal of confusion at discharge, or any patient who seemed to have high need for postdischarge follow-up based on the nurse's clinical judgment (Lowthian et al., 2016; Thomas et al., 1996). The team also identified a method for electronically flagging these patients in the postdischarge follow-up list. This method was tested with the help of a Nursing Informatics Specialist and a "test patient" in the EHR. Once the team confirmed that this method for flagging patients was viable, it could then be used for trials of gradually increasing magnitude.

Another aim of the team was to expand the scope of follow-up calls to not only include non-English speaking patients but to specifically target them (as described in the follow-up call criteria above). As previously mentioned, the current state of the follow-up phone calls was that non-English speaking patients were not being called due to a language barrier. To remedy this problem, a combination of manual chart audits and automatically generated monthly reports were conducted to find out what kind of language support would be needed. The audits revealed

that there were, on average, 10 Spanish speaking patients requiring telephone follow-up each day. The team expected that this would necessitate roughly 30 minutes of an interpreter's time. Furthermore, there appeared to be, on average, 3-4 additional patients daily who would require an interpreter for a language other than Spanish.

In order to make telephone follow-up possible for non-English speaking patients (for both Spanish and other non-English languages), the team had to collaborate with both telephone interpreters and in-person interpreters, as well as provide education for staff regarding the use of these services. After meeting with the coordinator for Interpretation Services, it was determined that a Spanish interpreter could be made available daily each morning to contact the Spanish speaking patients who required a follow-up call. This could be accomplished via a "three-way" or conference call. Patients requiring other languages would be best served through the use of a telephone interpreter. These telephone interpreters were available 24 hours a day and could be reached by calling the Language Services Coordinator and providing a 7-digit access code. Though the process for doing so is relatively simple, training for this process would be required in order for staff to feel comfortable using the service. Similarly, staff would need assistance with placing a conference call in conjunction with the in-person interpreters.

**Do.** Feedback collected during the initial evaluation of follow-up calls suggested that one of the most significant problems with the follow-up call process was the nurses' perception that the calls were not beneficial to the patients. In addition to tracking outcomes to demonstrate a direct benefit (such as the measures of patient satisfaction described above), the team decided to address a few of the nurses' concerns about the usefulness of the calls. Many of the nurses felt that they could not answer patients' questions during a follow-up call due to liability, lack of information, or a widely-held misconception that any patient with an ongoing medical complaint

must be instructed to return to the ED. In order to address these problems, reference materials were compiled to aid staff in answering patients' questions. These materials were condensed into a two-page document (Appendix A) which was then laminated and affixed to each side of a clipboard. Multiple clipboards with the reference sheets were constructed and distributed to each "team station" throughout the ED.

Another problem that was identified was that the follow-up call resource binders that had been created when follow-up calls began several years ago were still available in each team station, but they were rarely (if ever) utilized. The information contained in the binders was outdated and no longer reflected the current process. Consequently, the CNL student met with stakeholders to develop a new standard of work outlining the new follow-up call process (Appendix B), as well as scripting to guide the calls (Figure 3). The binders were updated with these new documents and the outdated documents were removed.

To optimize the follow-up call process for non-English speaking patients, the team determined that Spanish speaking patients and all other non-English speaking patients would need to be grouped together on the electronic follow-up call list. Having an in-person interpreter available for a short block of time (30 minutes, for example), would be wasteful if there was not a nurse ready and available to work with the interpreter during that time. In order to best prepare, it would be necessary to quickly identify all Spanish speaking patients from the follow-up list. Unfortunately, the only way to do this was by opening each individual patient's chart to the "Insurance" page in the EHR and then determining which primary language was charted there. This process was cumbersome and time consuming. In an effort to streamline this task, the team submitted a formal request for the EHR to be changed so that the each patient's primary language would be displayed "face up" on the main home screen for the ED (and the follow-up

list could therefore be sorted by language). This request was approved, but no timeline was given about when this change would be implemented. During the interim, the CNL student had to identify non-English speaking patients manually, as described above. This task required about 15 minutes of dedicated time to complete.

After collecting information about how best to utilize the language services available in the ED setting, reference materials were created that included a job aid (Appendix C); this job aid was designed to illustrate the step by step process for placing conference calls in coordination with an in-person interpreter and also for accessing a telephone interpreter for follow-up calls. A small trial was then conducted during which one nurse attempted to contact eight Spanish-speaking patients utilizing an in-person interpreter and the conference call feature of the phone. The same nurse then attempted to contact five non-English speaking patients – of varying primary languages – using the telephone interpreter. The nurse was not coached or assisted beyond the provided job aid. She then provided feedback on the job aid, which led to a few minor changes. Overall, however, she found the job aid very clear and very helpful. She also found that calling non-English speaking patients with the support of an interpreter did not require significantly more time than contacting English speaking patients.

Based on the success of the small trial with the interpreters, the team planned a trial to test the prioritization component of the intervention. It was decided that that trial would run for a 24-hour period, from midnight to midnight. All "high priority" patients would be flagged during that time and then follow-up calls would be placed to these patients the next morning (with the assistance of an interpreter when necessary). To facilitate this trial, another job aid was created to demonstrate the process for identifying "high priority" patients and flagging them in the EHR (Appendix D). The CNL student attended the evening huddle on the designated night in order to



communicate the plan to the night shift staff. Printed copies of the job aid were distributed to all RNs and the trial process was briefly explained. The charge nurse also agreed to page out a reminder to staff to begin the trial at midnight. The CNL student repeated this same process at the morning huddle the following day. The CNL student also rounded in the department throughout the day to assist staff and answer any questions.

The following morning, the CNL student reviewed the follow-up list for any high priority patients that might have been missed (i.e. patients who met criteria for high priority follow-up, but were never flagged as such). The CNL student also identified all non-English speaking patients from the list of patients flagged as high priority. These patients were grouped and assigned to one nurse for follow-up. This nurse was provided with the interpreter job aid (Appendix C). The CNL student then observed this RN while she placed follow-up calls and assisted only when necessary. The remaining high priority patients were assigned to a different RN. The CNL student observed and timed these calls as well. Verbal feedback was solicited from both RNs in addition to asking them to repeat the survey they had taken several months prior (Appendix E). The survey form also had three new questions added to gauge the effectiveness of the team's interventions.

**Study.** Reviewing the results of the 24-hour prioritization trial, the team found that out of 123 discharged patients, 24 were flagged as being high priority for postdischarge follow-up (about 20%). Of these 24 patients, three were three Spanish speaking, two spoke some other non-English language, eight were over the age of 70, six were under the age of 15, and seven were identified by staff as being high priority for follow-up for some other reason (i.e. clinical judgement). These numbers represent a day with slightly fewer than average number of discharged patients.

Calls to the five non-English speaking patients required about 30 minutes to complete. Though this is somewhat more time consuming than average-length follow-up calls to English speaking patients, the efficiency of these calls may improve with practice. On this occasion, the nurse was learning to place conference calls for the first time and had never utilized a telephone interpreter before. She found the job aid helpful, but still required more time than she might otherwise have needed. She did acknowledge that she felt like she was getting faster near the end and believed that contacting non-English speaking patients in this manner was, in fact, reasonable and feasible.

The remaining 19 high priority patients required 35 minutes for a different nurse to contact each of them. There was concern initially that these high priority patients might have more complex needs and therefore require longer phone calls, but in this trial that was not the case. Despite targeting patients in higher risk populations, length of time for phone follow-up was similar to the previous average (identified by tracking logs). In the 6 months leading up the 24-hour trial, only 37% of non-English speaking patients were contacted for follow-up. During the trial, 100% were contacted. It is impossible to determine any effect on patient satisfaction or Press Ganey scores (“degree to which staff cared about you as a person” and “information given about caring for yourself at home”) at this early juncture. Much longer term trials will be required in order to make any determination about the efficacy of the trial process on these longer term metrics.

**Act.** The next steps will include progressively larger scale trials of the new process. Without longer trials it will be impossible to determine efficacy or identify additional barriers. As more nurses participate in the trial, the team will be able to gather more robust feedback and make any necessary changes to the process based on this input from staff. Additionally, nurses

who did not participate on the team may later have ideas to contribute; these suggestions will likely shape any further modifications to the process.

According to both written and verbal feedback, staff found the clipboards with reference materials extremely useful. Despite this fact, within weeks of distributing the clipboards, half of them were missing. The team was unable to identify where the clipboards had gone. More clipboards had to be constructed to replace the missing ones. Additional next steps for the team would include problem solving the issue of disappearing clipboards.

### **Outcomes**

As described above, outcomes are limited at this point in the process. Most notable was the improved percentage of follow-up with non-English speaking patients (100%) compared with previous (37%). There was insufficient time for a larger scale trial that may have had more significant impact on patient satisfaction and Press Ganey scores. Based on the trial, there was no significant improvement in staff perception that follow-up calls are beneficial to patients, but this too may be affected by the very brief trial period and small sample size. Responses to the statement “I feel comfortable answering patients’ questions during follow-up” are promising, however. The team is optimistic that the clipboards with reference materials and resource binders may be responsible for this small increase. Additionally, all nurses who provided feedback after the trial felt that having an interpreter physically present in the ED to assist with contacting Spanish speaking patients was helpful. They also felt that prioritizing high risk patients for follow-up makes the calls more meaningful. The team hopes that will longer trials and additional survey responses these trends would continue.

**Implications for Practice**

Though quality improvement efforts are still in their early stages and further trials will be required, the efforts put forth by the team are likely to result in a permanently modified follow-up call process. As a minimum, it seems highly likely that staff will begin using an in-person Spanish interpreter to contact Spanish speaking patients after discharge. An important metric to track going forward will be the percentage of Spanish speaking (or non-English speaking) patients contacted following discharge.

**Summary of Important Successes and Difficulties.** There were numerous roadblocks through this quality improvement project. The most significant have all been related to nursing leadership. An initial proposal from the team outlined a process change that involved RNs asking ED patients for permission to contact them 1-2 days after discharge. For those patients who refused, their name would be removed from the follow-up list – thus eliminating “unnecessary” calls to patients who do not wish to receive them. Additionally this proposal included the prioritization of high risk patients (similar to the 24-hour trial described above). The response to the proposal from nursing leadership was that the suggested process changes would not be permitted. According to the nursing director, ED nurses must attempt to contact 100% of discharged patients, regardless of whether the patients wish to receive a call. This dismissal of the team’s recommendations posed a serious difficulty for the advancement of the project.

Though the rejection initially appeared to be a major setback to the project, nursing leadership would later undergo an abrupt change in priority. Several months after the initial rejection, a variety of unexpected stressors were affecting ED RNs; in an effort to alleviate this stress the Nursing Director announced that follow-up calls would be stopped completely. This

hiatus was intended to be temporary, but it coincided with the scheduled 24-hour trial and had no defined end point. With permission from the Nurse Manager, the team proceeded with the trial despite the hiatus on follow-up calls. The team believes that this discontinuity in follow-up calls may actually create a “system reset” for the staff members who normally perform these calls. By taking a break from placing follow-up calls, staff may actually be primed to restart with a new process. This apparent difficulty will have transformed into a success if RNs are more receptive to the new process than they might otherwise have been.

**Project Strengths and Weaknesses.** The project was significantly limited by time. The CNL student was not able to be present in the ED daily and struggled to maintain consistent forward progress due to the disjointed nature of her time with staff. Additional time would have allowed more consistent contact with staff, longer, more robust trials, and potentially more meaningful outcomes. Another major weakness was lack of support from senior-level nursing leadership. Project strengths, however, included strong support from the ED Clinical Nurse Leader (CNL) and deep engagement from ED staff. In addition to the RNs who participated directly on the team, nearly every RN in the department contributed in some way over the course of the project. This type of quality improvement project would not have been possible without willing participants.

**Sustainability.** Moving forward, the fate of this project is in the hands of the nursing director. No postdischarge follow-up call of any kind will occur without her decision to reinstate the calls. Assuming that the calls do resume at some point, the project will continue on in the hands of the team, led predominantly by one particular change nurse. This nurse has been provided with an augmented resource binder to aid in the continuation of the project; she will be further supported by the ED CNL and the rest of the project’s team. The binder also includes

templates and job aids for tracking follow-up calls to non-English speaking patients in the event that follow-up for non-English speaking patients continues to be a focus for the project moving forward. As it currently stands, there are no significant costs associated with continuation of the project and there are willing leaders prepared to continue the work, including the current ED CNL. These factors are promising for the sustainability of the project overall.

### **Enactment of Master of Science (MSN) Essentials**

The CNL student particularly addressed MSN Essential #1 in her efforts to “bridge linguistic barriers to improve quality outcomes.” This is seen in the identification of gaps in care for non-English speaking patients and in the efforts to modify the existing process to better serve those in need. By including both in-person and telephone interpreters in the follow-up call efforts, the CNL student demonstrated competence in the ability to bridge linguistic barriers as described in the CNL Competencies.

Essential #4 (Translating and Integrating Scholarship into Practice) is also represented by this project. Proposed changes to the follow-up call process were informed by an extensive literature review, as seen in Chapter 2. Existing literature was combed for randomized controlled trials, meta-analyses, and evidence-based clinical practice guidelines relating to postdischarge follow-up calls for both the inpatient and the ED setting. This evidence was then synthesized by the CNL student and evidence-based changes were implemented with the assistance of the follow-up call team, thus demonstrating a deep appreciation for Essential #4.

Informatics was another key component of the project. The proposal to modify the EHR to display primary language in a highly visible and easy to access location in the EHR further suggests that the CNL student has made strides to bridge linguistic barriers, as noted in MSN Essential #1. Additionally, it speaks to an ability to collaborate with an interdisciplinary team in

order to maximize the efficacy of the EHR. Furthermore, the CNL student sought out electronic reports (generated from the EHR to “collect and analyze data”). These actions suggest a thorough mastery of Essential #5 by the CNL student. In the context of this quality improvement project, the CNL student demonstrated a thorough familiarity of several of the MSN Essentials, as well preliminary skills in the implementation of these fundamental competencies.

Table 1

*Results of Survey to Nursing Staff Regarding Postdischarge Follow-Up Phone Calls*

	Agree	Disagree
<b>I feel that patient follow-up calls are beneficial to our patients.</b>	22%	<b>78%</b>
<b>I believe that our patients appreciate receiving a follow-up call.</b>	<b>72%</b>	28%
<b>I feel that our current standard of work for follow-up calls adequately protects patients' privacy.</b>	28%	<b>72%</b>
<b>I understand the purpose or goal of performing patient follow-up calls.</b>	<b>74%</b>	26%
<b>I feel comfortable answering patients' questions during follow-up calls.</b>	<b>69%</b>	31%
<b>I usually have time during my shift to place follow-up calls.</b>	6%	<b>94%</b>
<b>I feel that the goal of calling 80% of discharged patients is realistic.</b>	23%	<b>77%</b>
<b>I wish that the nursing staff was held accountable for their assigned follow-up calls so that the distribution of work was more "fair."</b>	45%	<b>55%</b>
<b>I would be willing to spend an hour at the beginning of my shift to place follow-up calls if I did not also have to care for patients during that time.</b>	<b>88%</b>	12%

<b>Which group(s) of patients do you feel benefit most from receiving a follow-up call?</b>	
<b>Older Adult Patients</b>	28
<b>Patients with Complex Medical Needs</b>	8
<b>Non-English Speaking Patients</b>	7
<b>Pediatric Patients</b>	4
<b>Ortho Patients</b>	2
<b>Patients with fevers</b>	2

<b>Are there any groups of patients that you feel should NOT be contacted following discharge?</b>	
<b>ETOH</b>	10
<b>Psych</b>	10
<b>ESI Level 4s and 5s (especially suture removals)</b>	9
<b>Complex Care Plan</b>	6
<b>STDs</b>	5
<b>"Frequent Flyers"</b>	5
<b>Dissatisfied/AMA</b>	5
<b>Non-English Speaking</b>	4
<b>Homeless</b>	3
<b>Aggressive/Violent/Verbally Abusive</b>	2
<b>Pediatric</b>	1
<b>Patients Started on Antibiotics</b>	1
<b>Nursing Homes/AFC</b>	1

<b>Are there any resources you wish you had when placing patient follow-up calls?</b>	
<b>Designated Time for Calls</b>	8
<b>Interpreter</b>	3
<b>More Info on Patients/Discharge Instructions</b>	4
<b>Training About What is "Allowed" Over the Phone</b>	3
<b>Designated Person for Making Calls</b>	2
<b>Scripting/Standardization for Calls</b>	1
<b>Quiet Space</b>	1
<b>Case Manager</b>	1
<b>Pharmacy</b>	1
<b>Better Education for Patients at Time of Discharge</b>	1



Table 2

*Review of Literature Regarding Postdischarge Follow-Up Calls*

Author & Year	Design	Intervention	Outcomes	Limitations	Strengths
<b>Bahr et al., 2014</b>	Systematic review of 19 articles	Assessed impact of postdischarge telephone calls on patient outcomes (content of call, timing, and professional placing the call varied)	Evidence is inconclusive for use of phone calls to decrease readmission, decrease ED use, improve patient satisfaction, improve follow-up, and improve physical/emotional well-being of the patient; nurses unable to manage the volume of calls	Study not specific to the ED setting; study strength low; findings inconsistent; sample sizes small	Recent integrated review of existing literature on postdischarge telephone calls
<b>Balaban et al., 2008</b>	RCT comparing two discharge processes from an inpatient unit	Intervention: patients received “user-friendly” discharge form, had their medical records transferred to their PCP, had their PCP review their discharge plan, and received telephone follow-up  Control: patients received standard discharge procedures	The intervention significantly improved rates of outpatient follow-up.	Study not specific to the ED setting; study only examined patients with PCPs in the same health system as the hospital and did not identify readmissions or ED visits outside that same health system; primarily lower SES patients; intervention required patients to have a PCP; sample size small; study power low	Included non-English speaking patients and addressed language barriers with translators

<b>Baren et al., 2001</b>	RCT comparing two discharge processes for ED patients with asthma	<p>Intervention: patients received free 5-day course of prednisone, vouchers for transportation to and from their PCP, and telephone appointment reminder</p> <p>Control: patients received standard discharge procedures</p>	The intervention significantly improved rates of outpatient follow-up.	Sample only represented patients with asthma; impossible to determine which part of the 3-part intervention enhanced PCP follow-up; enrollment of patients was nonconsecutive; patients not blinded to the intervention; return visits in other Emergency Departments not tracked	Study specific to the ED setting
<b>Biese et al., 2014</b>	RCT comparing three discharge processes for older adult ED patients	<p>Intervention: patients received a telephone call from a trained nurse 1 to 3 days after discharge to review discharge instructions and assist with discharge plan compliance; the nurse facilitated home services, scheduling appointments, managing medications, and making referrals</p> <p>Placebo: patients received a patient satisfaction survey call</p> <p>Control: patients received standard discharge procedures with no telephone call</p>	The intervention significantly improved rates of outpatient follow-up within 5 days, but had no effect on return visits to the ED or the hospital within 35 days. Patients in the intervention group were nearly twice as likely as those in the placebo or control group to follow-up with their PCP.	Study performed in a large health care system with multiple providers and resources to arrange timely follow-up appointments; bias in randomization of patients to groups; the control group received a call 5 to 8 days after discharge, while the placebo and intervention groups received their calls 1 to 3 days after discharge; follow-up information was self-reported	Study specific to the ED setting

<b>Braun et al., 2009</b>	Prospective RCT comparing two discharge process for patients discharged an inpatient unit	<p>Intervention: patients received follow-up telephone calls from one of the investigators at one week, one month, and three months after discharge; patients were asked about compliance with discharge instructions and discharge medications</p> <p>Control: patients received standard discharge procedures with a call at three months only</p>	The intervention significantly improved patients' satisfaction with information about how to take their medications and with the medical treatment they received at the hospital, but there was no change in how satisfied patients were with their nursing treatment at the hospital or their discharge instructions. The intervention also increased patients' compliance with physician recommendations. There was no difference in readmission rates between the intervention and control groups.	Small sample size; sample only included 21% of admitted patients; exclusion of patients who did not speak Hebrew, Arabic, Russian, or English;	The intervention was a simple telephone call with no additional services provided to patients.
<b>Chande &amp; Exum, 1994</b>	Prospective RCT of a convenience sample comparing two discharge processes for pediatric patients discharged from the ED	Intervention: patients received follow-up telephone calls from ED physicians 12 to 30 hours after discharge; patients were reminded to fill their prescriptions, call their regular doctors, and follow any other special instructions; patients were given an opportunity to ask questions	The intervention significantly improved rates of outpatient follow-up. There was no change in compliance with filling prescriptions.	All results were self-report; sample includes only pediatric patients	The intervention was a simple telephone call with no additional services provided to patients.

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		Control: patients received standard discharge procedures with no follow-up phone call			
Cochran et al., 2012	Case study of existing postdischarge call process at one large health system; this serves as a model for practice	The postdischarge telephone call is introduced at the time of discharge from the ED (patient is informed that he or she will receive a call within 24 to 48 hours after discharge). The call ensures that patients understand home care instructions and provides an opportunity to answer questions.	Postdischarge calls are most effective at addressing both patient satisfaction and clinical outcomes when combined with other interventions. Staff attempted to contact 92.3% of patients and actually made contact with 34.5%. 1,041 “interventions” were provided to the 9,240 patients contacted. 29 patients received “immediate escalation of care.” The authors found a “positive trend” in patients satisfaction (“likelihood to recommend”) over 12 months.	This article represents only low-level evidence and represents practice at only one health care system.	Content specific to the ED setting

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<b>Goldman et al., 2014</b>	Prospective RCT comparing two discharge processes for pediatric patients discharged from the ED	Intervention: patients received follow-up telephone calls from a non-health care provider within 24 hours after discharge  Control: patients received standard discharge procedures with no follow-up phone call	The intervention doubled the rate of ED return visits.	The intervention was performed by a non-health care provider (medical students). Patients were contacted as many as 10 times during a 12 hour period, which was excessive.	Study specific to the ED setting
<b>Harrison et al., 2011</b>	Retrospective cohort study comparing discharged patients who received a postdischarge call and those who did not.	Intervention: patients discharged from a hospital in 2008 who received a telephone call within 14 days of discharge and who were not readmitted prior to that call  Control: all other patients discharged from the same hospital in 2008	The intervention was associated with reduced 30-day readmission rates.	Study not specific to the ED setting; impossible to conclusively determine impact of calls alone on readmissions	Large sample size

<b>Johnson et al., 2013</b>	Nonsystematic review of literature (11 articles)	Assessed the use of telephone follow-up to improve postdischarge processes and reduce avoidable readmissions	Telephone follow-up should continue to be explored as an option for reducing readmissions, but results are inconclusive; more information is needed.	Study not specific to the ED setting; nonsystematic, low-level evidence	The study attempts to optimize who should place discharge calls, what should be discussed during the calls, and what the optimal timing of these calls should be.
<b>Locke et al., 2011</b>	Retrospective study	Evaluated Press Ganey satisfaction survey responses and linked them to defined components of the EHR for pediatric ED patients	The impact of ED call-backs on patient satisfaction was statistically significant, but weak in comparison to wait times, waiting room comfort, overall length of stay, and being informed about delays.	Sample includes only pediatric patients	Large sample size
<b>Phatak et al., 2016</b>	Prospective, randomized, longitudinal study	Intervention: patients received face-to-face medication reconciliation, a patient-specific pharmaceutical care plan, discharge counseling, and postdischarge phone calls on days 3, 14, and 30 to provide education  Control: patients received	The intervention reduced readmissions and ED visits following discharge.	Study not specific to the ED setting; study involves multiple interventions (impossible to determine the effect of calls alone)	

		the usual hospital standard of care			
<b>Racine et al., 2009</b>	RCT comparing two discharge processes from a pediatric ED	Intervention: patients receive a follow-up phone call from the primary care practice within 72 hours following discharge from the pediatric ED; the caller counseled patients on the availability of after-hours advice and when to access the ED  Control: patients received standard discharge procedures	The intervention had no effect on the number of return visits to the ED.	Sample includes only pediatric patients; primary care practices were inconsistent with execution of the intervention; unable to identify ED visits outside the intervention medical center	Study specific to the ED setting
<b>Ritchie et al., 2000</b>	RCT comparing two discharge processes for ED patients	Intervention: patients received a telephone call one to three days after discharge to remind the patient about their outpatient appointment or offer to make an appointment if one had not yet been made  Control: patients received standard discharge procedures with no telephone follow-up	The intervention significantly improved rates of outpatient follow-up.	Small sample size	

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<b>Smith et al., 2004</b>	Prospective RCT two discharge processes for pediatric ED patients	<p>Intervention: patients received telephone asthma coaching from an MSW on day 2 and day 5 following discharge and a monetary incentive; the caller discussed with the patient the advantages of seeking follow-up with the PCP; patients who completed a follow-up received \$15</p> <p>Control: patients received standard discharge procedures with no telephone follow-up or monetary incentive</p>	The intervention significantly improved rates of outpatient follow-up, but did not decrease ED visits or hospitalizations.	Participants were not blinded to their group (intervention vs. control); sample includes only pediatric patients
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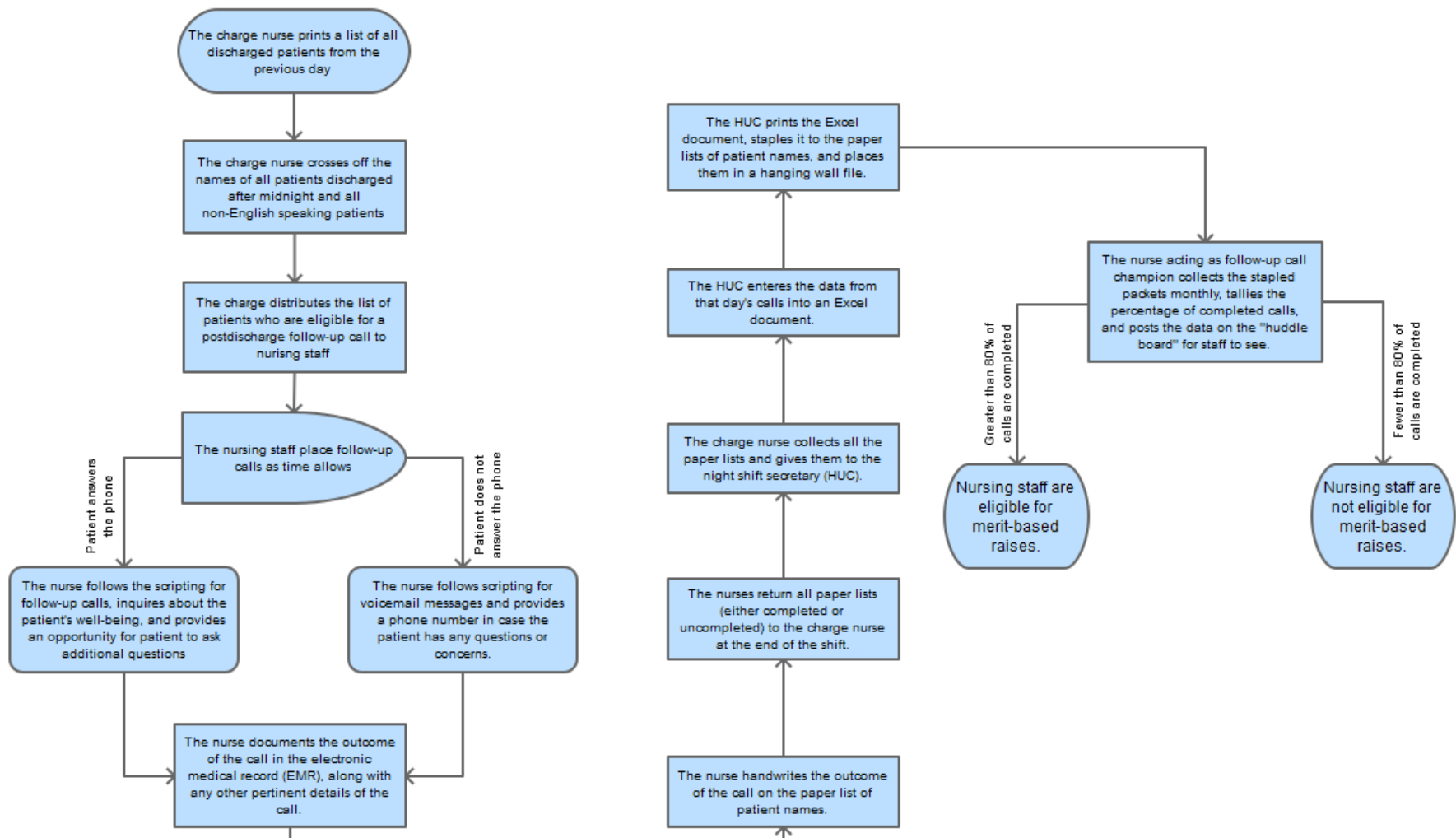


Figure 1. Flowchart for postdischarge call process in the ED. Demonstrates the process by which nursing staff identify patients for postdischarge follow-up, place follow-up calls, document the follow-up calls, and track percentage of follow-up calls completed.

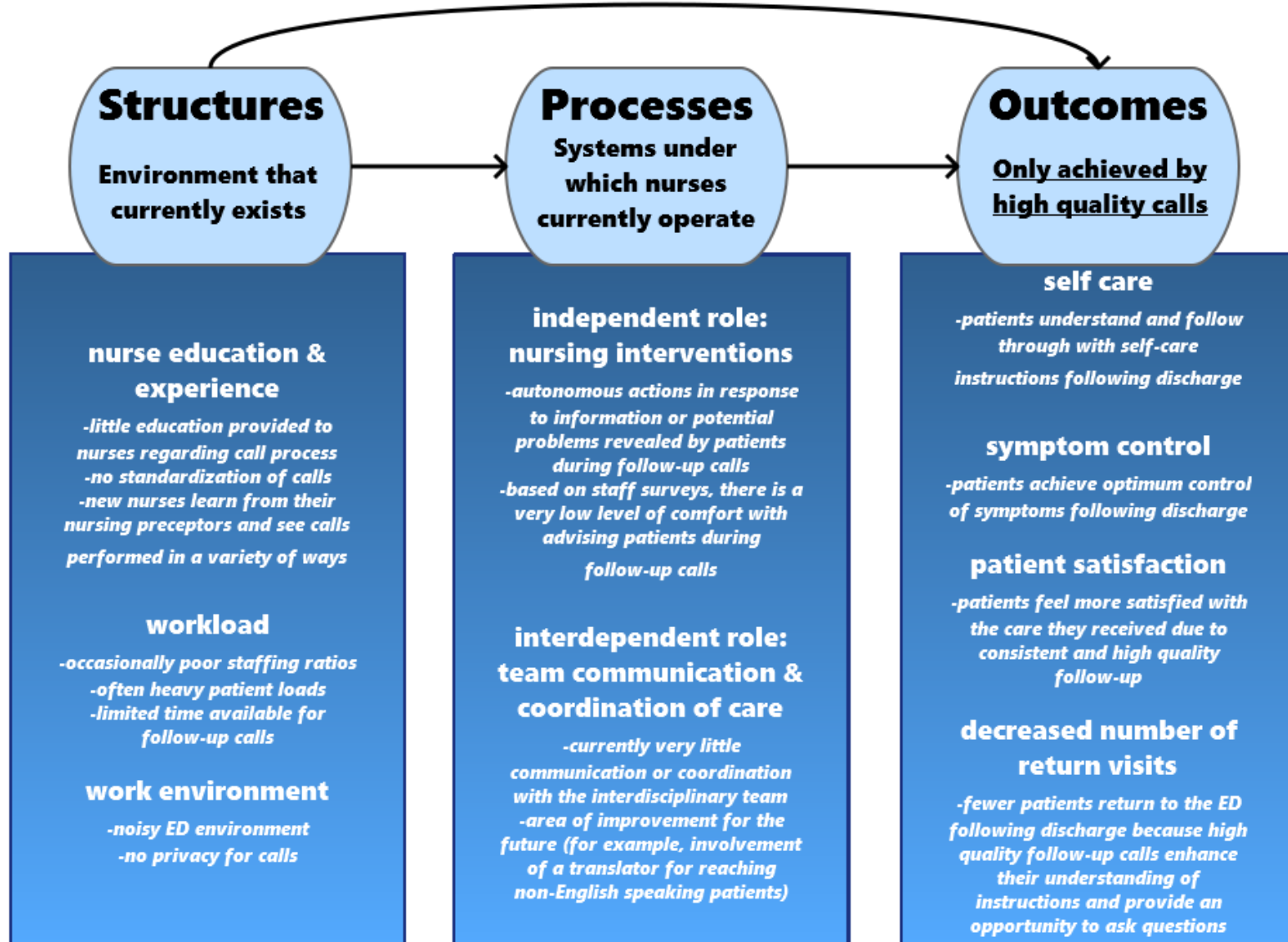


Figure 2. The Structure Process Outcome framework applied to postdischarge follow-up calls for ED patients. Demonstrates the current state for both “structures” and “processes,” as well as the desired future state for “outcomes” given an improved mechanism for follow-up calls.

**Scripting for ED Follow-Up Calls:**

Hello (...*patient name*...), this is (...*caller name*...) from Mercy Health Saint Mary's and I am calling to check on you after your recent visit to the Emergency Department.

Did your discharge instructions answer all of your questions?

Do you understand the follow-up recommendations you were given?

Is there anything else I can help you with today?

Thank you for choosing Mercy Health Saint Mary's.

*Figure 3. Scripting for follow-up calls. Provides guidance to RNs for addressing patients during postdischarge follow-up calls.*

## Appendix A

## Reference Materials for ED Staff Clipboards

If patients have a **complaint or concern...**

- *"Thank you for sharing your concerns. I apologize. I will definitely follow up with our manager."*
- Address patients' concerns by **entering them into VOICE**.
- If further assistance is needed, direct patients to **Patient Relations at 616-685-5444** and advise them that office hours are from 8:00am to 4:30pm Monday through Friday. Patients may leave a message after hours.

If patients complain of **ongoing or worsening symptoms...**

- Advise patients to **make an appointment with their PCP for follow-up**.
- You may also remind patients that **the Emergency Department is available 24-hours/day** if they feel that their symptoms have become emergent.
- **Always use your clinical judgment!** Increasing redness and swelling around a wound or infection, worsening fever, or altered mental status typically warrant emergent re-evaluation. Err on the side of caution.

If patients have **medical questions...**

- Please **DO answer basic questions about home care instructions and discharge medications**, as you would when discharging a patient. If you are unsure how to answer a patient's question, use your resources! Consult with:
  - an ED provider
  - a **clinical pharmacist at extension 56772** (Heather Draper or Kasey Brandt)
  - the **infectious disease pharmacist at extension 56368** (Lisa Dumkow)
- Please **DON'T provide test results or specific information about a patient's diagnosis**. If patients have such questions, you may refer them to their PCP.

If patients **do not have a PCP...**

- Advise them to call the **Physician Finder number (616-685-8500)**.
- Provide them with the **hours and locations for Mercy Health Urgent Care**:
  - **East Beltline location** at 1471 East Beltline NE (north of Leonard, next to Fuji Yama restaurant), 616-685-3414, open 8:00am – 8:00pm, 7 days/week
  - **Rockford location** at 6050 Northland Drive (north of 7 Mile, 1<sup>st</sup> floor of new Rockford Campus), 616-685-7961, open 8:00am – 8:00pm, 7 days/week (EXCEPT New Year's Day, Memorial Day, 4<sup>th</sup> of July, Labor Day, Thanksgiving Day, and Christmas Day)

If patients have **financial concerns...**

- Direct them to the **Financial Counselor at 616-685-6697**

## Appendix A (continued)

## Reference Materials for ED Staff Clipboards

If patients request **copies of their x-rays...**

- Direct them to the **Radiology Film Room at 616-685-6214** and advise them that office hours are from 8:00am to 4:30pm Monday through Friday.

If patients request **test results or copies of their chart...**

- *"I am not able to share that information. If your test results are positive you will be notified by mail or by phone. You may also follow up with your PCP or with HIM for further information."*
- Direct patients to the **HIM (Health Information Management) Department at 616-685-6166** and advise them that office hours are from 9:00am to 5:00pm Monday through Friday.
- Patients may also set up a **Patient Portal account, by calling 1-800-324-8163**. The Patient Portal provides instant access to patients' test results online.

If patients have **limited English proficiency...**



- Whenever possible, **page an interpreter at 397-3915**.
- If there is **no interpreter available** to make the call in person, **call 1-877-274-9745**. This can be done from **any phone** (it does not have to be the interpreter phone).
- Enter the access code, followed by the pound sign: **4309987#**
- Select the language by pressing 1 for Spanish, 2 for Mandarin, 3 for Cantonese, 4 for Arabic, or 9 for "other."
- Notify the coordinator that you are calling from the Emergency Department and that you would like to contact a patient for follow-up. They will also ask you to provide the patient's name, Medical Record Number (MRN), and telephone #.
- If you are **contacting multiple patients**, the same interpreter can **stay on the line and assist you to place additional calls**. You do **not** have to repeat the above process over and over!

A few notes on **HIPAA and liability:**

- There is nothing wrong with opening a patient's chart for telephone follow-up. Documenting in the "follow-up" form, demonstrates a clinical need to open the chart.
- If you have a question about what information you may share over the phone or you have concerns about liability...
  - During business hours, contact **Dustin Sullivan (Risk Management)** at **extension 55686**.
  - After hours, contact the **CRC (Clinical Resource Coordinator)** at **extension 55454**.

# Appendix B

## Standard of Work for Follow-Up Call Process

 <b>Standardized Work - Job Instruction Sheet</b> 			
<b>Process Name:</b>	ED Patient Follow-Up Calls	<b>Process Champion:</b>	Megan Pashnik, CNL Student
<b>Department:</b>	SMHC Emergency Department	<b>Revision #</b>	
		<b>Date:</b>	10/28/2016
<b>Page:</b>	1 of 1		
Process Description		Scheduled Time	Responsibility
Process of ED post-discharge follow-up calls.		ongoing	ED RN Staff
Process Step #:	Description of Process Step:	Est. Time (minutes):	Department Key Safety or Quality Points:
1	Patients will populate to the Follow-up tab on Cerner FN, patients will auto drop off the tab after 36 hours.	immed.	Content of Follow-up tab: Arrival time, Acuity, Patient name, dispo, follow-up, Depart time, Comments, chief complaint, age
2	Chg. RN will delete those admitted or d/c to SNF or another facility by "cancel". Chg. RN will then distribute lists to staff.	20 min.	
3	RN assigned to list will review list for high priority patients (to be called back first). Contact lower priority patients once high priority calls have been completed.	5 min.	Prioritize patients marked "start" (rather than "request"). Also focus on patients less than 15 or greater than 70 years old, and those who are non-English speakers.
3	Prior to placing calls, RN will briefly review the patient chart.	5 min.	Review chart for diagnosis and discharge instructions, rx, and general course of patient ED visit
4	Call patient using number listed on insurance page. Calls will begin after 8am on weekdays and 9am on weekends. Calls will end by 9pm. Review depart time for late d/c and call later in day when appropriate.	1 min.	When call is done "complete" the patient on the follow-up tab.

## Appendix B (continued)

## Standard of Work for Follow-Up Call Process

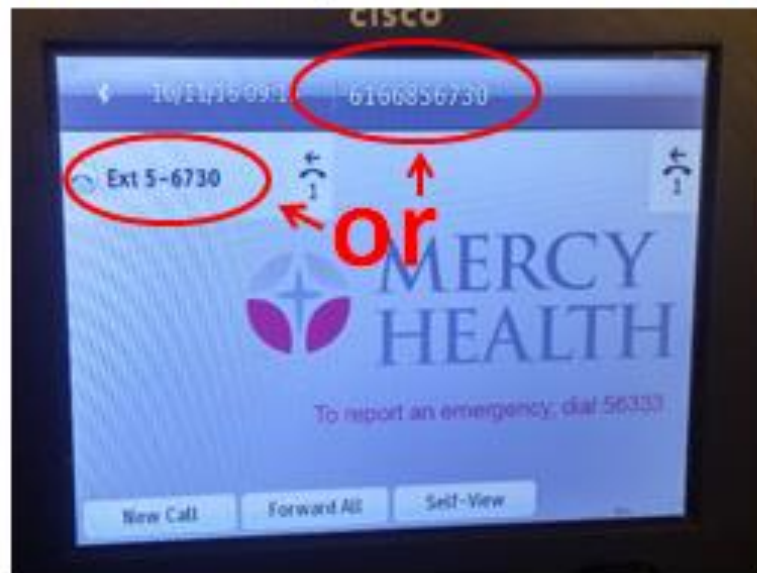
5	Script call according to the ED Follow-up call script.	5 min.	See attached script.
6	Call will be documented in the ER Follow-up Record in AdHoc.	5 min.	See documentation examples.
7	If patient is not home then leave a message concerning the purpose of the call.	1 min.	Document attempted call in f/u form. Message to be left if no answer: "Hello this is Laurie, RN from Saint Mary's Emergency Dept. I am calling to check on (pt. name). We are calling to assure that you are understanding and following your home care instructions. If you have any questions you may call your primary care provider or the Emergency Department at 685-6789."
8	Patient will be marked as "complete" on the Follow-up tab and will come off the list.	30 sec.	
9	Chg. RN will collect incomplete lists in afternoon and redistribute to night shift RNs for remaining call-backs as needed.		
10	Measure of Success: Run report of discharged patients and compare to those with completed follow-up forms.		Will monitor completion rate and Press Ganey results ("Degree to which staff cared about you as a person" and "Information given about caring for yourself at home.")

## Appendix C

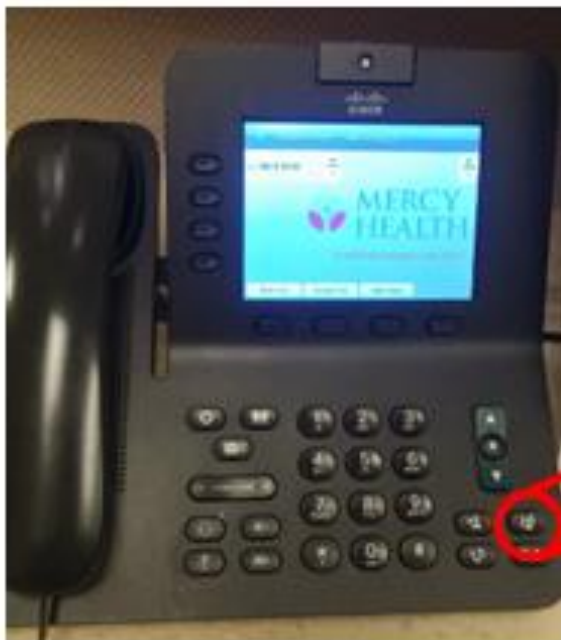
## Job Aid for Telephone Interpreters

When contacting patients with **limited English proficiency**...

- Whenever possible, **page an interpreter at 397-3915.**
- **Spanish interpreters will be present at 8:30am daily** to assist with contacting Spanish speaking patients.
- Once the interpreter is present, **ask them to call the desk phone nearest you.** You will find the number at the top of the screen or near the upper left corner.



- When the phone rings, **lift the receiver to answer the call.** Then **press the "conference call" button**, which looks like three little people:





## Appendix C (continued)

## Job Aid for Telephone Interpreters

- After pressing the conference call button, simply **enter "9" and then dial the telephone number for the patient you wish to contact**. Don't forget to dial "1" before the area code if the patient's number is long distance.



- Once you've entered the number, **press the "conference call" button again** (the one that looks like three little people), and all three phones will be connected (the interpreter's phone, your desk phone, and the patient's phone).
- When the patient answers, **speak just as you normally would**. Follow the scripting (below) for follow-up calls and **pause occasionally to allow the interpreter to speak**.

Hello (...patient name...), this is (...caller name...) from Mercy Health Saint Mary's and I am calling to check on you after your recent visit to the Emergency Department.

Did your discharge instructions answer all of your questions?

Do you understand the follow-up recommendations you were given?

Is there anything else I can help you with today?

- When the call is complete, **simply hang up to end the conference call**. The interpreter should also hang up their phone to disconnect from the call before initiating another call.
- As always, please **document the call using "ER Follow-Up Record."**
- You can then proceed with your next call following the same steps.

## Appendix C (continued)

## Job Aid for Telephone Interpreters

If there is no interpreter available to assist with the calls in-person, please use a **phone interpreter** by following these steps...

- If there is no interpreter available to make the call in person, **call 1-877-274-9745**. This can be done from **any phone** (it does not have to be the interpreter phone). You can use a desk phone or a hand-held phone.
- Enter the access code, followed by the pound sign: **4309987#**
- Select the language by pressing 1 for Spanish, 2 for Mandarin, 3 for Cantonese, 4 for Arabic, or 9 for "other."
- Notify the coordinator that you are calling from the Emergency Department and that you would like to contact a patient for follow-up. They will also ask you to provide the patient's name, Medical Record Number (MRN), and telephone number.
- If you are **contacting multiple patients**, the same interpreter can **stay on the line and assist you to place additional calls**. You do **not** have to repeat the above process over and over!

## Job Aid for Follow-Up Prioritization

Identify whether your patient is considered "high risk":

- Is your patient greater than 70?
- Less than 15?
- Does the patient speak a language other than English?
- Did the patient have a lot of questions during discharge?
- Does your clinical judgment tell you that this patient would benefit from a follow-up call?

**If you answered "yes" to any of these questions, please flag this patient immediately after discharge as a "high priority" for follow-up.**

To do so, find the patient in the "Follow-Up" tab immediately after you discharge him or her.

**Tracking Board**

GR ED All Beds | Next Pt | Triage | WR | Team 1 | Team 2 | Team 3 | Team 4 | Team 5 | Trauma | Intake | Overflow | Status | UR/CRC | Check Out | ERIP

Patient: [Redacted] | WR: 0 | Total: 568 | Avg LOS: 10:57 | Filter: GR Follow Up Filter

Arrival Time	Depart Time	Acuity	Patient	Age	Disco	Follow Up	CC	C
10/22/2016 22:43	10/23/2016 15:30	2 Emergent	[Redacted]	56 yr	Admit to inpa	Request	Hard time catchi cl	
10/25/2016 06:00	10/25/2016 16:50	2 Emergent	[Redacted]	54 yr		Request	ETOH, facial lacer	
10/25/2016 07:27	10/26/2016 19:30	2 Emergent	[Redacted]	45 yr	Admit to obs	Request	syncope episode cl	
10/25/2016 09:06	10/25/2016 21:23	2 Emergent	[Redacted]	21 yr	Psychiatric fa	Request	SI/HI, released fr	

In the column marked "Follow-Up," change the patient's status from "Request" to "Start."

Tracking Board

GR ED All Beds

Next Pt

Triage

WR

Team 1

Team 2

Team 3

Team 4

Team 5

Trauma

Intake

Overflow

Status

UR/CRC

Check Out

ERIP

Patient: [REDACTED]

WR: 0

Total: 568

Avg LOS: 10:57

Filter: GR Follow Up Filter

[Icons]

Arrival Time	Depart Time	Acuity	Patient	Age	Dispo	Follow Up	CC	C
10/22/2016 22:43	10/23/2016 15:30	2 Emergent	[REDACTED]	56 yr	Admit to inpa	Request	hard time catchi cl	
10/25/2016 06:00	10/25/2016 16:50	2 Emergent	[REDACTED]	54 yr		Request	ETOH, facial laci E	
10/25/2016 07:27	10/26/2016 19:30	2 Emergent	[REDACTED]	45 yr	Admit to obsi	Request	syncopal episodi cl	
10/25/2016 09:06	10/25/2016 21:23	2 Emergent	[REDACTED]	21 yr	Psychiatric fa	Request	SI/HI, released fr Al	

Appendix D (continued)

Job Aid for Follow-Up Prioritization

Tracking Board									
GR ED All Beds   Next Pt   Triage   WR   Team 1   Team 2   Team 3   Team 4   Team 5   Trauma   Intake   Overflow   Status   UR/CRC   Check Out   ERIP Check Out									
Patient: [REDACTED]   WR: 0   Total: 569   Avg LOS: 10:57   Filter: GR Follow Up Filter									
<div> </div>									
Arrival Time	Depart Time	Acuity	Patient	Age	Dispo	Follow Up	CC	Comment	
10/22/2016 22:43	10/23/2016 15:30	2 Emergent	[REDACTED]	56 yr	Admit to inpatient	Request	hard time catchi clean		
10/25/2016 06:00	10/25/2016 16:50	2 Emergent	[REDACTED]	54 yr		Request	ETOH, facial lacer	ETOH	
10/25/2016 07:27	10/26/2016 19:30	2 Emergent	[REDACTED]	45 yr	Admit to obs	Start	syncope/episodes	clean	
10/25/2016 09:06	10/25/2016 21:23	2 Emergent	[REDACTED]	21 yr	Psychiatric	Complete	SI/HI, released fr	Abulance	
10/25/2016 09:13	10/25/2016 21:55	2 Emergent	[REDACTED]	72 yr	Psychiatric	Cancel	MED CLEARANCE	MSW/sitt	
10/25/2016 09:13	10/25/2016 15:43	2 Emergent	[REDACTED]	54 yr	Home 01*	Collected	Pain around left t		
10/25/2016 09:31	10/26/2016 16:42	2 Emergent	[REDACTED]	74 yr	Admit to inpatient	Inlab	Left elbow pain a	clean	
10/25/2016 10:08			[REDACTED]			Not Reviewed			

Tracking Board									
GR ED All Beds   Next Pt   Triage   WR   Team 1   Team 2   Team 3   Team 4   Team 5   Trauma   Intake   Overflow   Status   UR/CRC   Check Out   ERIP Check Out									
Patient: [REDACTED]   WR: 0   Total: 569   Avg LOS: 10:57   Filter: GR Follow Up Filter									
<div> </div>									
Arrival Time	Depart Time	Acuity	Patient	Age	Dispo	Follow Up	CC	Comment	
10/22/2016 22:43	10/23/2016 15:30	2 Emergent	[REDACTED]	56 yr	Admit to inpatient	Start	hard time catchi clean		
10/25/2016 06:00	10/25/2016 16:50	2 Emergent	[REDACTED]	54 yr		Request	ETOH, facial lacer	ETOH	
10/25/2016 07:27	10/26/2016 19:30	2 Emergent	[REDACTED]	45 yr	Admit to obs	Request	syncope/episodes	clean	
10/25/2016 09:06	10/25/2016 21:23	2 Emergent	[REDACTED]	21 yr	Psychiatric	Request	SI/HI, released fr	Abulance	

That's it! You've now flagged this patient as a high priority for follow-up.

## Appendix E

## Follow-Up Call Survey

1. Which shift do you typically work?
  - ☐ Day shift
  - ☐ Night shift
  - ☐ Mid shift
2. How long have you been in your current role?
  - ☐ Less than 1 year
  - ☐ 1-4 years
  - ☐ 5-10 years
  - ☐ More than 10 years
3. Which of the following apply to you? (you may select more than one)
  - ☐ I work as a triage nurse
  - ☐ I work as a Sorter
  - ☐ I work as a charge nurse
  - ☐ None of the above
4. How frequently do you participate in placing follow-up calls for discharged patients?
  - ☐ Never (0 shifts/month)
  - ☐ Rarely (1-3 shifts/month)
  - ☐ Occasionally (4-6 shifts/month)
  - ☐ Usually (7-11 shifts/month)
  - ☐ Always (12+ shifts/month)
5. Please identify whether you agree or disagree with the following statements (based on the trial).

	Strongly Disagree	Disagree	Agree	Strongly Agree	N/A
I feel that follow-up calls are beneficial to our patients.					
I believe that our patients appreciate receiving a follow-up call.					
I feel that our current standard of work for follow-up calls adequately protects patient's privacy.					
I understand the purpose or goal of performing follow-up calls.					
I feel comfortable answering patients' questions during follow-up calls.					
I usually have time during my shift to place follow-up calls.					
I feel that the goal of calling 80% of discharged patients is realistic.					
I wish that the nursing staff was held accountable for their assigned follow-up calls so that the distribution of work was more "fair."					
I would be willing to spend an hour at the beginning of my shift to place follow-up calls if I did not also have to care for patients during that time.					

## Appendix E (continued)

## Follow-Up Call Survey

6. Which group(s) of patients do you feel benefit most from receiving a follow-up call?

- ☐ Older adult patients
- ☐ Patients with complex medical issues
- ☐ Non-English speaking patients
- ☐ Other (please describe)

7. Are there any groups of patients that you feel should not be contacted following discharge? If so, why?

8. Are there any resources you wish you had when placing follow-up calls? Is there anything that you think would assist you when making these calls?

9. Please identify whether you agree or disagree with the following statements.

	Strongly Disagree	Disagree	Agree	Strongly Agree	N/A
The clipboards with reference information have been helpful to me as I make follow-up calls.					
It is helpful to have the interpreter physically present in the ED to assist with contacting Spanish speaking patients.					
Prioritizing high risk patients for follow-up makes the calls more meaningful.					

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