Improving Transitions of Care: Emergency Department to Home

Last Revised: October 2009

National Transitions of Care Coalition

Rev.10/29/09

Acknowledgement

Funding Acknowledgement

For more information

Please visit the NTOCC website, www.ntocc.org, for additional information.

Rev.10/29/09

CONTENTS

Forward

NTOCC believes in the commitment of healthcare workers, practitioners, and leaders and in their ability to make a difference in improving transitions of care. To further NTOCC's reach for improving the quality of care transitions, we have added to our Implementation and Evaluation Plan by offering this additional module: the emergency department to home transition. The methodology used here is the same for the introductory module released in 2008—implement a plan and evaluate it to see how it is working. This document is intended to be used in conjunction with the original document, "Improving on Transitions of Care: How to Implement and Evaluate a Plan."

This plan includes evaluation questions, acceptable metrics or measures, tools, and tips applicable to emergency departments, home caregivers, and primary care offices. As with other NTOCC strategies, communication is the most important component of any plan, tool, or quality improvement effort.

Thank you for your continued dedication to making transitions safer.

Cheri Lattimer
Executive Director, Case Management Society of America
NTOCC Project Director

Introduction

Patients face significant challenges when moving from one care setting to another within the fragmented health care system. As currently structured, the U.S. health care system does not meet the needs of many patients during transitions between health care settings. The system's problems have culminated in medical errors and gross mismatches of health care resources to needs. (Chassin MR et al. JAMA 1998) Not only can poor transitions lead to poor care quality, transitions of care issues pose a financial burden for the health insurers, the government, and patients.

A constant in all episodes of care is the patient, who, with sufficient education, cultural and health literacy consideration, and empowerment can proactively facilitate necessary communication and interaction between providers. Exceptions include those with cognitive deficits, in which an empowered caregiver is a necessity. In order to improve health care in this country, patients and providers must ensure better information exchange at all stages of the health care process, and patients and their caregivers should actively participate in a standardized communication plan.

Background

The term "transitions of care" connotes the scenario of a patient leaving one care setting (i.e. hospital, emergency department (ED), nursing home, assisted living facility, skilled nursing facility, primary care physician, home health, or specialist) and moving to another. The care transition frequently involves multiple persons, including the patient, family or other caregiver, nurses, social workers, case manager, pharmacists, physicians, and other providers. An optimal transition should be well-planned and sufficiently timed. Research has shown that communication between settings or providers often fails to supply all of the information needed for optimum care.

Several studies in recent years have shown that deficiencies in health literacy, patient education, appropriate medical follow-up, and communication among health care providers to be associated with adverse event risk following ED discharge. The Office of the Inspector General reported in 2006 that 34,500 patients in 1996 and 1997 were discharged and readmitted on the same day, costing the system more than $226 million. (http://oig.hhs.gov/oas/reports/hcfa/b9900401.pdf) In 2008, investigators reported that an estimated 2.3 million emergency visits were by persons who had been discharged from the hospital within the previous 7 days.

Medication-related problems are a major concern in the ED. Recent evidence suggests that medication lists compiled as part of the medication reconciliation process in the ED are not accurate (Caglar S. J Emerg Med 2008). The identified errors included omitted medications (56%) and dosing

or frequency errors (80%); 87% of medication lists had at least one error. Another study showed that during triage, almost 50% of patients had one medication that was missed and 27% of the cases were related to the patient's chief complaint. (Shepherd G. AJHP 2009).

The ED discharge process can also be fraught with problems. In a recent study of patient and caregiver understanding of discharge instructions, the investigators assessed patient and caregiver understanding of discharge instruction in 4 domains: 1) diagnosis and cause, 2) ED care, 3) post-ED care, and 4) return instructions. Seventy-eight percent of participants demonstrated deficient comprehension in at least 1 domain. Greater than one-third of the deficiencies involved understanding of post-ED care. The authors concluded that many patients do not understand their ED care or their discharge instructions. (Engel KG et al. Ann Emerg Med 2009).

Adverse events are another concern following ED discharge. In a prospective cohort study, Forster et al found that 6% of 399 ED visits resulted in an adverse event within 2 weeks of discharge. Of these, 71% were deemed preventable by a panel of physician reviewers. (Forster AJ et al., Qual Saf Health Care 2007).

Communication with primary care providers regarding an ED visit is considered to be a necessary process, particularly for vulnerable elders (ACOVE-3 J Am Geriatric Soc 2007). In a recent survey of public health nurses and ED staff in the United Kingdom, 70% of nurses stated that they never receive notification from the ED following discharge of an older person (Dunnion ME et al. J Clin Nurs 2008).

In the year since the original Implementation and evaluation plan, numerous publications on transitions of care and quality improvement have been published. The Institute for Healthcare Improvement, under funding from the Robert Wood Johnson Foundation, recently published a How-to Guide for creating the ideal transition for heart failure patients returning home following hospitalization. (http://www.ihi.org/IHI/Topics/MedicalSurgicalCare/MedicalSurgicalCareGeneral/ Tools/TCABHowToGuideTransitionHomeforHF.htm). Although not specifically related to the ED to home transition, this document provides a great deal of useful guidance applicable to this transition.

NTOCC has built upon these findings and suggestions and developed its own recommendations as outlined below.

1. Improve communications during transitions between providers, patients, and caregivers.
2. Implement electronic medical records that include standardized medication reconciliation elements.
3. Establish points of accountability for sending and receiving care, particularly for hospitalists and nursing home providers.
4. Increase the use of case management and professional care coordination.
5. Expand the role of the pharmacist in transitions of care.
6. Implement payment systems that align incentives and include performance measures to encourage better transitions of care.
7. Develop performance measures to encourage better transitions of care

Purpose and goal of this report

The purpose of this module is to develop an implementation and evaluation outline for transitions of care tools and resources developed by NTOCC, specifically as they relate to ED transitions. The plan is intended for institutions ready to make changes in the processes their facilities use to send and receive patients. This implementation and evaluation plan will empower institutions to take the first step at measuring their own performance in transitions of care and identify areas for improvement. It may be helpful to review the primer on evaluation in Appendix F of "Improving on Transitions of Care: How to Implement and Evaluate a Plan" prior to getting started. This document is available at www.ntocc.org.

NTOCC Tool

Concept Paper
Improving Transitions of Care to Increase Quality and Patient Safety While Controlling Costs: The Vision of the National Transitions of Care Coalition

Evaluation Plan
Improving on Transitions of Care: How to Implement and Evaluate a Plan

www.ntocc.org

Evaluating and Improving Transitions of Care in Your Institution

Step 1. Select What You Plan to Study

When deciding to undertake a quality improvement project, the first step is to decide in which area to make change. Each health care system and environment is different, so the areas needing change will vary. Change is tough, both for individuals and institutions, and requires a systematic approach and commitment to be sustainable.

Keep it simple

For this module, the discussion is in the context of the patient transitioning from the emergency department (ED) to care at home by a primary care provider (PCP). There are a number of possible ED transitions. Examples include transitions to alternative receiving entities such as nursing homes or acute care settings, and other common situations, such as not having a PCP, caregiver, or care manager. The process presented here is designed to be adaptable to different scenarios.

Individuals who may need information during or after a care transition
o Patient
o Family members/caregivers
o Attending physicians
o Other providers (NP, PA)
o Primary care physicians
o Specialist physicians
o Nurses (Triage, others)
o Case managers
o Social workers
o Pharmacists
o Therapists
o Home health providers
o Insurance
o Home care providers
o ED clerk
o Others

To begin, determine the exchanges for this transition. Each exchange is where communication occurs and where evaluation may occur as well. Communication must happen between the accountable providers at all of the exchanges. For example, the accountable providers at the emergency department (e.g., triage nurse, physician, nurse practitioner, physician assistant) must communicate with the patient, family/caregiver, and PCP. When there is more than one designated accountable provider, special cautions should be taken to ensure that the actions and expectations surrounding a transition encounter are all completed. Too often each accountable provider relies on others to complete the tasks and, in the end, tasks are not accomplished, the transition encounter is fragmented or completely omitted, and the patient is at risk for poor outcomes.

Consider the following exchanges in the ED to home transition of care:

Case study: In an ED to home transfer, 3 major exchanges to address include:
    Exchange 1:   Patient arrival at ED
    Exchange 2:   Preparation in ED to discharge patient home
    Exchange 3:   Patient/client system takes over care coordination

Step 2. Assess the Current Process

An evaluation methodology can be used to walk through the key exchanges where care transitions can be affected. Consider the framework in which the transition occurs. As outlined by the NTOCC Measures workgroup, the framework will have the same basic components regardless of what transition exchange you want to affect.

Structure
Each healthcare facility/institution/department/unit has a structure by which they provide patient care. There must be accountability to providers for all patients at all steps within the transition exchange. Setting expectations for all providers can help enhance accountability and ensure the achievement of desirable outcomes.

> NTOCC Tool
> Metrics & Outcomes Workgroup
> Transitions of Care Measures:
> Paper by the NTOCC
> Measures Work Group, 2008
>
> www.ntocc.org

All patients should have a documented plan of care that takes into account the patient's (and family's or caregiver's) preferences and is culturally appropriate. Health information technology (HIT) is an important part of the communication and documentation structure of an institution and can play an important role in transitions of care. Individual organizations should have a through understanding of the capabilities and limitations of their current systems

Process
The processes involved, the information to be transferred, and the NTOCC guidance documents to aid in education, policy development, etc will be discussed for each exchange.

The processes should be embedded into the daily environment workflow or individual practitioners, whenever possible. This evaluation plan will review each of these 3 exchanges, as the evidence

suggests these areas each have considerable impact on an effective transition. This document is divided into sections discussing these exchanges in detail and include graphic representations of the process from an evaluable model; the key elements to be measured from an evaluation matrix; patient, caregiver, and staff educational opportunities; the patient "My medicine list" and other patient education tools, etc.

Outcomes

When implementing and modifying processes to improve transitions of care, knowing the outcomes to be measured is also critical in determining where there is a communication breakdown and whether improvements are affecting overall patient care. Clinical and financial outcome-oriented measures have been used for public reporting and accountability as well as for internal quality improvement activities. This document will indicate where these are applicable in the evaluation process.

Getting Started

When preparing to conduct an evaluation, a literature review about the particular area of study is conducted to identify what has been published on the transition of interest. The studies identified can enlighten those in charge of the evaluation about areas in most critical need of change and successful methods of improving transitions. A literature review of the ED-to-home transition is included in Appendix F. The literature can be a source of information on what to measure, what gains can be expected, and the mistakes or successes of others.

The next step is to develop a basic flow diagram that describes, at a high level, the processes to evaluate. A graphical presentation is illustrated on the following page. Each exchange and its related components can easily be seen. It may take several iterations to arrive at a diagram that everyone agrees is representative of the process. This is an opportunity to engage institutional leadership in the discussion about the evaluation effort and its goals.

A process map is a more detailed visual presentation about processing a transaction and all important details. It contains additional information about input and output variables, such as the structure, process, and outcome items discussed above. For additional information on process mapping, see http://www.isixsigma.com/library/content/c061030a.asp. The team should document a detailed description of each step to ensure no steps or tasks are left out. Include logistic details if they are critical to completing a particular step during a transfer (e.g., access to a copy machine during overnight shift, paging the physician and waiting for a callback, etc).

Emergency Department to Home Bi-directional Transfer

Exchange 3

Acute change in patient status dictates need for ED visit

PCP resumes patient's care

Follow-up with case manager/ ED nurse for missing information, questions or concerns

Care continues at home (self or assisted)

Exchange 1

Patient enters ED

Patient information obtained by ED clerk (insurance, contact info, chief complaint)

Patient assessed by triage nurse *MED REC* Cognitive and functional assessment

Medical provider makes assessment, orders tests/ procedures

Follow-up with PCP for missing information/ records

Patient condition managed in ED

Exchange 2

Medical provider writes discharge orders

Discharge orders confirmed and signed by MD *MED REC*

Case manager/ nurse prepares patient/caregiver for transfer back to home/PCP

Patient receives discharge instructions

Appropriate follow-up information sent to PCP/ specialists

*Medication Reconciliation occurs at this point

Rev.10/29/09

ED Arrival

Exchange 1, the arrival of the patient in the ED, is the first of the steps to evaluate. The study and measurement of the Exchange 1 components is conducted in the ED. Keep in mind the transitions here are examples of the steps to consider.

Exchange 1: Patient arrival at ED

1. Emergency department clerk obtains patient information (chief complaint, insurance provider, medical history, allergies, contact information)
2. Triage nurse assesses patient
3. Nurse performs medication reconciliation
4. Medical provider makes assessment, orders tests, procedures
5. Provider makes diagnosis, determines treatment plan, and initiates plan

---

Think about the Exchange 1 framework as discussed previously, in terms of the structure, process, and outcomes. See the example below.

Exchange 1 Framework

Structure
A. Accountable provider at point of transition (ED)
- Medical provider (MD, NP, PA) in ED
- Patient's Primary Care Provider (PCP) or surrogate (on-call provider)
- Consultants (e.g., psychiatry, neurology, cardiology, etc.)
- Nurse(s) caring for patient/triage nurse
- ED clerk
- Care/case manager/social worker
- Patient/legally authorized representative (LAR)/other caregiver
B. Plan of care
- Medication list (required medication reconciliation document)
- Medical history (medical record documents, patient/caregiver interview)
- Contact information for LAR, caregiver, patient, PCP
- Reason for visit and related information (lab data, x-rays, ECG, vital signs, symptoms)
- Plan for medical care postdischarge
- Advance directive

C. Use of HIT

    - Electronic medical record (EMR) - system specific implementation

Process

A. Care team processes

    - Medication reconciliation – compare home list to ED record

    - Physical and mental function assessment

    - Test/procedure tracking – recent labs, other diagnostic tests, ECG

    - Admission and discharge planning – care plan document by case manager/admission personnel/social worker

B. Information transfer/communication between providers

    - Contact PCP

    - Utilize shared EMR if available

    - Pending test results

    - Timeliness, completeness, and accuracy of information transferred

    - Protocol of shared accountability in effective transfer of information

C. Patient education and engagement

    - Patient education, where possible, for self-management

    - Caregiver/family/LAR education

    - Appropriate communication with patients with limited English proficiency or health care literacy

    - Use post-testing (e.g., teach-back) if possible

Outcomes

    - Patient/caregiver experience

    - Provider experience

    - Communication between ED staff and PCP/office staff

    - Health care utilization and costs (readmission, etc.)

    - Health outcome (e.g, functional status, adverse drug events, etc.; should be condition specific, if applicable)

Medication Reconciliation

Medication reconciliation is the process of creating the most complete and accurate list of medications possible, comparing that list against medication orders at ED entry and discharge, and resolving any discrepancies. Medication reconciliation is a Joint Commission National Patient Safety

goal for hospitals, including the ED, and nursing homes. In order to be in compliance with this standard, there must be documentation that the reconciliation has taken place. Many hospitals have developed forms to facilitate this documentation, some having the document also serve as a standardized physician order form for medications.

In this example scenario, the ED will most likely obtain the list of medications from the patient or interview with a caregiver.

There are several published examples of the complexity of medication reconciliation in the ED. Implementing a successful medication reconciliation process has been described elsewhere. However, specific information regarding the process in the ED is limited. The following are a few of the available resources for improving on understanding medication reconciliation programs in the ED:

Caglar S et al. Emergency department medication lists are not accurate. J Emerg Med 2008; http://dx.doi.org/10.1016/j.jemermed.2008.02.060.

Hayes BD et al. Pharmacist-conducted medication reconciliation in an emergency department. Am J Health-Syst Pharm 2007;64:1720-3.

Shepherd G, Schwartz RB. Frequency of incomplete medication histories obtained at triage. Am J Health-Syst Pharm 2009;66:65-9.

Legacy Health System Medication Reconciliation: Bridging Communications Across the Continuum of Care (supported by grant number 5U18HS015904-02 from the Agency for Healthcare Research and Quality (AHRQ)).

For each of the Exchange 1 goals, choose what data to collect and where the information is documented. By looking at the framework, determine which elements to affect and where changes need to take place.

Evaluation Questions for Patient Arrival at ED:
- Question 1: Was the appropriate information obtained on entry to the ED?
- Question 2: Was medication reconciliation performed?
- Question 3: Did staff assess functional status and cognitive function?
- Question 4: Did staff communicate with the patient's PCP?

Step 3. Determine Your Current Level of Performance

A key component of an effective transition is communication of the appropriate information to the receiving care providers. In the case of the ED-to-home pathway, the patient/client system (family, other caregivers) carry a high level of responsibility for communicating information on entry to the ED. Based on a literature review and interviews with care providers in the ED and home care setting, make a list of the key pieces of information to measure. A description of each evaluation question will help clarify what is being asked, where the information will be found, and how it will be collected and reported. See the Evaluation Matrix for Exchange 1 on page 19.

> **💻 NTOCC Tool**
>
> Metrics & Outcomes
> Workgroup
>
> Assigning Existing Measures
> to the NTOCC Framework
> for Measuring Transitional
> Care
>
> www.ntocc.org

Evaluation Question 1: Was the appropriate information obtained on entry to the ED?

Table 1 lists 8 items, two of which address metrics identified as health care quality indicators by ACOVE (see Appendix D for summary document) and two Joint Commission National Patient Safety Goals (Appendix F). The input of ED stakeholders also needs to be considered. Having as many stakeholders as possible participating in this process is critical, since they do not all have the same needs (e.g., administrative, clinical, financial, etc.). There may be information needed by the ED that was not discovered during the literature review.

For the sake of this evaluation, there is no consistent method of documenting which information is sent during a transition from home to the ED. Number and percent will be reported for each measure.

Evaluation Question 2: Was medication reconciliation performed?

Medication reconciliation can be assessed as a static event (i.e., performance documentation by signature and completion of a medication reconciliation form) and by detecting errors that occurred during the process (i.e., medication discrepancies resolved). This addresses the Joint Commission National Patient Safety Goal on medication reconciliation. This goal is particularly challenging to meet in the ED.

Medication reconciliation in the ED is often performed by a nurse/triage nurse. Demonstration projects using a pharmacist have been conducted, although this appears to be an unrealistic expectation based on the national pharmacist shortage (Bridgeman PJ. Am J Health-Syst Pharm 2008).

If an institution requires electronic ordering of medications, it should develop specific instructions for the multidisciplinary team members to assure an accurate and complete medication reconciliation process. An example of one health system's process is available at the Legacy Health System website. http://www.legacyhealth.org/body.cfm?id=1878.

The form and system used to record admission medications, whether paper or electronic, should include a minimum set of data elements. NTOCC developed a document containing suggested common/essential data elements for medication reconciliation (see Appendix H).

> NTOCC Tool
> Tools & Resources Workgroup
>
> Suggested Common/Essential Data Elements for Medication Reconciliation
>
> www.ntocc.org

As there is a direct relationship between adverse drug events and medication discrepancies during admission or discharge, it may be beneficial to measure and plot the rate of adverse drug events as a means of assessing performance on achieving the objectives for medication reconciliation.

Evaluation Question 3: Did staff assess cognitive function during the ED visit?

The Society for Academic Emergency Medicine (SAEM) Geriatric Task Force in 2009 published a series of ED-specific quality indicators for older patients in order to help practitioners identity quality gaps in the ED. One of the areas of attention was around cognitive assessment. Knowledge of an individual's cognitive status will help determine how they are managed during discharge and if they will be able to take care of themselves at home or need assistance upon leaving.

The SAEM Task Force considered the quality indicators regarding cognitive assessment (see Appendix C) to be applicable to older patients, defined in the project as those over the age of 65 years.

This assessment should be documented in the patient's medical record if it occurred. Number and percent will be reported.

Evaluation Question 4: Did staff communicate with the patient's PCP?

When patients with chronic illnesses enter the ED, especially when they are patients who have been in the hospital or ED recently, it is critical to communicate with the patient's PCP. There is an ACOVE-3 measure that states if a vulnerable elder is treated in an emergency department, there should be documentation that communication with a PCP or an attempt to reach the physician occurred during the ED visit.

For each evaluation question, aggregate the information based on the measure (e.g., number of patients transferred for whom there was a documented communication or attempt at communication with the PCP during the ED visit). Data will be reported as a number and percent for each measure.

Table 1. Evaluation Matrix for Exchange 1

Measure	Data source	Reporting Guidance
Evaluation Question 1: Was the appropriate information obtained on entry to the ED?		
1. # patients with documented patient name, address, birth date, and phone number (patient/caregiver interview, EMS)	ED medical record	Number and percent
2. # patients with documented reason for visit (EMS transfer form, verbal)	ED medical record	Number and percent
3. # patients with documented medical problem list (EMS, patient/caregiver interview)	ED medical record	Number and percent **(Transitions of Care Consensus Conference - Care plan/transition record standard)**
4. # patients with medication list upon arrival (personal medication list, medication supply (prescription) supply, patient/caregiver interview)	ED medical record	Number and percent **(Joint Commission – National Patient Safety Goal 8, Medication Reconciliation)**
5. # patients with documented allergy list (patient/caregiver interview)	ED medical record	Number and percent
6. # patients with documented advance directive (DNR status, living will, patient/caregiver interview)	ED medical record	Number and percent *(ACOVE-3 QI, End-of-life care, No. 4 and 9)*
7. # patients with documented test results/pending results (lab reports, patient/caregiver interview)	ED medical record	Number and percent
8. # patients with documented physician contact name and phone number (patient/caregiver interview)	ED medical record	Number and percent **(Joint Commission – National Patient Safety Goal 2, Communication among caregivers)** *(ACOVE-3 QI, Continuity and coordination of care, No.1)*
Evaluation Question 2: Was medication reconciliation performed?		
9. # patients for whom there was a completed and signed medication reconciliation form	Ed medical record	Number and percent **(Joint Commission – National Patient Safety Goal 8, Medication Reconciliation)**
Evaluation Question 3: Did staff assess cognitive function during the ED visit?		
10. # patients 65 years of age or older that had documented cognitive function assessment during the ED visit	ED medical record	Number and percent **(Society for Academic Emergency Medicine Geriatric Task Force QI 1.)**
Evaluation Question 4: Did staff communicate with the patient's PCP?		
11. # patients that had documented communication or attempt to communicate with the PCP by ED staff during the visit	ED medical record	Number and percent *(ACOVE-3 QI, Continuity and coordination of care, No.7)*

In order to gather the data outlined in the evaluation matrix, a data collection instrument is essential. The number of ED admissions reviewed depends on facility size. A review of ten admissions may be acceptable for a small hospital, whereas a large hospital with a very active ED may want to review 20 or more ED visits. The number could be based on a time frame; for instance "review 1 ED visit on each shift daily over a 7-day period." Based on the information in the evaluation matrix, a data collection form is developed to complete the baseline analysis.

The Institute for Healthcare Improvement has a philosophy of performing "small tests of change." In this spirit, an institution may decide to measure and monitor only 1 or more of the evaluation questions, and only selected components, as the initial effort in the evaluation. The goal is to get the process started. If the resources are not available to conduct a full scale evaluation, get started with something manageable.

Rev.10/29/09

Sample Data Collection Instrument

Entry to ED

Patient name: _____ Date and time of entry: _____

Person collecting information: _____

Question - ED medical record (or similar document) contains:	Response*	
1. Patient contact information (name, birth date, address, and phone number); any missing information scored as a "No"	☐ Yes	☐ No
2. Reason for visit (check method) ☐ EMS transfer form ☐ verbal communication with patient/caregiver	☐ Yes	☐ No
3. Medical problem list (ED medical record)	☐ Yes	☐ No
4. Medication list (ED medical record, pharmacy records)	☐ Yes	☐ No
5. Allergy list (ED medical record)	☐ Yes	☐ No
6. Advance directive (ED medical record, DNR status, living will)	☐ Yes	☐ No
7. Recent lab work (ED medical record, laboratory records)	☐ Yes	☐ No
8. Physician contact name and phone number (Ed medical record)	☐ Yes	☐ No
9. Medication reconciliation form completed and signed (ED medical record, pharmacy records)	☐ Yes	☐ No
10. Cognitive function (65 years and older) assessed in ED (ED medical record)	☐ Yes	☐ No
11. PCP contacted or attempt was made to communicate with the PCP during ED visit (ED medical record)	☐ Yes	☐ No

* Indicate "Yes" if asked and information not available. Provide notation in comments.

Comments:

_____

_____

_____

_____

_____

_____

Rev.10/29/09

Summarizing Your Results

After collecting the information for the transition, aggregate the numbers and prepare the information for dissemination. Many organizations and individuals realize that the current state is not ideal, but they cannot see how their actions or their system are part of the problem. One way to illustrate the problem and get individuals to engage in the process is to show them what is happening in their institution and to give concrete examples. In the ED it may help to include a setting-specific example to illustrate the implications of poor transitions.

> *"The patient presented to the emergency department (ED) in extreme pain and was found to have a ruptured abdominal aortic aneurysm (AAA). Although his DNR form was with him, neither the ED staff nor the consulting surgeon looked at it. The patient was rushed to the operating room (OR), where his AAA was repaired. Postoperatively, an internist came upon the DNR form in the patient's chart and discussed resuscitation preferences with the patient and the family. The patient reconfirmed his desire to avoid resuscitation and heroic procedures, expressing anger that he had been taken to the OR for the AAA repair." Source: AHRQ*

The figure below is a sample graphical display of the findings. It is visually clear which areas need the most work.

Sample of Baseline Evaluation Graph
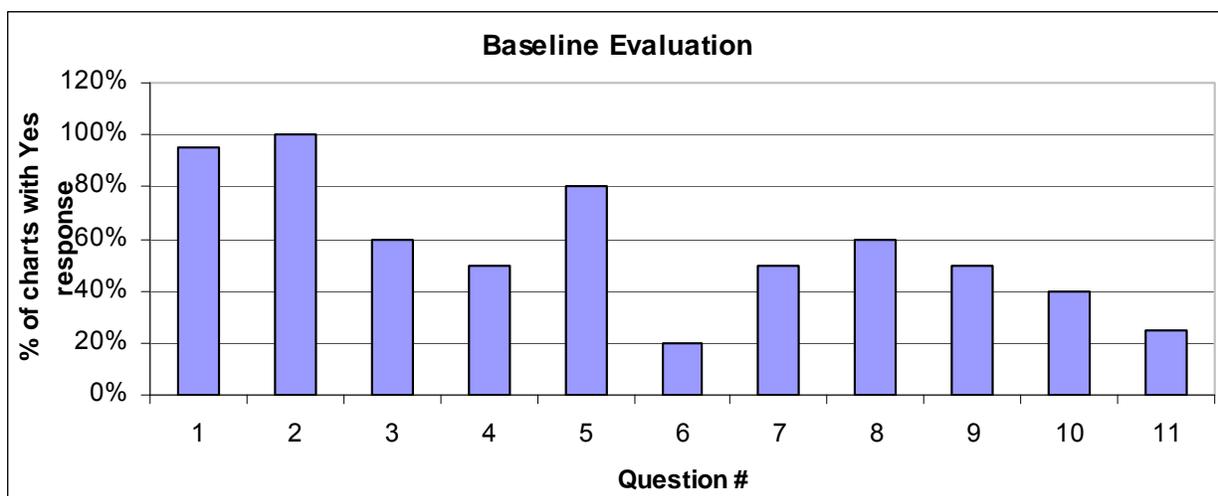
Sample Results of Baseline Assessment

Entry to ED

Background/time table: Due to the increasing concern about communication during transitions of care, XXXXXXXX facility conducted a baseline assessment of performance in communication involved with patients admitted to the emergency department (ED). Review of the ED medical records was conducted to determine the level of documentation for the evaluation questions.

Objective: To assess baseline performance and gathering of information during and following ED encounters.

Method: A data collection instrument was developed to gather information on 11 measures relevant to the transition. A review of the ED medical record was conducted to determine the level of documentation. A data collection form was filled out for each of 20 ED visits.

Results (20 transfers)

Measure (from ED chart review)	Response		% Compliance
	Yes	No	
1. Patient/caregiver contact information	19	1	95%
2. Reason for ED visit	20	2	100%
3. Medical problem list	12	8	60%
4. Medication list	10	10	50%
5. Allergy list	16	4	80%
6. Advance directive (DNR status, living will)	4	16	20%
7. Recent lab results (lab reports)	10	10	50%
8. Physician contact name and phone number	12	8	60%
9. Medication reconciliation form completed	10	10	50%
10. Cognitive function assessed	8	12	40%
11. Communication with PCP documented (or attempted)	5	15	25%

The information presented above indicates areas where improvement can be made. Discussions with the staff may help uncover reasons why all of the information necessary to care for a person entering the ED in not being collected. Examples of information obtained from these conversations include:

- o Staff had difficulty obtaining past information from family members/friends, etc. when the patient could not provide the information. In addition, many of the ED visits occurred during hours when the PCP's office was closed.
- o Many times the patient had not decided on DNR and the family/caregivers were uncomfortable making that decision.

o During intake, stress levels are often high and the staff doesn't always remember every piece of information they are supposed to obtain. A member of the staff suggested disease/condition-specific clinical point-of-care orders.

Step 4. Determining Your Intervention Strategy

There are several key issues that need to be addressed in developing intervention strategy:

- Shared accountability between sender and receiver; sender is accountable for patient care until the receiver has positively acknowledged assumption of patient care. There should be a period of shared accountability; a period when active communication occurs between the sender and the receiver.
- Timely interchange of key information (see transition record components) with special attention to medication reconciliation.
- Use HIT when possible to facilitation implementation
- Patient and caregiver education and empowerment, such as use of transition coaching. This includes understanding of patient culture, consideration of patient's health literacy level, understanding self-management of diseases/conditions, and understanding responsibility for care at each transition point
- Identification and respect for the care coordination hub (see diagram)

After it is determined what is happening around ED entry in the facility, it is time to decide on what to change and how to accomplish it. Consider the structure, process, and outcome framework discussed in Step 2.

Based on the current structure for Exchange 1, the medical provider (MD, NP, PA), the ED clerk, the care/case manager, social worker, the nurse providing care, and the legally authorized representative/caregiver are accountable in the transition process.

The first step might be to create a policy and procedure document and educate the staff on exactly what information should be obtained when a patient

NTOCC Tool
Education & Awareness Workgroup
- Consumers
- Healthcare professionals
- Media
- Policy makers

Tools
- My Medicine List
- Taking Care of My Health Care
- Medication reconciliation essential elements data specifications

www.ntocc.org

enters the ED (based on evaluation question 1). Staff need to take ownership of this process so that there is accountability. Identifying a specific individual to perform this task will minimize confusion. Sharing the findings from the baseline evaluation and specific examples of problems caused by either incomplete information or poor documentation during the transition will reinforce the need for a change, such as a new policy.

Conceptual Model for Transitions of Care
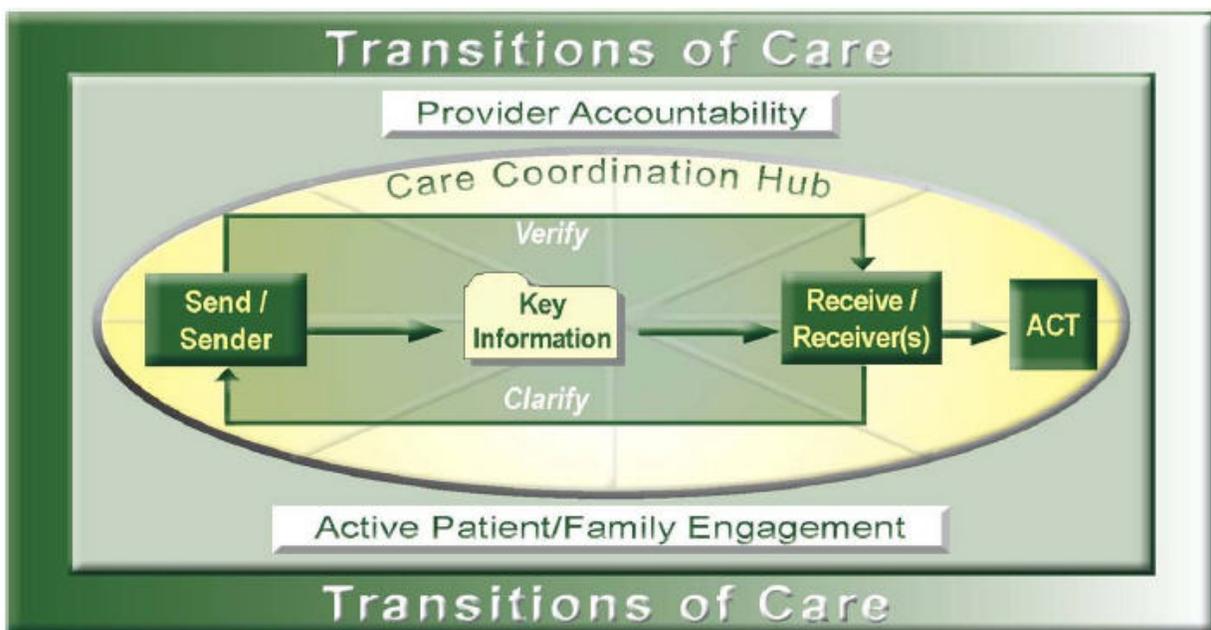
Source: Transitions of Care Measures. Paper by the NTOCC Measures Work Group, 2008. Available at http://www.ntocc.org/Portals/0/TransitionsOfCare_Measures.pdf

Some states have instituted universal transfer forms or "Continuity of Care" documents that are required by law to be filled out at the time a patient transfers out from any institutional setting (e.g., Rhode Island, New Jersey). Although not designed for ED entry, it can provide useful information, particularly with regard to the deficits identified during the baseline evaluation (See **Sample of Baseline Evaluation Graph on 21**). This form contains all of the elements discussed so it can be used as a resource for individual EDs to assess if their EMR or paper documentation system is capturing the necessary information.

An institution may decide to roll out interventions one at a time, or to initiate several interventions at once. Just make sure that the available resources meet the staff needs; staff will have to initiate and follow through on the intervention. The team must develop tools once they have determined which interventions to roll out. For example, assign responsibility for writing of a policy and procedure, a revised, updated ED intake form or process, and modified versions of documents already in use. Below is a sample of how an institution might organize a simple policy and procedure for gathering important information on entry to the ED.

When determining interventions, always consider how they might fit into the current workflow. This can involve a formal workflow analysis or be accomplished through a discussion among relevant personnel in the department. This discussion aids in reducing duplication of effort, creating streamlined processes, and minimizing extra effort by staff. The fewest staff behavior changes needed for the intervention to be fully employed is likely to improve acceptance and compliance.

Sample Policy and Procedure

Policy and Procedure for ED Entry/Triage Information	
Title: Appropriate and patient centered information for entry and assessment in the emergency department	Approved by:
	Approved by:
Effective date: Sept 1, 2009	Revised:
Purpose: o To make clear the appropriate information that should be included with a patient when they are assessed in the emergency department o To set responsibility among the professional staff and support services with respect to obtaining this information o To maintain patient centered care by involving the patient and their family member or legally authorized representative whenever possible	
Procedure: One key individual involved in the care of the patient (e.g., the ED clerk and triage nurse) will carry the responsibility for coordinating the transfer process. This individual will ensure that all necessary action has been taken to: a) gather all necessary documents and information for entry and triage in the ED b) communicate with the patient's primary care physician c) communicate with the patient's family or legally authorized representative d) document all communication attempts and activities in the patient's ED medical chart	

Sample Universal Transfer Form

New Jersey TRANSFER FORM   *revised 01/06/2009*

1.	2.
TRANSFER FROM: _____ TRANSFER TO: _____	Date of transfer: _____ Time of transfer: _____:_____ ❏AM ❏PM

3. PATIENT NAME: LAST	FIRST	MI	DOB	4. LANGUAGE: ❏English Other:_____

5. CONTACT PERSON (Family/Other): Name: Phone:	6. CODE STATUS: ❏DNR ❏DNH ❏DNI ❏Out of Hospital DNR attached

7. PHYSICIAN Name: Phone:	8. If questions about patient, call: Name: Phone:

9. REASONS FOR TRANSFER: *Must include brief medical history and recent changes in physical function or cognition.*

V/S: BP_____ P___ R___ T___ PAIN: ❏None ❏Yes: Rating_____ Site_____ Treatment_____

---

10. DIAGNOSIS: Include mental health.
❏Pacemaker ❏Internal Defib.

11. AT RISK ALERTS: ❏None	12. RESPIRATORY NEEDS: ❏None	13. ISOLATION / PRECAUTION:
❏Falls ❏Harm to: ❏self ❏others ❏Pressure Ulcer ❏Restraints ❏Aspiration ❏Limited/non-weight bearing: ❏Wanders ❏Left ❏Right ❏Elopement ❏Other: ❏Seizure	❏Oxygen: Device: _____ Flow Rate:_____ ❏CPAP ❏BPAP ❏Trach. ❏Vent ❏Attach related details ❏Other:	❏MRSA ❏VRE ❏ESBL ❏C-Diff. ❏Other: Site: Comments:

14. ALLERGIES:	15. MENTAL STATUS:	16. SENSORY:	17. FUNCTION:		
				Self	Help	Not Able
❏None ❏Yes, List:	❏Alert ❏Forgetful ❏Oriented ❏Unresponsive ❏Disoriented ❏Depressed ❏Recent Change ❏Other:	Vision: ❏Good ❏Poor ❏Blind ❏Glasses Hearing: ❏Good ❏Poor ❏Deaf Hearing Aid: ❏L ❏R Speech: ❏Clear ❏Difficult ❏Aphasia	Walk Transfer Toilet Feed	❏ ❏ ❏ ❏	❏ ❏ ❏ ❏ ❏ ❏ ❏ ❏

18. SKIN CONDITION: ❏No wounds ❏Yes, wound type: Pressure, Surgical, Vascular, Diabetic, Other   ❏See Attached

Site:_____ Type (circle): P S V D O Size/Stage:_____ Comment:_____

Site:_____ Type (circle): P S V D O Size/Stage:_____ Comment:_____

19. DIET	20. IV ACCESS: ❏None	21. IMMUNIZATIONS:	22. BOWEL:	23. BLADDER:
Special: ❏Tube feed ❏Supplements Comments:	❏PICC ❏Saline lock ❏IVAD ❏Other:	❏Flu Date: _____ ❏PPV Date: _____ Other: _____ Date:_____ Other: _____ Date:_____	❏Continent ❏Incontinent Date last BM:_____ Comments:	❏Continent ❏Incontinent Comments:

24. PERSONAL ITEMS SENT WITH PATIENT: ❏GLASSES   HEARING AID: ❏L ❏R   DENTURES: ❏Upper/Partial ❏Lower/Partial
❏Walker ❏Cane ❏Other:

25. ATTACHED DOCUMENTS: *MUST ATTACH CURRENT MEDICATION INFORMATION* ❏Face Sheet ❏MAR ❏Medication Reconciliation
❏TAR ❏POS ❏Diagnostic Studies ❏Labs ❏Operative Report ❏Respiratory Care ❏Advance Directive ❏Code Status
❏Discharge Summary ❏PT Note ❏OT Note ❏ST Note ❏HX/PE ❏Other:

26. REPORT CALLED IN BY: ❏Not called Name: Title:	27. REPORT CALLED TO: Name: Title: Unit:

28. FORM COMPLETED BY:
Name: Title: Signature:

©2009 Permission granted to copy documents with attribution to the New Jersey Universal Transfer Form Development Team.

Rev.10/29/09

Step 5. Implementing Your Intervention Strategy

Planning the implementation is likely the most important aspect of this step. All accountable providers and staff will need to be involved. Consider all the factors ahead of time, anticipate problems, and develop a strategy for what to do when problems arise.

For implementation, it will be important to fully describe all facets of what is to be implemented. Creating a brief summary of the events conducted to date will help get the leadership support needed for the implementation to be successful. It is likely that the ED medical director, clerks, triage nurses, and the director of nursing have already been included up to this point, but there will be others who have not been involved but will be important for a successful outcome of the evaluation.

The ED is a setting with a high acuity level serving patients with a broad range of medical conditions. Patients often come from home without much preparation and therefore without important information needed by ED providers. The ED staff can do little to change this other than educate individuals and caregivers regarding preparation for future events.

Use of on-line health information data repositories like Google Health and Microsoft Health Vault are systems that are evolving for use in this settings. Some integrated health systems have EHRs that contain essential information, but out-of-system ED access generally precludes use of these data at this point in time.

Learn from Others

Several published reports of quality improvement programs in the ED have been published on transitions of care. A review of these might help generate ideas about how and where to implement change. See Appendix J for a list of programs and how to access them.

For Exchange 1, the following are possible interventions:

Education and Training:
- inservices for the staff on
    - ED entry/triage information
    - results of evaluation – key areas that need improvement (i.e., medication reconciliation, advance directives, cognitive assessment)
    - the newly created policy and procedure

Rev.10/29/09

- an article for local media about the need for patients and caregivers to keep health information up-to-date in case of an emergency and possible ED visit with a focus on problem areas
- communication with community physician practices about the ED efforts for improving care transitions and how to prepare patients for unanticipated emergencies

Assigning responsibility:
- ED medical director – coordinate preparation of policy and procedure
- ED triage director – inservice on medication reconciliation
- Director of ED nursing/staff development coordinator – inservice for all staff on evaluation results.

It may also be helpful for those involved to identify barriers to change. This will allow for a rational approach to involving other stakeholders in the process. The Joint Commission recently published a results of a study looking at barriers to EDs' adherence to four medication safety-related National Patient Safety Goals. This might serve as a useful resource when evaluating barriers at an individual ED (Juarez A et al. Jt Comm J Qual Patient Saf 2009).

Step 6. Determine Your Degree of Success

Reassess your performance at an agreed upon time. Early in the intervention, this may include a weekly update at staff meetings. A formal assessment will likely be held monthly early in the intervention, and change to quarterly after the program has become part of the routine process. The formal assessment will involve repeating the actions performed in the baseline assessment. It is important to display the finding of the reassessment in a way that compares it to baseline results. This is necessary for internal benchmarking purposes and to quantify the degree of improvement the staff has achieved.

Keep in mind the process has likely changed since the baseline assessment. For example, a new tool or process implemented may have changed how something needs to be measured. Adapt the evaluation process as the system and transition process changes. See the sample post-intervention summary on the following page.

Step 7. Make Any Modifications Necessary to the Intervention

This is the step in the process where the organization needs to look at what has been accomplished, what lessons have been learned, and decide where modifications are needed.

For our theoretical example, a few areas stood out as still needing improvement (compliance <80%), post-intervention:

- advance directives
- medication reconciliation
- cognitive assessment

Make an effort to discover barriers to performance on these measures. Discussion with ED clerks, triage staff, physicians, social workers, and other staff for feedback about improving these areas may be a simple but direct way of determining what modifications are needed.

For example, limited staff time to conduct medication reconciliation on entry to the ED could be a process barrier. Several studies have documented this as an issue in the ED. A study conducted in a 752-bed regional trauma center utilizing a pharmacist-conducted medication reconciliation as the comparison, found that clinicians' medication reconciliation were commonly incomplete and inaccurate. Some of the inaccuracies identified were clinically significant. (Miller SL et al. Ann Emerg Med 2008)

Barriers identified by the investigators included:
- poorly informed patients.
- use of multiple pharmacies
- use of samples dispensed by physicians' offices
- use of mail order pharmacies
- prescriptions obtained through the internet
- purchase of drugs from another country.

After identifying a barrier and a strategy to intervene, it can be useful to monitor progress achieved over time. Developing a simple chart showing the percent compliance is one method to monitor progress.

Since there may only be a few issues worthy of monitoring, it makes the process of looking at trends easier. A simple trend chart with only four of the questions represented is shown below.

Sample Trend Chart
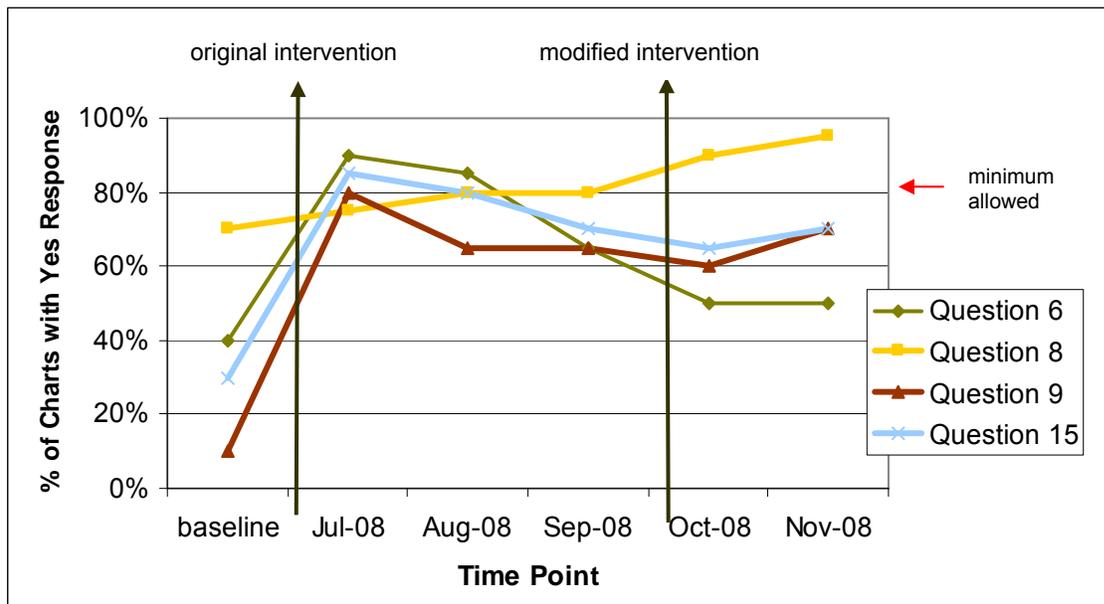
A trend chart shows where the organization has been over time. Staff changes or other factors will necessitate the need for periodic reminders (via a institution newsletter or emails) or more formal educational inservices at regular intervals to keep the interventions at the predetermined threshold levels. If there are modifications to the intervention, redeploy the intervention with the changes and measure again every 30 days and report findings to the quality management committee.

Sustain the Interventions

Following steps 1 through 7, it is important that the positive changes are maintained and that staff members do not slip back into old habits. The process of collaborating with other institutions and developing the interventions and tools should be shared with other sites. A few steps may be helpful for sustaining the efforts once staff has become well-versed in the process.

- Share results within the organization. Keep staff informed of progress, successes, and failures.
- Share results outside of the organization. Present your process and findings at local, state, and national levels.
- Expand the scope of measured outcomes beyond ED to home patients to include all patients transferring into, out of, or within the facility, regardless of starting or destination points.
- Focusing on a key area of concern, such as medication reconciliation, is also a way to broaden the project's scope.
- Look for participation from other departments and/or disciplines. Educate other disciplines on their role in improving quality and safety of health care delivery as it relates to transitions of care.

Keep in mind if you plan on presenting in a public forum or publishing your findings, the project will need ethical review and/or oversight by an Institutional Review Board.

Appendices

Appendix A: Preparation in ED to Discharge Patient Home

Step 1. Select What You Plan to Study

As discussed on page 8 for Exchange 1, decide what you want to study. Here are the basic steps for Exchange 2, preparation in the ED to discharge the patient back to the home setting

---

Exchange 2: Preparation in ED to discharge patient home

1. Physician writes discharge orders and dictates transition document
2. Case manager/discharge planner contacts home providers to coordinate patient's return home.
3. Patient/family counseled on medication changes (medication reconciliation, My Med List)
4. Patient/family counseled on physician orders, pending tests/results, appointments scheduled, and medical condition "red flags"
5. Transition record is provided to patient/caregiver; appropriate information sent to specialists/PCP office

---

For Exchange 2, the ED prepares for transfer of the patient back to their previous care setting, the home. Depending on the circumstances, a number of resources may need to be accessed; in home rehabilitation and/or nursing care, new medications, wound care management, etc. The study and measurement of Exchange 2 processes takes place in the ED environment.

Step 2. Assess the Current Process

Exchange 2: Structure, Process, Outcome

Structure
A. Accountable provider at point of transition

- Medical provider (MD, NP, PA)

- Nurse(s) caring for patient

- ED clerk

- Care/case manager/social worker

- Patient/LAR/other caregiver

Rev.10/29/09

B. Plan of care
- Transition record
- Medication list (completed medication reconciliation form, My Medicine List)
- Scheduled appointments
- Pending tests
- Discharge instructions
- NTOCC Patient Care Tool

C. Use of HIT
- Electronic medical record (EMR) - system specific implementation

Process

A. Care team processes
- Medication reconciliation – comparison of admission and discharge medications
- Test tracking – forward labs obtained during ED visit, acknowledge any pending labs
- Test scheduled – labs or other procedures, date of testing
- Referral tracking – indicate any referrals, consultants
- Discharge planning – in-home nursing care/other support
- Follow-up appointment(s) – include contact name/phone, date of appointment
- Follow-up information to PCP

B. Information transfer/communication between providers
- Timeliness, completeness, and accuracy of information transferred
- Protocol of shared accountability in effective transfer of information

C. Patient education and engagement
- Patient preparation for transfer – discharge instructions provided to patient/caregiver
- Patient education for self-management – medical condition/procedure "red flags"
- Patient personal "My Medicine List" – provided to patient/caregiver
- Appropriate communication with patients with limited English proficiency
- NTOCC Patient Care Tool

Outcomes
- Patient experience – CAT-T
- Provider experience – survey
- Health care utilization and costs (re-entry to ED, hospital, etc.)
- Health outcome (e.g., functional status, adverse drug reactions, etc.)

Step 3. Evaluate Your Current Level of Practice

Evaluation Questions for Exchange 2

Question 1: Was discharge summary/transition record completed prior to patient departure from ED?

Question 2: Was patient/family counseled regarding medications on discharge (medication reconciliation)?

Question 3: Did the hospital case manager/discharge planner coordinate any post-discharge services for patient/caregiver?

Question 4: Was the patient/family educated about their discharge and any self-management instructions?

Question 5: Did the patient/family receive a copy of discharge instructions?

Evaluation Matrix for Exchange 2

Measure	Data source	Reporting Guidance
Evaluation Question 1: Was discharge summary completed prior to patient departure from ED?		
1. # patients transferred with ED discharge summary	Discharge planner	Number and percent **(ACOVE-3 QI, Continuity and coordination of care, No.13)**
2. # patients transferred with pending test results documented as pending in the transition record	Transition record	Number and percent **(ACOVE-3 QI, Continuity and coordination of care, No.11)**
3. # patients transferred with pending appointment documented as pending in the transition record	Transition record	Number and percent **(ACOVE-3 QI, Continuity and coordination of care, No.12)**
4. # patients transferred with medication list noted in discharge summary	ED medical record	Number and percent
Evaluation Question 2: Was patient/family counseled regarding medications on discharge (medication reconciliation, medication education)?		
5. Was the form filled out and signed by the patient/caregiver and provider?	Medical record	Number and percent **(Joint Commission – National Patient Safety Goal 8, Medication Reconciliation)**
6. Was the patient provided with a copy of the reconciled medication list?	Medical record	Number and percent
Evaluation Question 3: Did the hospital case manager/discharge planner coordinate any post-discharge services for patient/caregiver?		
7. # patients transferred with need for in-home care	Case manager checklist	Number and percent **(ACOVE-3 QI, Continuity and**

Measure	Data source	Reporting Guidance
		coordination of care, No.7)
8. # patients transferred with "red flags" or information about warning signs associated with their ED visit	Case manager checklist	Number and percent
Evaluation Question 4: Was the patient/family educated about their discharge and any self-management instructions?		
9. # patients that had documentation of patient/caregiver education on discharge from the ED	ED medical record	Number and percent *(ACOVE-3 QI, Continuity and coordination of care, No.7)*
10. # patients transferred with the "Taking Care of My Health" document	ED medical record	Number and percent
Evaluation Question 5: Did the patient/family receive a copy of discharge summary/transition record?		
11. # patients with documentation of receiving a copy of the transition record	Patient/caregiver survey	Number and percent
12. # patients whose transition record was provided to their PCP within 7 days of discharge	PCP medical record	Number and percent

As outlined for Exchange 1, continue the process by completing steps 4 through 7. These steps will be discussed briefly below, but not fully described as for Exchange 1.

Step 4. Determining Your Intervention Strategy

As with Exchange 1, the first step is to create a policy and procedure document and educate the staff on exactly what should be sent home with the patient (based on the list for evaluation question 1), who should be communicated with, and in what time frame it should occur. Include findings from the baseline evaluation and specific examples of problems caused by poor communication or documentation during the transition. For example, implement an ED to home checklist as part of a revised policy. As with Exchange 1, literature suggests that that patients and caregivers often leave the ED confused and without a full understanding of what they are to do when they get home. Primary care providers are

NTOCC Tool
Education & Awareness Workgroup

- My Medicine List
- Patient Care Tool

www.ntocc.org

often left in the dark about their patient's visit to ED. These issues lead to medication errors, adverse events, and often the return of the patient to the ED or hospital for additional care.

Two recent consensus documents provide guidance on what information should be included in the information provided to the patient at discharge from the ED. The American College of Physicians-Society of General Internal Medicine-Society of Hospital Medicine-American Geriatrics Society-American College of Emergency Physicians-Society of Academic Emergency Medicine published a transitions of care policy statement in April 2009. In this statement they proposed a minimal set of data elements that should always be part of the transition record.

They are:
- Principle diagnosis
- Medication list (reconciliation) including over-the-counter/herbal medications, known allergies the patient experienced, and potential drug interactions
- A clearly identified medical home/transferring coordinating physician and institution, and their contact information
- Patient's cognitive status
- Test results/pending results

Additional elements recommended to create an "ideal transition record" included:
- Emergency plan and contact number and person
-Treatment and diagnostic plan
- Prognosis and goals of care
- Advance directives, power of attorney, consent
- Planned interventions, durable medical equipment, wound care, etc.
- Assessment of caregiver status

Patients and/or their family/caregivers must receive, understand, and be encouraged to participate in the development of their transition record, which should take into consideration the patient's health literacy, insurance status, and be culturally sensitive.

The American Board of Internal Medicine Foundation, the American College of Physicians, Society of Hospital Medicine, and The Physician Consortium for Performance Improvement proposed a Performance Measurement Set for care transitions in 2008. Draft Measure #4 addressed the transition record for ED discharges to ambulatory care (home/self care). See Appendix B for the measure description.

Medication reconciliation is particularly important on discharge. The medication reconciliation form should be signed by the accountable provider and the patient/caregiver with acknowledgment of understanding the medication regimen and any changes made while in the ED.

Recent evidence suggests that patient/caregiver comprehension of ED care and instructions is suboptimal (see Engle KG et al. 2009 and page 6 of this document). Engle KG et al used the following patient interview questions to assess perceived comprehension at ED discharge:

Using the poor to excellent scale (likert), how would you (patient/caregiver) rate your understanding of:

1. Diagnosis and cause: your diagnosis, in other words, what the medical team thought was wrong with you today (or yesterday)
2. ED care: what was done for your medical problem in the ED
3. Post ED care: what you have to do to take care of your medical problem at home
4. Return instructions: what symptoms or changes should cause you to return to the emergency department?

The same questions were asked with a second scale ("not at all" to "extremely") with the question "How difficult was it for you to understand …?"

Mer and colleagues recommend patient assessment of their communication with the medical team. In their research, they used a psychometrically validated instrument, the Communication Assessment Tool, for use in Team settings (CAT-T) to collect patient perspective on communication with medical teams in the ED. (see Appendix E).

Work with the health information technology departments to find how the transfer documents could be set to be automatically generate on discharge. For the ED, find a source of standardized patient information pamphlets on a variety of disease states, and written in a basic reading level.

Step 5. Implementing an Intervention Strategy

As discussed previously, planning is critical. These tasks should be completed during the planning phase.

- Fully describe all facets of what is to be implemented in one clear and concise document.
- Get the leadership support needed for the implementation to be successful.
- Determine the "what's in it for me" for each of the accountable stakeholders.
- Convene a work group from the institution.

Learn from Others

The trials and efforts of others will help you reduce the time to discovery of problem areas and making improvement in transitions. There are others who have addressed the ED-to-home issue. Some of the resources are obtained below. A comprehensive bibliography on this topic is contained in Appendix J.

Resources from others:

- Project Red (the Re-engineered Discharge) - http://www.bu.edu/fammed/projectred/
- The Care Transitions Program[SM] - http://www.caretransitions.org/intervention_design.asp
- Care Transitions for Older Adults. Society of Hospital Medicine (SHM)
- http://www.hospitalmedicine.org/AM/Template.cfm?Section=Home&Template=/CM/HTMLDisplay.cfm&ContentID=10814

As outlined in Exchange 1, steps 6 and 7 involve reassessing performance at an agreed upon time and making modifications to the intervention as necessary.

Appendix B: Patient or Family/caregiver Takes Over Care Coordination

Step 1. Select What You Plan to Study

For Exchange 3, it is critical that the home caregivers work directly with the ED discharge planner/nurse to determine the plan for discharged patients. The study and measurement of Exchange 3 processes takes place in the home.

Exchange 3: Patient or family/caregiver takes over care coordination
1. Patient at home with appropriate information from the ED
2. Discharge planner/case manager coordinates in-home care, when necessary and communicates those plans, verbally and in writing, to the patient and family caregivers.
3. Patient or family/caregiver compares the ED medication reconciliation form with the home medication list reconciles discrepancies and clarifies with discharge planner/case manager

---

Process mapping will help clarify all of the activities that occur around Exchange 3.

Step 2. Assess the Current Process

Exchange 3: Structure, Process, Outcome

Structure

A. Accountable provider at point of transition
   - Patient
   - ED discharge planner/nurse
   - Primary care provider
   - LAR/other caregiver

B. Plan of care
   - ED discharge summary (treatment provided in ED/hospital)/transition record
   - Medication list
   - Advance directives
   - Lab data, x-rays, vital signs
   - Pending test results
   - Referrals, follow-up appointments

C. Use of HIT
  - Electronic medical record (EMR) - system specific implementation

Process
A. Care team processes
  - Medication reconciliation – Compare ED medication reconciliation form with home medication list (prior to ED visit)
  - Test tracking – monitor for appropriate follow-up from hospital procedures/lab tests
  - Referral tracking – monitor follow-up physician visits, referrals
B. Information transfer/communication between providers
  - Timeliness, completeness and accuracy of information transferred
  - Protocol of shared accountability in effective transfer of information
C. Patient education and engagement
  - Appropriate communication with patients with limited English proficiency

Outcomes
  - Health care utilization and costs (re-admissions)
  - Health outcome (e.g., functional status, medical errors, etc.)

Step 3. Evaluate Your Current Level of Practice

Evaluation Questions for Exchange 3

Question 1: Did the in patient/caregiver receive the appropriate information from the ED?
Question 2: Did the ED discharge planner/case manager coordinate in-home care when necessary?
Question 3: Was the ED medication reconciliation form compared with the in-home list and on-hand prescriptions?

NTOCC Tool
Education & Awareness Workgroup

- My Medicine List
- Patient Care Tool

www.ntocc.org

Evaluation Matrix for Exchange 3

Measure	Data source	Reporting Guidance
Evaluation Question 1: Did the in patient/caregiver receive the appropriate information from the ED?		
1. # patients with ED transition document	Patient/caregiver Interview	Number and percent *(ACOVE-3 QI, Continuity and coordination of care, No.13)*
2. # patients with pending test results documented as pending in the transition document	Patient/caregiver Interview	Number and percent *(ACOVE-3 QI, Continuity and coordination of care, No.11)*
3. # patients who knew when their pending followup care appointment was scheduled	Patient/caregiver Interview	Number and percent *(ACOVE-3 QI, Continuity and coordination of care, No.12)*
4. # patients received with medication list (medication reconciliation form, EMR printout)	Patient/caregiver Interview	Number and percent **(Joint Commission – National Patient Safety Goal 8, Medication Reconciliation,** *ACOVE-3 QI, Continuity and coordination of care, No.9***)**
Evaluation Question 2: Did the ED discharge planner/case manager coordinate in-home care when necessary?		
5. # patients that had documentation that verbal communication between the ED and the PCP occurred within 24 hours of discharge	Patient/caregiver Interview	Number and percent *(ACOVE-3 QI, Continuity and coordination of care, No. 7)*
Evaluation Question 3: Was the ED medication reconciliation form compared with the in-home list and on-hand prescriptions?		
6. # patients that compared the ED medication reconciliation form with the in-home list and on-hand prescriptions and that discrepancies were reconciled and discussed with the ED discharge planner/case manager	Patient/caregiver Interview	Number and percent

See Exchange 1 for carrying this process forward through steps 4 to 6.

There are several published examples of documenting and measuring medication discrepancies including the following:

Coleman EA, Smith JD, Raha D, Min S. Posthospital medication discrepancies; prevalence and contributing factors. Arch Intern Med 2005;165:1842-47.

Cornish PL, Knowles SR, Marchesano R et al. Unintended medication discrepancies at the time of hospital admission. Arch Intern Med 2005;165:424-29.

Varkey P, Cunningham J, O'Meara J et al. Multidisciplinary approach to inpatient medication reconciliation in an academic setting; Am J Health-Syst Pharm 2007;64:850-4.

As there is a direct relationship between adverse drug events and medication discrepancies during admission or discharge, it may be beneficial to measure and plot the rate of adverse drug events as you plot performance on achieving your objectives for medication reconciliation.

Additional resources on implementing medication reconciliation are:

Medication reconciliation review, Luther Midelfort – Mayo Health System, and Institute for Healthcare Improvement. Available at http://www.ihi.org/ihi/topics/patientsafety/medicationsystems/tools/medication+reconciliation+review.htm

Medication Reconciliation, Bridging Communication Across the Continuum of Care, Legacy Health System. Available at http://www.legacyhealth.org/body.cfm?id=1878.

Kramer JS, Opkins PJ, Rosendale JC et al. Implementation of an electronic system for medication reconciliation. Am J Health-Syst Pharm 2007;64:404-22.

Summary of Safe Practice Recommendations for Reconciling Medications at Admission

Collect complete and accurate pre-admission medication lists

1. Collect a complete list of current medications (including dose and frequency) for each patient on admission.

2. Validate the pre-admission medication list with the patient (whenever possible).

3. Assign primary responsibility for collecting the preadmission list to someone with sufficient expertise, within a context of shared accountability (the ordering prescriber, nurse, and pharmacist must work together to achieve accuracy).

Write accurate admission orders

4. Use the pre-admission medication list when writing orders.

5. Place the reconciling form (see Recommendation 8) in a consistent, highly visible location within the patient chart (easily accessible by clinicians writing orders).

Reconcile all variances

Assign responsibility for identifying and reconciling variances between the pre-admission medication list and new orders to someone with sufficient expertise.

6. Reconcile patient medications within specified time frames.

Provide continuing support and maintenance

7. Adopt a standardized form to use for collecting the pre-admission medication list and reconciling the variances (includes both electronic and paper-based forms).

8. Develop clear policies and procedures for each step in the reconciling process.

9. Provide access to drug information and pharmacist advice at each step in the reconciling process.

10. Improve access to complete medication lists at admission.

11. Provide orientation and ongoing education on procedures for reconciling medications to all healthcare providers.

12. Provide feedback and ongoing monitoring (within context of non-punitive learning from mistakes/near misses).

* Although the Safe Practice Recommendations provided here were developed focusing particularly on reconciling medications at admission, the same vigilance must occur at all critical transitions. The reconciling practices also offer significant safety benefits at patient handoffs on transfer between services and at discharge.

Source: Rogers G, Alper E, Brunelle D et al. Reconciling medications at admission: safe practice recommendations and implementation strategies. Jt Comm J Qual Patient Saf. 2006;32:37-50.

Appendix C. Quality Indicators for Geriatric Emergency Care

The Society for Academic Emergency Medicine (SAEM) Geriatric Task Force

Quality Indicator 1 Cognitive Assessment	IF an older adult presents to an ED, THEN the ED provider should carry out and document a cognitive assessment (such as an indication of level of alertness and orientation or an indication of abnormal or intact cognitive status or document why a cognitive assessment did not occur).
Quality Indicator 2 Assessment of Patients with Cognitive Impairment in the ED	IF an older adult presents to an ED and is found to have cognitive impairment, THEN the ED care provider should document whether there has been an acute change in mental status from baseline (or document an attempt to do so).
Quality Indicators 3 an 4 ED Care of Patients with Acute Cognitive Impairment Who Are Discharged Home	IF an older adult presenting to an ED is found to have cognitive impairment that is a change from baseline and is discharged home, THEN the ED provider should document the following: • Support in the home environment to manage the patient's care. • A plan for medical follow-up.
Quality Indicator 5 Detecting Whether Cognitive Abnormalities Were Previously Recognized	IF an older adult presenting to an ED is 1) found to have an abnormal mental status, 2) has no change in mental status from baseline, and 3) is discharged home, THEN the ED provider should document whether there has been previous recognition or diagnosis of an abnormal mental status by another health care provider (or document an unsuccessful attempt to determine this).
Quality Indicator 6 ED Care of Patients with Baseline Abnormal Mental Status Who Are Discharged to Home	IF an older adult presenting to an ED 1) is found to have an abnormal mental status that had not been previously recognized or diagnosed by another health care provider, 2) has no change in mental status from baseline, and 3) is discharged home, THEN a referral for outpatient evaluation of the cognitive impairment should be documented.

Source: Terrell KM, Hustey FM, Hwang U et al. Quality indicators for geriatric emergency care. Acad Emerg Med 2009;16:441-9.

Appendix D. Assessing Care of Vulnerable Elders-3 Quality Indicators

CONTINUITY AND COORDINATION OF CARE

Identify source of care
1. **ALL** vulnerable elders (VE) should be able to identify a physician or a clinic to call for medical care or know the telephone number or other mechanism to reach this source of care.

Medication continuity
2. **IF** an outpatient VE is prescribed a new chronic disease medications and he or she has a follow-up visit with the prescribing physician, **THEN** one of the following should be noted at the follow-up visit:
    *   Medication is being taken
    *   Patient was asked about the medication (e.g., side effects, adherence availability)
    *   Medication was not started, because it was not needed or changed

3. **IF** a VE is under the outpatient care of two or more physicians and one physician prescribed a new chronic disease medication or a change in prescribed medication, **THEN** the nonprescribing physician should acknowledge the medication change at the next visit.

Consultation continuity
4. **IF** an outpatient VE was referred to a consultant and revisited the referring physician, **THEN** the referring physician's medical record should acknowledge the consultant's recommendations, include the consultant's report, or indicate why the consultation did not occur.

Test continuity
5. **IF** an outpatient VE was given an order for a diagnostic test, **THEN** one of the following should be documented at the follow-up visit:
    *   Result of the test initialed or acknowledged
    *   Note that the test was not needed or reason why it will not be performed
    *   Note that the test is pending

Prevention reminders
6. **IF** a VE misses a required preventive care event that is recurrent with a specific periodicity, **THEN** there should be medical record documentation of a reminder that the preventive care is needed within one full interval since the missed event.

Communication with continuity physician
7. **IF** a VE is treated at an emergency department or admitted to a hospital, **THEN** there should be documentation (during emergency department visit or within the first 2 days after admission) of communication with a continuity physician, of an attempt to reach a continuity physician, or that there is no continuity physician.

Posthospitalization follow-up

8. **IF** a VE is discharged from a hospital to home and survives 6 weeks or longer after discharge, **THEN** a physician visit or telephone contact should be documented within 6 weeks of discharge and the medical record should document acknowledgement of the recent hospitalization.

Poshospitialization medications

9. **IF** a VE is discharged from a hospital to home and received a new chronic disease medication or a change in medication before discharge, **THEN** the outpatient medical record should document the medication change within 6 weeks of discharge.

10. **IF** a VE is discharged from a hospital to home with a new medication that requires a serum medication level to checked, **THEN** the medical record should document the medication level, that the medication was stopped, or that the level was not needed.

Poshospitalizaiton tests

11. **IF** a VE is discharged from hospital to home or a nursing home and the transfer form or discharge summary indicates that a test result is pending, **THEN** the outpatient or nursing home medical record should include the test result within 6 weeks of hospital discharge or indicate that the result was followed up elsewhere or why the result cannot be obtained.

Poshospitalization appointments

12. **IF** a VE is discharged from a hospital to home or a nursing home and the hospital medical record specifies a follow-up appointment for a physician visit or a treatment (e.g., physical therapy or radiation oncology), **THEN** the medical record should document that the visit or treatment took place, was postponed, or was not needed.

Discharge summary

13. **IF** a VE is discharged from a hospital to home or nursing home, **THEN** there should be a discharge summary in the outpatient or nursing home medical record.

14. **IF** a VE is discharged from a nursing home to home, **THEN** there should be a discharge summary in the outpatient medical record.

Outside medical records

15. **IF** a VE is new to a primary care practice, **THEN** the medical record should contain medical records from a prior care source, a request for such medical records, or an indication that such records are unavailable.

Interpreter

16. **IF** a VE is deaf or does not speak English, **THEN** an interpreter or translated materials should be used to facilitate communication.

HOSPITAL CARE AND SURGERY

Discharge assessment

IF a VE is discharged from the hospital, **THEN** the hospital record should contain an assessment of level of independence, need for home health services, and patient and caregiver readiness for discharge time and location.

Source: J Am Geriatr Soc 2007;55 Suppl 2:S464-87

Appendix E. The Communication Assessment Tool for Use in Team Settings (CAT-T)

Communication with patients is a very important part of quality medical care. We would like to know how you feel about the way your medical team communicated with you. Your answers are completely confidential, so please be as open and honest as you can. Thank you very much.

1	2	3	4	5
Poor	Fair	Good	Very good	Excellent

Please use this scale to rate communication during this visit. Circle your answer for each item below.

The medical team	Poor				Excellent
1. Greeted me in a way that made me feel comfortable	1	2	3	4	5
2. Treated me with respect	1	2	3	4	5
3. Showed interest in my ideas about my health	1	2	3	4	5
4. Understood my main health concerns	1	2	3	4	5
5. Paid attention to me (looked at me, listened carefully)	1	2	3	4	5
6. Let me talk without interruptions	1	2	3	4	5
7. Gave me as much information as I wanted	1	2	3	4	5
8. Talked in terms I could understand	1	2	3	4	5
9. Checked to be sure I understood everything	1	2	3	4	5
10. Encouraged me to ask questions	1	2	3	4	5
11. Involved me in decisions as much as I wanted	1	2	3	4	5
12. Discussed next steps, including any follow-up plans	1	2	3	4	5
13. Showed care and concern	1	2	3	4	5
14. Spent the right amount of time with me	1	2	3	4	5

The front-desk staff	Poor				Excellent
15. Treated me with respect	1	2	3	4	5

|__|__|__|__|MM/YY   MD/MS|__|__|__|__|__|__|__|__| _____

Source: Mercer LM et al. Patient Educ Couns 2008 :73 :220-23.

Rev.10/29/09

Appendix F: Literature Review - Transitions from the ED to home

Caplan GA, Brown A, Croker WD, Doolan J. Risk of admission within 4 weeks of discharge of elderly patients from the emergency department—the DEED study. Age Aging 1998;27:697-702.

This study was designed to determine whether a standardized functional, mental, and social status assessment could identify frail patients at risk of admission within 28 days. The investigators included patients aged 75 years and older who were discharged form the ED. Patients answered a questionnaire about living arrangements, ED visit, ADLs, IADLs, and a short Portable Mental Status Questionnaire. Patients were called after 28 days to inquire about the use of health services and the reason for use and an admission risk was calculated. The authors found that risk factors for hospital admission during the following 28 days following an ED visit included dependence in ADLs, specifically bathing and dressing; dependence in IADLs (using stairs, finances, shopping and transportation; and needing a community nurse).

The investigators recommend that emergency department staff use a simple screening instrument (ADL+ IADL + mental status questionnaire) on people over the age of 75 years, to determine those most likely to be admitted to the hospital with 28 days of an emergency department visit. This will allow for targeted follow-up in a high-risk group.

Caplan GA, Williams AJ, Daly B, Abraham K. A randomized, controlled trial of comprehensive geriatric assessment and multidisciplinary intervention after discharge of elderly from the emergency department--- The DEED II Study. J Am Geriatr Soc 2004;52:1417-23.

The prospective study was designed to assess the effects of a comprehensive geriatric assessment on elderly patients sent home from the emergency department. The study took place in a medical school-affiliated urban public hospital in Sydney, Australia. Patients aged 75 years and older were randomized into two groups, an intervention group and a control group. The intervention group received a comprehensive assessment from a multidisciplinary outreach team. Primary outcome measure was hospital admissions with 30 days of the initial ED visit.

Miller SL, Miller S, Balon J, Helling TS. Medication reconciliation in a rural trauma population. Ann Emerg Med 2008;52:483-91.

This was a prospective study designed to determine the accuracy of medication histories obtained on trauma patients by health care providers that are the initial responders compared with a medication reconciliation process by a designated clinical pharmacist after the patient's admission. The authors further set out to determine whether trauma-associated factors affected medication accuracy.

The authors found that most of the patients had inaccurate medication histories recorded by health care providers during their initial phase of evaluation and treatment in the ED. They further documented preventable medication errors that reached the patient.

The authors concluded that while medication reconciliations were commonly incomplete and inaccurate, some of which were clinically significant, full reconciliation by a pharmacist was costly and could not be accomplished promptly in the ED.

Stiell A, Forster AJ, Stiell IG, van Walraven C. Prevalence of information gaps in the emergency department and the effect on patient outcomes. CMAJ 2003;169:1023-8.

This study was conducted to measure the prevalence of physician-reported information gaps for patients presenting to a teaching hospital emergency department in Canada. An information system that provided online access to hospital-based laboratory and radiology tests results and hospital admissions was introduced during the study period. The attending emergency physician was interviewed to ascertain what information was not available. The physician was also queried as to the importance of the missing information and asked to grade on a 3-point scale. The investigators found that at least one information gap was identified in 32.2% of visits and were more common for elderly patients, patients with important chronic conditions, whose who had visited the ED or admitted to the hospital within the previous 6 months, those with a high Canadian Emergency Department Triage and Acuity Scale level (a classification scale with 5 acuity levels that has excellent reliability and agreement), patients brought in by ambulance and those in monitored areas of the ED. The most common types of gaps were lack of hospital information, assessments, lab results, medications and imaging and physicians deemed 47.8% of the missing information as very important or essential.

The authors concluded that information gaps are common for ED patients for sicker patients and that are independently associated with a prolonged stay in the emergency department.

Juarez A, Gacki-Smith J, Bauer MR, et al. Barriers to emergency departments' adherence to four medication safety-related Joint Commission National Patient Safety Goals. Joint Commission Journal on Quality and Patient Safety 2009;35:49-59.

The investigators conducted a survey of emergency department staff to determine barriers to implementation of the National Patient Safety Goals related to medication safety and factors related to the barriers. For Joint Commission Goal 2E, standardized hand-off communication, only 43.8% of ED reported having a standardized hand-off communication policy. Barriers to hand-off communication included limited availability of colleagues when hand-offs are necessary (24.9%), lack of colleague cooperation to perform as suggested (13.3%), and colleagues do not actively participate in the hand-off.

OIG Report – June '07
- Consecutive Medicare stays involving inpatient and skilled nursing facilities in CY 2004
- Key findings
  - 35% of consecutive stays were associated with quality-of-care problems and/or fragmentation of services
  - 11% of individual stays within consecutive stay sequences involved problems with quality-of-care, admission, treatments or discharges

The Joint Commission has goals that address transitions of care in its National Patient Safety Goals for hospitals and nursing homes.

NPSG.02.05.01
The [organization] implements a standardized approach to hand-off communications, including an opportunity to ask and respond to questions. Health care has numerous types of [patient] hand-offs, including, but not limited to, nursing shift changes; physician transfer of complete responsibility for a [patient]; physician transfer of on-call responsibility; acceptance of temporary responsibility for staff leaving the unit for a short time; anesthesiologist report to post-anesthesia recovery room nurse; nursing and physician hand-off from the emergency department to inpatient units, different hospitals, nursing homes, and home health care; and critical laboratory and radiology results sent to physician offices. The primary objective of a hand-off is to provide accurate information about a [patient]'s care, treatment, and services; current condition; and any recent or anticipated changes. The information communicated during a hand-off must be accurate in order to meet [patient] safety goals.

Elements of Performance for NPSG.02.05.01
1. The hospital's process for effective hand-off communication includes the following: Interactive communication that allows for the opportunity for questioning between the giver and receiver of patient information.
2. The hospital's process for effective hand-off communication includes the following: Up-to-date information regarding the patient's condition, care, treatment, medications, services, and any recent or anticipated changes. (See also NPSG.08.01.01, EP 4)
3. The hospital's process for effective hand-off communication includes the following: A method to verify the received information, including repeat-back or read-back techniques.
4. The hospital's process for effective hand-off communication includes the following: An opportunity for the receiver of the hand-off information to review relevant patient historical data, which may include previous care, treatment, and services.
5. Interruptions during hand-offs are limited to minimize the possibility that information fails to be conveyed or is forgotten.

Rev.10/29/09

Appendix G: Institute for Healthcare Improvement Tips for Effective Measures

The Institute for Healthcare Improvement prepared an AHRQ report in 2007 that examines the link between health information technology (HIT) and quality improvement in a range of primary care settings. Here is a table from that report that has some tips for effective measures.

Tips for Effective Measures

1. Track data over time. Improvement requires change, and change is, by definition, a temporal phenomenon. System information and targets for improvement is often obtained by plotting data over time. (e.g., length of stay, volume, patient satisfaction data) and then observing trends and other patterns. Tracking a few key measures over time is the single most powerful tool a team can use.

2. Seek useful information, not perfect information. Improvement is the goal, not measurement. For a team to move forward to the next step, they need enough data to know whether changes are leading to improvement.

3. Use sampling. Sampling is a simple, efficient way to help a team understand how a system is performing. Sampling can save time and resources while accurately tracking performance.

4. Integrate measurement into the daily routine. Useful data are often easy to obtain without relying on information systems. Don't wait two months to receive data when a simple data collection form can be developed, and data collection made part of someone's job. Often, a few simple measures will yield all the information you need.

5. Use qualitative and quantitative data. In addition to collecting quantitative data, be sure to collect qualitative data, which often are easier to access and highly informative. For example, ask the nursing staff how the new medication reconciliation is going or how to improve the protocol. Or, in order to focus your efforts on improving patient and family satisfaction, ask patients and their families about their experience with their hospital discharge.

Adapted from:
http://www.ihi.org/IHI/Topics/Improvement/ImprovementMethods/Measures/tipsforestablishingmeasures.htm

---

Appendix H: NTOCC Tools

Suggested Common/Essential Data Elements for Medication Reconciliation

NTOCC
National Transitions of Care Coalition

Suggested Common/Essential Data Elements for Medication Reconciliation

ASSESSMENT ON ACCESS TO CARE SETTING (E.G, HOSPITAL ADMISSION, NURSING HOME ADMISSION)				
Category	Element	Source(s)	Barrier(s)	Comments
Demographic	Name	Patient/caregiver	Cognitive status	Universally available unique identifier information
	Date of birth			
	ID Number			
	Gender			
	Contact information			
	Caregiver name and contact information	Caregiver	Caregiver knowledge of patient	
	Allergies/intolerances	Patient/caregiver		
	Date of assessment	Interviewer		May also include time of transport of info
Medications (active, taken chronically)	Name – generic/trade	Patient/caregiver	Patient/caregiver knowledge of complete medication list, cognitive status	NDC will be used in automated systems – name + dose
	Dose			
	Form			
	Frequency			
	Reason for use			
Other medications/OTC/herbal remedies/nutritional supplements/time-limited medications	Name – generic/trade			Stop dates for short term medications
	Dose			
	Form			
	Frequency			
Other elements for consideration				
Demographic	Primary language	Patient/caregiver	Patient/caregiver knowledge of complete medication list, cognitive status	
	Religious, cultural factors			
Medications	Prescriber			Variety of methods to provide info on

My Medicine List

How to use My Medicine List:

"My Medicine List" can help you and your family keep track of everything you take to keep you healthy—your pills, vitamins, and herbs. Having all of your medicines in one place also helps your doctor, pharmacist, hospital, or other healthcare workers take better care of you.

Start using "My Medicine List" today!

1. With help from your healthcare professional, fill out the form.
2. In order to fill out the form, you need a list of all of your medicines or everything you take in front of you. Be sure you include medicine you take from all pharmacies that you use as well as any over-the-counter medicines, vitamins, herbs or minerals you may take.
3. Next, think about what you take in the morning, afternoon, around dinner time, and before you go to bed.
4. For every medicine (including ones you get without a prescription), vitamin or herb you take, you need to write down these things:
   • The name of what you take (like Tylenol, Acetaminophen 500 mg)
   • How much you take of this (1 pill, 3 drops, 2 puffs)
   • What it looks like (round, white and red, clear liquid)
   • How you take it (by mouth, with food, with a needle)
   • You started taking this on: (Sept. 15, 2007)
   • You will stop taking this on: (Sept. 30, 2007)
   • Why you take it (for my arthritis, for my heart, to lower cholesterol)
   • Who told me to use it (my internist, my rheumatologist)
   Here's an example:

Drug name (brand name, generic name, dose)	This looks like	How many?	How I take it	I started taking this on:
Zocor, Simvastatin, 40 mg	yellow pill	1 pill	with water	June 2001

5. Always keep this card with you. Fold it and keep it in your wallet or purse, so you will have it in case of an emergency.
6. Whenever you stop taking something or start taking something new

My Medicine List

This medicine list is for:

Name: _____ Birth date: _____

If you need to get in touch with me, use:

this phone number: _____

this e-mail: _____

Emergency contact:_____

The best way to get in touch with my emergency contact is:

Phone: _____ E-mail: _____

I am allergic to: _____

I also have some other problems with medicines: _____

_____

Keeping My Medicine List up-to-date:

It is very important to keep this information current. Use the chart below to review and update your "My Medicine List". You can do this with your doctor, pharmacist, nurse, or other health care professional.

Reviewed by:	Reviewed on:	Updated on:	Updated by:

Taking Care of My Health Care

Taking Care of MY Health Care

A guide for you or your caregiver to be active in either your own health care or caring for someone else.

Take this with you each time you meet with a health care provider (such as a doctor, nurse, pharmacist, or social worker); visit a hospital, nursing center, or other health care facility; or receive care in your home.   You have rights to your personal health information. Using this guide can help you keep track of your health information, and may prevent other health problems.

Visit With: _____

BE SURE YOU KNOW THESE THINGS: Today's Date: _____

1. Why am I meeting with a health care provider today? _____
   _____
2. What medical conditions do I have? _____
   _____
3. Do I have a <u>list</u> of all the medicines I need to take, including all on the following list?   **Important: Tell the health care provider any allergies or sensitivities you have to any medicine.**
   ___Prescription medicine (can buy only with a prescription)
   ___Over-the-counter medicine (can buy without a prescription)
   ___Vitamins, herbs, or supplements I take (such as St. John's Wort)
   ___Any NEW prescriptions I received during this visit
   ___Written directions on how to take all my medicines
   ___Major side effects of these medicines
4. Besides taking my medicines, what else do I need to do?

> **Being sick can affect all areas of your life. If you have questions or concerns about any of the following, check the box and talk about them with a health care provider.**

☐ Alcohol, drug, or tobacco use
☐ Caregiving concerns

Elements of Excellence in Transitions of Care (TOC) Checklist

Elements of Excellence in Transitions of Care (TOC)

TOC Checklist

*The purpose of this checklist is to enhance communication—among health care providers, between care settings, and between clinicians and clients/caregivers—of patient assessments, care plans, and other essential clinical information. The checklist can serve as an adjunct to each provider's assessment tool, reinforcing the need to communicate patient care information during transitions of care. This list may also identify areas that providers do not currently assess but may wish to incorporate in the patient's record. Every element on this checklist may not be relevant to each provider or setting.

*For purposes of brevity, the term *patient/client* is used throughout this checklist to describe the client and client system (or patient and family). The *patient/client system* (or family), as defined by each patient/client, may include biological relatives, spouses or partners, friends, neighbors, colleagues, and other members of the patient/client's

Appendix I: NTOCC Proposed Framework for Measuring Transitions of Care

I.   <u>Structure</u>

     A. Accountable provider at all points of transition. Patients should have an accountable provider or a team of providers during all points of transition. This provider(s) should be clearly identified and will provide patient-centered care and serve as central coordinator of his/her care across all settings, across other providers.

     B. Plan of Care. The patient should have an up-to-date, proactive care plan that includes clearly defined goals, takes into consideration the patient's preferences, and is culturally appropriate.

     C. Use of health information technology (HIT). Management and coordination of transitional care activities is facilitated through the use of integrated electronic information systems that are interoperable and available to patients and providers.

II.   <u>Processes</u>

     A. Care team processes
- Medication reconciliation
- Test tracking (lab and diagnostic procedures)
- Referral tracking
- Admission and discharge planning
- Follow up appointment

     B. Information transfer/communication between providers
- Timeliness, completeness, and accuracy of information transferred
- Protocol of shared accountability in effective transfer of information

     C. Patient education and engagement
- Patient prepares for transfer
- Patient education for self-management
- Appropriate communication with patients with limited English proficiency and health literacy

III.   <u>Outcomes</u>
- Patient experience (including family or caregiver)
- Provider experience (individual practitioner or health care facility)
- Patient safety (medication errors, etc.)
- Health care utilization and costs (reduced avoidable hospitalization)
- Health outcomes (clinical and functional status, intermediate outcomes, therapeutic endpoints)

Appendix J: Annotated Bibliography and References

Transitions of Care intervention programs and literature

The Care Transitions Program[SM]: This program received funding from The John A. Hartford Foundation and The Robert Wood Johnson Foundation. The Care Transitions Intervention[SM] was designed to be a patient-centered, interdisciplinary intervention that addresses continuity of care across multiple settings and practitioners. The goal of the intervention is to improve care transitions by providing patients with tools and support that promote knowledge and self-management of their condition as they move from hospital to home. Available at http://www.caretransitions.org/intervention_design.asp.

Project Red (the Re-engineered Discharge): Project RED is a Randomized Controlled Trial at Boston Medical Center. This project re-engineers the workflow process and improves patient safety for patients from a network of Community Health Centers discharged from a general medical service at an urban hospital. The research was supported by Agency for Healthcare Research and Quality (AHRQ) grant number 1 U18 HS015905-01. Available at http://www.bu.edu/fammed/projectred/.

Project BOOST and the Care Transitions Implementation Guide. The Society of Hospital Medicine (SHM) launched Project BOOST (Better Outcomes for Older Adults Through Safe Transitions) to improve transitions out of the hospital to risk assess patients on admission, and plan and execute risk specific discharge planning activities. Available at http://www.hospitalmedicine.org/AM/Template.cfm?Section=Quality_Improvement&TEMPLATE=/CM/HTMLDisplay.cfm&CONTENTID=14413.

Best Practice Intervention Package – Transitional Care Coordination. The Home Health Quality Improvement Organization Support Center (HHQIOSC) created this package for to assist home health agencies in understand the concept of transitional care coordination, recognize the necessity for home health to assert its role in and to implement transitional care coordination strategies to promote collaboration with other providers to improve care coordination. Available at http://www.homehealthquality.org/hh/hha/interventionpackages/default.aspx.

5 Million Lives Campaign. The Institute for Healthcare Improvement leads the 5 Million Lives Campaign, which aims to improve the quality of American health care by protecting patients from five million incidents of medical harm between December 2006 and December 2008. The How-to Guides associated with this Campaign are designed to share best practice knowledge on areas of focus for participating organizations. Available at www.ihi.org/IHI/Programs/Campaign.

Medication Reconciliation Toolkit. A Department of Defense patient safety program. Available at http://dodpatientsafety.usuhs.mil/modules.php?name=News&file=article&sid=451.

Rev.10/29/09

References

ENA study cites barriers to NPSG compliance. ED Manag 2009;21: 45-6.

Apker J, Mallak LA, Gibson SC. Communicating in the "gray zone": perceptions about emergency physician hospitalist handoffs and patient safety. Acad Emerg Med 2007;14:884-94.

Benner JP, Hilton J, Carr G et al. Information transfer from prehospital to ED health care providers. Am J Emerg Med 2008;26:233-35.

Bridgeman PJ, Rynn KO. Medication reconciliation in the emergency department. Am J Health Syst Pharm 2008;65:2325-26.

Burt CW, McCaig LF, Simon AE. Emergency department visits by persons recently discharged from U.S. hospitals. Natl Health Stat Report 2008;24 Jul;1-9.

Caglar S, Henneman PL, Blank FS et al. Emergency Department Medication Lists Are Not Accurate. J Emerg Med 2008 Sep 29. [Epub ahead of print].

Caplan GA, Williams AJ, Daly B, Abraham K. A randomized, controlled trial of comprehensive geriatric assessment and multidisciplinary intervention after discharge of elderly from the emergency department--the DEED II study. J Am Geriatr Soc 2004;52:1417-23.

Dunnion ME, Kelly B. From the emergency department to home. J Clin Nurs 2005;14:776-85.

Dunnion ME, Kelly B. All referrals completed? The issues of liaison and documentation when discharging older people from an emergency department to home. J Clin Nurs 2008;17:2471-79.

Engel KG, Heisler M, Smith DM et al. Patient comprehension of emergency department care and instructions: are patients aware of when they do not understand? Ann Emerg Med 2009;53:454-61.

Forster AJ, Rose NG, van WC, Stiell I. Adverse events following an emergency department visit. Qual Saf Health Care 2007;16:17-22.

Graumlich JF, Novotny NL, Nace GS et al. Patient readmissions, emergency visits, and adverse events after software-assisted discharge from hospital: Cluster randomized trial. J Hosp Med 2009.

Hastings SN, Heflin MT. A systematic review of interventions to improve outcomes for elders discharged from the emergency department. Acad Emerg Med 2005;12:978-86.

Juarez A, Gacki-Smith J, Bauer MR et al. Barriers to emergency departments' adherence to four medication safety-related Joint Commission National Patient Safety Goals. Jt Comm J Qual Patient Saf 2009;35:49-59.

Rev.10/29/09

Koehler BE, Richter KM, Youngblood L et al. Reduction of 30-day postdischarge hospital readmission or emergency department (ED) visit rates in high-risk elderly medical patients through delivery of a targeted care bundle. J Hosp Med 2009;4:211-18.

Parsons P, Boling PA. Patterns of emergency care use in residential care settings: opportunities to improve quality of transitional care in the elderly. Home Health Care Serv Q 2007;26:79-92.

Shepherd G, Schwartz RB. Frequency of incomplete medication histories obtained at triage. Am J Health Syst Pharm 2009;66:65-69.

Stiell A, Forster AJ, Stiell IG, van WC. Prevalence of information gaps in the emergency department and the effect on patient outcomes. CMAJ 2003;169:1023-28.

Terrell KM, Hustey FM, Hwang U et al. Quality Indicators for Geriatric Emergency Care. Acad Emerg Med 2009 Mar 28. [Epub ahead of print].

AHRQ Patient Safety Network. Glossary: Underuse, Overuse, Misuse. Available at http://psnet.ahrq.gov/popup_glossary.aspx? name=underuseoverusemisuse.

Australian Council for Safety and Quality in Health Care. Clinical hand-over and Patient Safety literature Review Report. March 2005. Available at http://www.health.gov.au/internet/safety/publishing.nsf/Content/AA1369AD4AC5FC2ACA2571B F0081CD95/$File/clinhovrlitrev.pdf

Bates DW, Gawande AA. Improving safety with information technology. N Engl J Med 2003;348:2526-34.

Coleman EA, Boult C. Improving the quality of transitional care for persons with complex care needs. Position Statement of The American Geriatrics Society Health Care Systems Committee. J Am Geriatr Soc 2003;51:556-7.

Coleman EA, Parry C, Chalmers S, Min SJ. The care transitions intervention: results of a randomized controlled trial. Arch Intern Med 2006;166:1822-28.

Coleman EA, Smith JD, Frank JC et al. Preparing patients and caregivers to participate in care delivered across settings: the Care Transitions Intervention. J Am Geriatr Soc 2004;52:1817-25.

Committee on Identifying and Preventing Medication Errors. Preventing Medication Errors: Quality Chasm Series. Aspden P, Wolcott J, Bootman JL, Cronenwett LR (eds). Washington, DC: National Academies Press; 2006. Available at: http://books.nap.edu/openbook.php?record_id=11623&page=R1

Institute for Healthcare Improvement. One Patient, Many Places: Managing Health Care Transitions 2004 Available at http://www.ihi.org/IHI/Topics/MedicalSurgicalCare/MedicalSurgicalCareGeneral/Literature/OneP atientManyPlacesManagingHealthCareTransitions.htm.

Rev.10/29/09

Institute of Medicine, Crossing the Quality Chasm: A New Health System for the 21st Century. Available at http://books.nap.edu/openbook.php?record_id=10027&page=R1

The Joint Commission (formerly JCAHO). Using medication reconciliation to prevent errors 2006 Jan 25 Available at http://www.jointcommission.org/SentinelEvents/SentinelEventAlert/sea_35.htm.

The Joint Commission (formerly JCAHO). National Patient Safety Goals 2008 Available at http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/.

Rev.10/29/09

Appendix K. Sample Emergency Department (ED) Discharge Instruction form

Patient Name: **Date:**

Diagnosis:

Medications and treatments given during visit:

Medication/Treatment	Dose (include route)	Time given

Procedures performed during visit:

Lab and/or x-ray results (if any):

Note for Patient: Please follow up with your primary care physician regarding this visit within 24 hours.

Rev.10/29/09

Discharge medications

Medication	Dose (include route)	Times per day

Required follow-up:

If the following symptoms occur, call your doctor:

If the following symptoms occur, return to the ED:

Tests pending:

I have had these discharge instructions reviewed with me and I understand them. I will call my doctor or return to the hospital if my condition does not improve or gets worse.

Patient Signature/Phone number   Witness Signature

Appendix L: Transition of Care Intervention Programs

The Emergency Department to Home Transition: What can we learn from others?

The Study or Program
Hayes BD, Donovan JL, Smith BS, Hartman CA. Pharmacist-conducted medication reconciliation in an emergency department. Am J Health-Syst Pharm 2007;64:1720-3.

Objective: To determine the effect of a pharmacist-conducted medication reconciliation on compliance with a hospital's medication reconciliation policy.

Who was targeted: Individuals admitted to the hospital from the emergency department

The Intervention
What did they do: Pharmacists obtained medication histories from patients admitted to the hospital through the ED. The pharmacist interviewed patients about their prescription medications, nonprescription and herbal products, and allergies. These results were compared to those with usual care.

The primary outcome was compliance with the hospital policy for medication reconciliation. Secondary outcomes were completeness and accuracy of the medication reconciliation form.

Authors comments or suggestions
- Shifting pharmacist workload from actively following up on an error to actively taking patient medication histories in the ED may be a more productive use of time
- Most medication reconciliation errors were errors of incompleteness

What they accomplished:
- Compliance with the hospital approved medication reconciliation form and policy for the usual care group with 78%.
- The mean number of errors per form was higher in the usual care group compared to the pharmacist intervention group

Rev.10/29/09

The Study or Program

Caplan GA, Williams AJ, Daly B, Abraham K. A randomized, controlled trial of comprehensive geriatric assessment and multidisciplinary intervention after discharge of elderly from the emergency department—The DEED II Study. J Am Geriatr Soc 2004;52:1417-23.

Objective: To assess whether a comprehensive geriatric assessment (CGA) and 4 week intervention decreased hospital admission and improved health and functional outcomes

Who was targeted: Patients aged 75 years and older who were discharged from an ED in Sydney, Australia.

Who was excluded: Patients could not be residing in a nursing home or live out of the local area.

The Intervention

What did they do: Randomized patients to usual care or intervention group. Both groups at enrollment received a questionnaire about living arrangements, ED visit background, assessment of activities of daily living assessment (ADLs) and instrumental activities of daily living (IADLs), and functional status assessment.

Intervention patients received:
- A visit within 24 hours of ED departure, usually by a nurse
- A nurse formulated care plan and urgent interventions and referrals
- A weekly status review by the interdisciplinary team, which included a geriatrician

Primary outcome measures: primary, admission to any hospital within 30 days. Secondary outcomes were elective and emergency admissions to the hospital, nursing home admission, or mortality. Other considered outcomes were cognitive and physical functional status. Patients were followed for 18 months after intervention.

Authors comments or suggestions
- CGA combined with a multidisciplinary care plan leads to improved function and better health outcomes for elderly discharged from the ED
- It may be that prevention of hospitalization and the associated deterioration in health is the key to improved function in the elderly.
- Treating elderly people at home may lead to fewer complications

What they accomplished
- Fewer hospital admissions for 30 days after initial ED visit in the intervention group
- Lower ED visits during the 18-month followup and longer time to emergency admission
- Those receiving intervention maintained greater function over 6 months

The Study or Program
Miller SL, Miller S, Balon J, Helling TS. Medication reconciliation in a rural trauma population. Ann Emerg Med 2008;52:483-91.

Objective: To determine completeness of medication histories in trauma patients during the admission phase through a reconciliation process using a designated health care provider after hospital admission

Who was targeted: English-speaking patients admitted to a level 1 trauma service who were taking prescription mediations.

Excluded: Patients who died or were discharged prior to clinical pharmacist review.

The Intervention

What did they do: Enrolled subject received
- A pharmacist-reconciled admission medication history and detailed medication history investigation
- A phone call to all pharmacies named by the patient
- Queries to family caregivers, paid caregivers, PCP or others for medication-related information
- Completion of medication specific data points

The PHR was compiled by the transition coach who first met with the patient in the hospital:
- To establish initial rapport
- To introduce the PHR
- To arrange a home visit 48 to 72 hours after hospital discharge.

At the home visit, the transition coach and patient (and caregiver if appropriate) reviewed each medication to ensure that the patient understood its purpose, instruction, and potential adverse effects. The patient was coached in how to effectively communication with health care professionals. "Red-flags" were also reviewed with the patient during this visit.

Following the home visit, the transition coach maintained continuity with the patient/caregiver by telephoning 3 times during a 28-day posthospitalization period.

Authors comments or suggestions
- Encourage patients and their caregivers to assert a more active role in their care transitions
- A transition coach and PHR can enable patients and caregivers to meet their needs during transitions

What they accomplished
- Reductions in rehospitalization rates in the intervention group at 30, 90 and 180 days (180 days not statistically significant)
- Projected annual cost savings projected to be $295,594 for the 379 intervention patients

Rev.10/29/09

The Study or Program
Naylor MD, Brooten DA, Campbell RL et al. Transitional care of older adults hospitalized with heart failure: a randomized, controlled trial. J Am Geriatr Soc 2004;52:675-84.

Objective: Examine the effect of a comprehensive transitional care intervention by advanced practice nurses for elders hospitalized with heart failure.

Who was targeted: Patients aged 65 and older admitted to study hospitals from home; English speaking, alert and oriented, reachable by phone after discharge, residing within a 60-mile radius of hospital

Who was excluded: patients with end-stage renal disease

The Intervention

What did they do: Assigned patients to intervention group with advanced practiced nurses (APN) and compared them to a group that received usual care

APN intervention included:
- an initial APN visit within 24 hours of hospital admission
- APN visit each day during hospitalization
- At least 8 APN home visits, the first within 24 hours of discharge, weekly visits during the first post-discharge month, bi-monthly visit for months 2 and 3
- APN accompanied patient visit to post-discharge PCP visit
- APN availability via phone, 7 days per week, (8 am - 8 pm weekdays; 8 am - noon weekends)
- APN resumed daily visits for rehospitalization

APN intervention did not extend beyond 3 months of the original hospital discharge. APNs underwent orientation and training for the program that focused on developing competencies related to early cognition and treatment of heart failure episodes in the elderly.

Authors comments or suggestions
- Intervention effect declined as the post-intervention time increased
- The complexity of heart failure patient's health needs may necessitate ongoing APN involvement
- Program was successful to the care continuity provided by the same APN and use of highly skilled APNs with the ability to use a holistic approach to navigate care

What they accomplished
- Increased length of time between hospital discharge and readmission or death in the intervention group
- Reduced total number of rehospitalizations
- Decreased healthcare costs – the cost of the APN involvement was more than offset by by savings from reductions in other home care visits, acute care visits, and hospitalizations.

The Study or Program
Baren JM, Boudreaux ED, Brenner BE et al. Randomized controlled trial of emergency department interventions to improve primary care follow-up for patients with acute asthma. Chest 2006;129:257-65.

Objective: To compare the effect of two ED interventions on the rates of primary care follow-up for patients receiving either telephone reminders to make primary care appointments vs. those receiving a telephone contract to give them an actual appointment.

Who was targeted: Patients presenting with a chief complaint of acute asthma, age 2 – 54 years, decision by the ED physician to discharge with a prescription for prednisone, and access to phone.

Who was excluded: Did not speak English.

The Intervention

What did they do: Randomized patients presenting with acute asthma to one of 3 groups:

A – Usual care (i.e., discharge instructions, Rx for prednisone). No attempt made to standardize care.

B – Provide an Rx for 5 days of prednisone, provided 2 travel vouchers (value of $15/ea) prearranged through a local cab service. Investigators explained that travel vouchers were to be used to visit PCP for follow-up after ED visit

C – All components of B, however, research nurse made post-ED PCP appointment for patients and call 48 hrs after discharge from ED to inform patient of appointment date and time.

Outcomes were assessed at 30 days (follow-up with PCP), and 12 months (recurrent ED visits, continued inhaled steroid use, hospitalization)

Authors comments or suggestions
- Making the appointment for the patient with the PCP is the most important aspect of the intervention
- Depending on the severity of illness, facilitated referral to a asthma specialists may be considered
- Future study should examine the nature of the interaction during the first PCP visit after ED care

What they accomplished:
- Group C had greater follow-up with PCP compared to B and A (65% vs. 48% vs. 45%, respectively)
- No difference in long term asthma outcomes between groups (clinic visits, ED visits)

The Study or Program
Guttman A, Afilalo M, Guttman R et al. An emergency department-based nurse discharge coordinator for elder patients: does it make a difference. Acad Emer Med 2004; 11:1318-28.

Objective: To evaluate the impact of an ED-based nurse discharge plan coordinator (NDPC) for elder patients on the number of unscheduled ED revisits.

Who was targeted: Patients 75 years or older, discharged from the ED from 8 am to 10 pm, resided at home prior to entry, and were available for follow-up telephone interviews. Individuals with cognitive impairment on screening were asked to identify a caregiver to answer questions on their behalf.

Who was excluded: Those discharged to a foster home or nursing home, did not speak English or French and did not have a translator available.

The Intervention

What did they do: Pre/post study design

Preintervention (control group):   Received the routine ED discharge care.   Consisted of verbal communication to the patient and/or caregiver about the diagnosis and treatment plan. More complex discharge plans involved the ED social worker, a geriatric clinical nurse specialist, or a clinical nurse specialist with expertise in discharge planning. ED recommendations for follow-up care or community resources were suggested, but it was their responsibility to arrange this care.

Postintervention (intervention group):   Received a comprehensive, individualized discharge planning intervention implemented by one of three ED-based NDPCs. All patients were followed for 14 days after the ED visit. Interviews were conducted by research assistants in the ED during the baseline visit and by telephone at days 1, 8, 14 after the ED visit. NDPCs had minimum 5 years nursing experience and received specialized training with respect to geriatric assessment and health needs of community-dwelling elders.

Outcomes, measured at 1, 8, and 14 days after discharge, included: ED revisits, hospitalization, satisfaction with clarity of provided information, adherence to new medications, adherence to follow-up recommendations, and perceived well being.

Authors comments or suggestions
- Discharge planning coordination is a highly involved and time-consuming process
- The ED nurse cannot realistically provide discharge planning coordination
- The focus of discharge planning should be the patient and patient participation is key
- the availability of postdischarge patient resources is imperative.

What they accomplished:
- The presence of an ED NDPC reduced the rate of unscheduled revisits within 14 days as well as increased satisfaction with provided information, adherence to new medication prescriptions, and perceived will being.

Rev.10/29/09