Volume 1

Issue 13 *Prescriptions for Excellence in Health Care Issue #13 Fall 2011*

Article 1

November 2011

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Editorial

Partnering to Improve Care Transitions

By David B. Nash, MD, MBA
Editor-in-Chief

This issue of *Prescriptions for Excellence in Health Care* marks the end of our series of articles devoted to a vitally important but - until recently - generally overlooked systemic problem: transitions of care.

In April of this year, the Obama Administration launched Partnership for Patients: Better Care, Lower Costs, an innovative public-private partnership designed to help improve the quality, safety, and affordability of health care by bringing together the leaders of major hospitals, employers, health plans, physicians, nurses, and patient advocates along with state and federal governments in a shared effort to make hospital care safer, more reliable, and less costly.

The Partnership aims to save lives by stopping millions of preventable injuries and complications in patient care over the next 3 years – a very ambitious goal! If the initiative is successful, the price tag for US health care could be reduced by up to $35 billion, including $10 billion for Medicare.

Today, nearly 1 in 5 Medicare patients discharged from the hospital is readmitted within 30 days. This means that almost 2.6 million of our senior citizens are readmitted to hospitals to the tune of over $26 billion every year. So, it should come as no surprise that one of the Partnership's 2 major goals is to help more patients heal without complication. Targeting preventable complications during a transition from one care setting to another, the goal is a 20% reduction in all hospital readmissions by 2013 (compared with 2010 data).

In humanistic terms, achieving the goal would mean that more than 1.6 million patients would be spared the suffering from a preventable complication that would land them back in the hospital in less than a month.

The Centers for Medicare and Medicaid Services (CMS) has made a financial commitment to the effort. A new Community-Based Care Transition

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Program at CMS' Innovation Center is providing $500 million in funding to community-based organizations that partner with their local hospitals to improve care transition services.

When I first heard about the Partnership, I thought it was a great idea but I was skeptical about the prospects of achieving such a lofty goal. I'm happy to report that my pessimism was fleeting.

Within a few short months of the Partnership's launch, more than 500 hospitals have pledged their commitment along with physician groups, nursing organizations, consumer groups, and employers. As Partnership members, each of these entities will identify specific steps they will take to improve transitions of care. For instance, the Association of American Medical Colleges has implemented

a complementary harm reduction effort – Best Practices for Better Care – a multiyear initiative to improve the quality and safety of health care. More than 200 teaching hospitals and health systems have joined the effort and have pledged to take simple steps such as using surgical checklists for safer surgery and using proven practices to reduce central line infections.

The lead article in this issue, "Engaging Communities in Improving Care Transitions and Reducing Utilization," describes the development and ongoing success of a community-based care transitions project in Northwest Denver. The second article, "Inherent Risks: A Hospitalist's Perspective on Hospital Discharge Transitions," explores care transitions from the perspective of a physician "hospitalist." The final article, "Medications and Care Coordination: Prevalence, Measurement, and

Reduction of Errors," discusses how hospital-based pharmacists are tackling medication reconciliation as a means to improve transitions from the hospital to the home, nursing home, or long-term care setting.

As always, I welcome questions and comments from readers. I can be reached at david.nash@jefferson.edu.

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For further information on the Partnership for Patients, see http://www.healthcare.gov/news/factsheets/partnership04122011a.html or http://www.healthcare.gov/center/programs/partnership/index.html

A Message from Lilly
Aiming for Improvements
By Dawn Blank, RPh

The 3 areas of focus for the Centers for Medicare and Medicaid Services (CMS) are Better Care, Healthy People/Healthy Communities, and Affordable Care. To achieve these aims, we, as a nation, must address the inefficiencies and medical errors in our health care system.

One area of focus is patient and medication safety. If we (the health care system) can improve patient and medication safety, we may reduce harm to patients (better care), and may avoid potential harm to patients

(better health) as well as the costs associated with patient and medication safety errors (decrease costs).

There is a new campaign under way titled Partnership for Patients (Partnership). This patient safety initiative is a public-private partnership between Health and Human Services (HHS) and other ongoing initiatives. The Partnership would like to leverage the good work being done by many national, regional, and local organizations to achieve 2 goals: keeping patients from getting

injured or sicker in the health care system, and helping patients heal without complication by improving transitions from acute care hospitals to other care settings, such as home or a skilled nursing facility.[1]

The Partnership expects success to occur at the local and regional level with support from the federal government. The 3 elements of local success are: (1) the normalization of patient safety efforts in the daily tasks of all health care delivery staff, from frontline providers to senior

management, (2) a system of inquiry and learning that permeates through the entire health care delivery system, and (3) a steady focus on patients as the center of care.

One of the exciting parts to this initiative is the shift toward creating change and generating action. As HHS Secretary Kathleen Sebelius has stated, there is no "silver bullet"[2] solution. It is clear that leadership, collaboration, and authentic engagement with patients and their families are the keys to success. To accelerate change, HHS is making a commitment to work with frontline providers to redesign systems of care. Specifically, HHS is committing up to $1 billion to this initiative, $500 million of which is focused on community care transitions. Additional support from the Innovation Center at CMS is forthcoming. It should be noted that HHS's commitment is a result of section 3026 of the Affordable Care Act.

One of the Partnership's ambitious goals is to reduce hospital readmissions by 20% by 2013. Achievement of this goal will center on reducing complications during transitions from one care setting to another, particularly for patients with multiple chronic conditions. Seamless care transitions require thoughtful collaboration among hospitals, community-based organizations, patient caregivers, and patients themselves.[3] To assist with this effort, the Partnership has created the Community-Based Care Transition Program (CCTP).

The 4 goals for the CCTP are to: (1) improve transitions of beneficiaries from the inpatient hospital setting to home or other care settings; (2) improve quality of care; (3) reduce readmissions for high-risk beneficiaries; and (4) document measurable savings to the Medicare program. More information is available at: http://www.cms.gov/DemoProjectsEvalRpts/MD/.

In addition to the CCTP, the Partnership has identified 9 other areas of focus. Specifically, the Partnership would like to reduce all-cause harm and recognizes that there may be opportunities in other areas that will focus on the following: adverse drug events; catheter-associated urinary tract infections; central line-associated bloodstream infections; injuries from falls and immobility; obstetrical adverse events; pressure ulcers; surgical site infections; venous thromboembolism; ventilator-associated pneumonia; and other hospital-acquired conditions.[2]

The interest in and support for the Partnership has been demonstrated by over 4500 organizations, including about 2000 hospitals, by their signing a pledge - a great beginning. In a conference call hosted by Don Berwick and Kathleen Sebelius on June 20, 2011, they discussed moving from demonstrating support (signing the pledge) to the next step, which is implementation and activation. CMS and HHS are looking for specific examples of how to address patient and medication safety, especially within care transitions and the areas of focus mentioned above. How concepts were translated into tactical plans, including the specifics of how the tactic was implemented, is what is needed to be shared.

Lilly has developed several programs over the years to try to address the how-tos and best practices in the areas of medication safety and care transitions for our hospital customers. We will continue our efforts in medication safety and care transitions as we are committed to improving patient outcomes in the health care community and as a large employer.

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Engaging Communities in Improving Care Transitions and Reducing Utilization

Presentation by Alicia D. Goroski, MPH; adapted for publication by Janice L. Clarke, RN

By their very nature, transitions from one health care setting to another are prone to errors. The more complex a patient's condition and medical management requirements, the more likely that errors and "near misses" will occur during transitions of care. The ripple effect from poor care transitions is substantial for patients (ie, undue suffering, disability, death) and for the health care system (ie, unnecessary utilization, unwarranted costs).

The drivers of poor care transitions are well documented. The first driver is a low level of "patient activation" that stems from low health literacy, lack of self-management skills, and motivational issues. The second driver is the lack of standardized and generally known processes, which lead to breakdowns in communication during patient discharges and handoffs. The third driver, inadequate transfer of information across settings, continues to cause delays, inaccuracies, and omissions.

Care Transitions is an innovative, community-based Quality Improvement Organization (QIO) initiative with the primary purpose of improving care transitions for a geographically described population of fee-for-service (FFS) Medicare beneficiaries through interventions that reduce rehospitalizations. Medicare defines rehospitalization as a return to the hospital within 30 days of discharge.

Care Transitions projects are funded by the Centers for Medicare and Medicaid Services (CMS). Target communities within each of 14 regional QIOs received awards for a 3-year scope of work that

began August 1, 2008. The QIOs and their target communities included:

1. Alabama (Tuscaloosa)
2. Colorado (Northwest Denver)
3. Florida (Miami)
4. Georgia (Metropolitan Atlanta East)
5. Indiana (Evansville)
6. Louisiana (Baton Rouge)
7. Michigan (Greater Lansing Area)
8. Nebraska (Omaha)
9. New Jersey (Southwestern NJ)
10. New York (Upper capital)
11. Pennsylvania (Western PA)
12. Rhode Island (Providence)
13. Texas (Harlingen)
14. Washington (Whatcom County)

The 14 QIOs began with the same general strategy. First, the target communities were defined using "zip code overlap" (ie, identifying FFS Medicare beneficiaries living in zip codes of interest and discharged from hospitals of interest).

Next, appropriate providers were engaged (eg, hospitals, skilled nursing facilities, home health agencies, outpatient rehabilitation facilities). Problematic utilization patterns were

identified by means of FFS Medicare claims analysis, root cause analysis, and provider observations and insights.

To accommodate regional health care market variations, CMS did not mandate specific interventions but rather suggested several evidence-based methods. Each QIO developed and implemented interventions and tools tailored to its target population.

Why engage a community in care transitions? Every hospital readmission begins with a care transition (ie, from hospital to home setting). Problems tend to arise when the patient - and pertinent information regarding the patient's medical management and health status – is isolated in the home setting. In addition to providing the impetus for improvement, information sharing is critical to safe medical management.

How do we build "community-ness"? Most important is to assure that any intervention is visibly a community effort. The 4 suggested models for community engagement are:

- Assembling a multistakeholder steering committee

- Aggregating providers vertically in clusters at first, then merging the clusters

- Aggregating providers by setting at first, then integrating them vertically

- Developing individual improvement projects using an information and data broker

A Closer Look: Colorado Foundation for Medical Care

Colorado Foundation for Medical Care (CFMC), the QIO for Colorado, is under contract with CMS for the Care Transitions project in Northwest Denver. In 2008, CFMC formed a steering committee to outline an overall strategy and to map out tactics for engaging other key providers and stakeholders. All of the community's key stakeholders - 2 prominent area hospitals, a large physician network, employers, state policy leaders, and senior citizen advocates – were represented on the steering committee.

Influential leaders were invited to participate in one of 4 community-based action teams that were co-led by a community leader and a CFMC staff member.[1] These teams were formed to provide infrastructure for improvement efforts directed at the major drivers of poor care transitions:

Action Team 1: Standard Processes – Tasked with creating standardized processes for notification of patient transfer

Action Team 2: Patient Activation and Family Support – Tasked with increasing support for patient self-management and family involvement

Action Team 3: Communications – Tasked with community outreach and public relations

Action Team 4: Culture Change Regarding End-of-Life Issues[1]

A cross section of the community (ie, payers, pharmacies, large employers, state and local government, patient advocacy groups, senior resource centers, community service organizations, physician networks, patients, area

residents, retirement communities) was invited to a community kickoff meeting. Designed to raise awareness, attract media attention, generate enthusiasm for the initiative, and recruit additional participants, the kickoff meeting featured nationally known care transitions experts and was attended by nearly 200 people from more than 70 organizations. By the end of the meeting, each Action Team had recruited between 10 and 15 additional participants.[1]

The Action Teams are already making progress toward their goals.

- Team 1 is addressing inconsistent processes and unreliable information transfer by creating a post-acute care decision-support tool to be used by the 2 major hospitals and by initiating a regional health information exchange.

- By means of presentations and educational materials directed at physicians, patients, and families, Team 2 concentrates on activating patients by initiating community-wide use of personal health records (PHR).

- Team 3 is focused on designing and refining the standardized PHR for community-wide use and on fostering community cohesion.

- Team 4 combats the drivers of poor transitions via educational and awareness campaigns for providers and patients. The Team also participates in policy discussions aimed at increasing the timely use of palliative and hospice care. [1]

The next step for CFMC will be a social interconnections analysis to help identify existing networks based on

utilization patterns and to understand the intervention's effect on the quality and coordination of care in northwest Denver.

Among the valuable lessons CFMC has learned from its Care Transitions project are the key steps toward motivating a community:

1. Identify your community. Who are the people you serve most often? Where do you serve them?

2. Identify your provider community. What providers participate and "share patients" in the community's health care services? Be sure to include home-based service providers.

3. Create a collaborative forum for routine information exchange and discussion. Be sure to include nonmedical health service providers as well as patients and their families.

4. Exchange quality data routinely.

5. Create a standard communication process within the community.

6. Encourage – and expect – visits among providers and stakeholders.

7. Identify the sickest people in the community. Review their care patterns.

8. Consider integrating patient coaching into the programs provided in your community.

9. Implement a standardized PHR for the community. Measure aggregate data and work toward creating population-based measures of utilization.

10. Develop tools to make the community more visible to consumers.

11. Contribute to the formation of local collective action platforms.

12. Promote provider accountability for building an infrastructure that crosses care settings.

Update on the 14-City Care Transitions Demonstration Project

About halfway into the nationwide Care Transitions project, Medicare spending on hospital care for approximately 1.25 million beneficiaries had been reduced by an estimated $100 million.[2]

Results at the 2-year interval showed that relative improvement for readmissions per 1000 Medicare beneficiaries ranged from 0.3% to 14%, with a median of 4.5%.[3] At this point, the CFMC program achieved a 9.3% reduction in readmissions among the 80,000 Medicare beneficiaries in its patient target population covering 44 zip codes.[2]

Recently, CMS Administrator Donald M. Berwick, MD, MPP, joined a meeting celebrating the success of the CFMC project in reducing hospital readmissions and was quoted as saying, "*…I just urge you to keep raising the bar. You're helping not just your area but leading the whole country by your example.*"[4]

Note: This article is based on "Engaging Communities in Improving Care Transitions and Reducing Utilization," a presentation by Alicia D. Goroski, MPH, at the Transitions of Care Advisory Board Meeting in Cambridge, MA, on August 15–16, 2010.

Alicia D. Goroski, MPH is the Care Transitions Project Director for the

Colorado Foundation for Medical Care. More information on the project is available at: www.cfmc.org/caretransitions.

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Inherent Risks: A Hospitalist's Perspective on Hospital Discharge Transitions
By Christopher Kim, MD, MBA

I can still remember how good it felt to hear my senior resident compliment me for being such a "good intern" when I admitted 8 patients the night before and discharged 8 others the next day. I diligently filled out my paperwork, signed the prescriptions, and wrote the order for the clerk to give to the nurse indicating "discontinue IV and discharge home." Those were the sweetest 10 letters to write as an intern: "DC IV, DC home."

If you were to ask me how these patients did after their discharge from the hospital, my answer would have been "I'm sure they are doing well," but the truth was probably closer to "We did a good job of caring for them in the hospital, and I hope they are doing well."

You see, unless patients came back to our hospital while I was still on that service, I rarely ever found out what happened to the patients I discharged.

Back then, I wouldn't have thought twice about the processes involved in how we discharged patients from the hospital. Fast forward more than a decade later and I am a practicing hospitalist; the opportunity to improve the quality of transitioning patients from hospital to home is at the front of my mind from the moment I admit a patient to the hospital.

One compelling reason to optimize the processes involved in transitioning patients out of the hospital is well articulated in a paper by Jencks et al.[1] An

evaluation of nearly 12 million Medicare beneficiaries discharged from an acute care hospital between 2003 and 2004 revealed that nearly 1 in 5 patients was readmitted to the hospital within 30 days of their discharge. Patients discharged from a medical service had a 21% rate of readmission, while those discharged with a primary surgical diagnosis had a readmission rate of 15.6%. Among those surgical patients, however, 70% were readmitted for a medical condition, suggesting that many patients have medical comorbidities that can exacerbate at any time. The top medical conditions that led to a readmission included: congestive heart failure, pneumonia, chronic obstructive pulmonary disease, psychoses, and gastrointestinal disorders.

The top surgical conditions that led to readmission included: cardiac stent placement, major hip or knee surgery, vascular surgery, major bowel surgery, and hip or femur surgery.

Another recent study reporting on the rates of readmission for Medicare patients who were initially discharged to a skilled nursing facility revealed that 25% were readmitted to the hospital within 30 days of their discharge.[2]

Other published reports have highlighted the potential problems patients can experience after being discharged from the hospital. A study by Forster and colleagues found that 1 in 5 patients experienced an adverse event at home after being discharged from the hospital. Further analysis of these data found that a third of these events were potentially preventable.[3] Although there are many possible reasons why patients experience complications after leaving the hospital, one potential root cause is related to how patients are educated and engaged in discussions about their medical care. A survey of patients at the time of discharge found that only 42% of the patients could accurately state their diagnosis, a mere 28% could list the names of their medications, 37% could state the purpose of their medications, and only 14% were able to list the common side effects of these medications.[4]

Another potential reason why patients experience avoidable complications post discharge is the quality and timeliness of the discharge information provided to ambulatory care providers. A systematic review of the literature on communication and information transfer from inpatient providers to outpatient providers revealed a significant number of deficiencies in the timeliness, quality, and effectiveness of this process. For example, only 3% of primary care physicians (PCPs) reported being involved in discussions concerning their patients prior to hospital discharge, and only 20% reported always being notified about their patients' discharge. The discharge summary - the primary method of discharge communication - often lacked several important pieces of information: 21% did not include discharge medications, 65% did not provide information about test results pending at the time of discharge, and 91% did not include information about counseling being provided to patients and their family members. The authors reported that discharge summaries are frequently unavailable during the first posthospitalization visit with the PCP and that this affected the quality of patient care in about a quarter of follow-up visits.[5]

Other studies took a closer look at the period between discharge and follow-up with patients' PCPs. One study found that tests and study results were pending for a significant number of patients at the time of their discharge and, of these, 9.4% of the pending test results potentially required action. A sample survey of outpatient providers revealed that nearly two thirds of PCPs were unaware that a test result was pending when their patients were discharged from the hospital.[6]

A study evaluating follow-through on tests after discharge from the hospital found that, of the 28% of patients discharged with a recommendation for further studies, 36% were not completed. Increased time from discharge to the first follow-up visit and unavailability of the discharge summary at the first visit were contributing factors.[7]

Adverse episodes following hospital discharge have been linked to inaccuracy of medication information provided to patients. A study of geriatric patients showed that those with 1 or more medication discrepancies were taking an average of 9 medications and had a higher 30-day readmission rate compared to patients who had no medication discrepancies (14% vs. 6%).[8]

Even the lay press has taken an interest in the topic of care transitions from the hospital to other settings. Discussing a study of heart failure patients over the past 20 years, a recent *Wall Street Journal* article reported that, although hospital length of stay had decreased, 30-day readmission rates had increased. One of the messages to readers was to discuss with their doctors whether they are "really sure they are ready to go home."[9] During the same time period, a *New York Times* article related a personal story. The journalist's elderly father was unable to manage his complicated wound care needs after being discharged from the hospital and required readmission within 3 days. This article encouraged readers to take more initiative in their own care after leaving the hospital and provided references to resources.[10]

As is evident from the foregoing studies and reports of deficiencies and problems that arise as patients transition from the closely monitored hospital setting to home, hospitals and the health care system need to devise interventions and processes of care to help make this transition phase as smooth as possible.

A number of "best practice" projects have demonstrated how a comprehensive approach to transitioning patients out of the hospital in a coordinated fashion leads to reductions in potential

complication rates by minimizing return visits to the emergency department (ED) following discharge and reducing 30-day readmission rates. The project RED (Reengineered Hospital Discharge program) study utilized a discharge advocate, a specially trained nurse who helped patients understand their diagnoses, arranged follow-up appointments, and confirmed medications at the time of discharge. Two to 4 days after discharge from the hospital, a clinical pharmacist made an outreach phone call to the patient. All patients had a follow-up appointment made for them prior to their discharge, and 90% of the patients had their discharge summary information sent to their PCP within 1 day after discharge. This comprehensive "package" of transitioning patients discharged from an inner-city Boston hospital led to a 33% reduction in readmissions or return visits to the ED.[11]

Other studies also have demonstrated that a multidisciplinary approach to engage the patient in the discharge process can lead to reductions in adverse outcomes post discharge from the hospital.[12, 13] National collaboratives - such as the Society of Hospital Medicine's BOOST (Better Outcomes for Older Adults through Safe Transitions),[14] the Institute for Healthcare Improvement's STAAR (State Action on Avoidable Rehospitalizations),[15] and the American College of Cardiology's H2H (Hospital to Home)[16] – endorse the use of a comprehensive package to help patients at the time of discharge. The package includes initiatives such as information, tools, and guides to improve the processes of care involved in transitioning patients out of the hospital.

As health care providers and hospitals evaluate their current processes for patient transitions from the hospital to alternate settings, it is critical that the hospital care team (eg, physicians, mid-level providers, nurses, pharmacists, discharge planners, case workers, social workers) is aligned and working in a coordinated fashion to smoothly transfer patients to their PCPs. In theory, when the health care team works together with the patient as the focus, the patient becomes engaged in the process and there are fewer adverse outcomes following discharge from the hospital.

Looking back on my internship, I think we did a good job of taking care of our patients during their hospital stays. I also think that everyone in the hospital worked very hard to help anticipate and meet the needs of patients as best we could. However, there clearly was room for improvement and a need to better understand the transitions of care phase. As new information and studies reveal gaps in our care processes and suggest improvement opportunities in transitions of care, it is important for hospitals and their providers to pay attention and take appropriate action. As we gain more experience, and with guidance from collaboratives such as the ones mentioned herein, optimization of the transition process will be within our grasp.

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Medications and Care Coordination: Prevalence, Measurement, and Reduction of Errors

By Karen B. Farris, PhD

Medications and their dosages often change during hospitalizations and physician office visits. These changes require reconciliation with the medications patients already have in their homes or other health care facilities.

Medication reconciliation is defined as "a process for comparing the [patient's] current medications with those ordered for the [patient] while under the care of the [organization]".[1] The goal of this process is to ensure that individuals have available the correct medications in the correct doses at specified times.

In addition to intended changes, unintended changes may occur during transitions of care. Omitted drugs, changed doses, and changes in frequency of administration are the most common issues, but medications that should no longer be present may remain on the patient's medication list.[2]

Studies of medication reconciliation have documented medication problems at admission and discharge,[3-6] as well as during transitions to other facilities[7] and back into the community.[8] The magnitude of the problems varies by type of error and site of transition, but the evidence suggests that about one third of patients admitted to a facility have an error on their admission medication lists and up to one third of patients have a discrepancy between their discharge medication lists and what they are taking 30 days later.[6]

Fortunately, many of these medication discrepancies do not cause significant harm, but those involving certain medications (eg, warfarin, insulin, nonsteroidal anti-inflammatory drugs) can have a serious, negative impact on chronic disease management and lead to adverse drug events. Thus, medication reconciliation to ensure that medication lists are transferred, checked, and evaluated in any new health care setting (including the patient's home) has become an important National Patient Safety Goal.[1] The Joint Commission's original implementation of this goal in 2005 presented difficulties for institutions and new guides are expected in 2011.

Medications are but one important aspect of coordinating care during various transitions. A broader view is necessary if we seek to improve the quality of care transitions in all aspects. To that end, the National Quality Forum (NQF) brings together health care organizations to discuss, measure, and report on quality indicators with the expectation that these processes will lead to quality improvement.

The NQF endorses quality measures developed by various organizations using a standardized Consensus Development Process. Important to the topic at hand, NQF defined care coordination in 2006 as a "function that helps ensure that the patient's needs and preferences for health services and information sharing across people, functions, and sites are met over time."[9]

In 2008-2009, NQF led a Consensus Development Process to "endorse a set of preferred practices and performance measures in care coordination that are applicable across all settings of care."[9] From this process, 10 measures and 25 preferred practices were endorsed, 4 of which focused on medications across transitions of care.[9, 10]

The care coordination measures relevant to medications were submitted by the American Medical Association – Physician Consortium for Performance Improvement (NQF measure numbers 0646, 0647, 0648 and 0649). In addition to these 4 newer measures, the NQF had already endorsed 2 measures focused on medications and medication reconciliation from the National Committee for Quality Assurance (NQF measure numbers 0097 and 0554). The numbers for the measures are included here to enable a search of the measures database at the NQF Web site.

The most general measure (#0554) is defined as the "percent of discharges from January 1 to December 1 of the measurement year for patients 65 years of age and older for whom medications were reconciled on or within 30 days of discharge." One measure (#0097) adds specificity to medication reconciliation conducted in physician offices within 60 days post discharge and another measure (#0646) assesses whether patients receive a reconciled medication list at discharge. Three measures focus on the transition record, in which medications are included, and document receipt of the transition record by the patient following an inpatient stay (#0648) or an emergency department visit (#0649)

and its timely transmission (#0647). Additional documentation in the final report identifies all elements of the transition record.

In essence, NQF is broadening the focus on medication reconciliation to include medications within a transition record, and the types of information to be included in the transition record are specified. The value of the established NQF measures lies in their use by health systems to assess the quality of their care coordination across different settings.

Beyond the care coordination practices and measures, the NQF established the National Priorities Partnership (NPP), a collaborative group of 32 public and private organizations with health care interests. The NPP identified a set of 6 priorities in November 2008, believing that substantial improvement in those areas would result in transformative change in the health care system.[11]

One of the 6 priorities is care coordination. In September 2010, the NPP Care Coordination Convening Workshop was held, building on previous work to:

1. Identify environmental barriers with plans to address such barriers in achieving the NPP Care Coordination goals,

2. Identify gaps in measurement, and

3. Consider uses of health information technology.[11]

We know that using NQF-endorsed measures to assess the quality of processes of care is essential to improving care. But, when problems are identified, how do we decide on the best approach for improving the processes of care? This is the role of randomized clinical trials or other research - to establish strong evidence of practices or processes of care that produce specific outcomes.

At the University of Iowa Hospitals and Clinics, we conducted a randomized controlled trial to quantify the effect of pharmacist-case managers on medication appropriateness, adverse drug events, and a composite measure of unscheduled office visits, emergency department visits, or rehospitalizations.[12] In this study, pharmacist-case managers:

- Conducted medication reconciliation at admission,

- Updated the hospital's admission medication list,

- Monitored and visited patients daily,

- Created wallet-size medication lists for patients upon discharge, and

- Provided discharge counseling to all patients in the intervention arms of the study.

Patients in the enhanced intervention study arm also received a follow-up call 3-5 days post discharge. An enhanced discharge care plan (format and example available upon request) with medication list (including medication name, dose, directions, titration, and monitoring plans) was sent to the patient's primary care physician and community pharmacy. An enhanced care plan includes a summary of the course of each condition in the hospital, medication problem identification, and laboratory results and/or tests required to monitor the effects of medications.

The study was designed to allow separate determination of the effect of pharmacist-case managers' inpatient activities on medication use versus their outreach activities. This will enable the results to be translated into effective practices by targeting aspects of the interventions to specific populations. For instance, the enhanced intervention with follow-up phone call and enhanced medication list may be used in populations for whom rehospitalization is the result of medication problems (eg, patients with diabetes using insulin, patients with heart failure).

As of August 2010, a total of 670 patients were enrolled in the study. An interim analysis of medication discrepancies showed that the number of important discrepancies was lower in primary care physician offices for the enhanced intervention group compared to the minimal intervention and control groups. Specifically, fewer medications were omitted from the medication lists in the physician records for those individuals in the enhanced care group.

In summary, we know that medication errors occur during transitions of care. Using NQF-endorsed measures provides a mechanism for evaluating care coordination practices such as medication reconciliation post discharge or timely transition record transmission in an institution or within a health plan. When problems are identified, implementing evidence-based interventions to improve medication reconciliation practices or other care coordination activities will result in improved processes of care that are known to impact outcomes of care.

Knowing which patients require reconciled medication lists,

postdischarge phone calls, or home-based visits is critical to reducing medication-related rehospitalizations. Using nationally endorsed quality measures in conjunction with evidenced-based interventions can improve the quality of care coordination.

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