TOPICS IN PATIENT SAFETY

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Medication Reconciliation

Keith W. Trettin R.Ph., MBA, NCPS program manager

What do These Medication Orders Have in Common?

Each of these non-VA medication orders have been reported in the national literature as failures in communication during a change in the level of care.

- Upon discharge from a hospital, an 80-year-old received Amaryl 5mg rather than Ramipril 5mg.
- Upon admission to a hospital, an order was written for Coreg 25mg, to be taken twice a day, rather than one 6.25mg dose the patient was receiving at home.
- A patient received Propranolol Solution 20mg/5ml in a long-term care center; upon admission to a hospital, an order was written for 20mg/ml give 5m l, resulting in a five-fold increase in dose.
- Enoxaparin and Clopidogrel were not continued when a patient was transferred to a different level of care.

The Joint Commission and Institute of Healthcare Improvement (IHI) responded by requiring medical centers to develop formal medication reconciliation processes.

History

Nationally, adverse medication events significantly contribute to increased morbidity and mortality in American hospitals.

In August 2006, the Institute of Medicine of the National Academies released a major study on such events in American hospitals, noting that adverse drug events (ADEs) annually harm more that 1.5 million people, kill several thousand, and cost at least $3.5 billion.

Poor communication between health care providers and between providers and their patients continues to be a major contributing factor to these adverse events.

Especially significant are communication breakdowns at the interface of care.[1] In addition, 46 percent of adverse medication events occur during admission or discharge.[2]

Many studies have indicated that 30-70 percent of all admission orders have variances between medications patients were taking at home and hospital admission orders: The most common discrepancy is omission of home medications, followed by problems in wrong dose, route, etc.[3]

Regulatory Goals

Multiple studies indicate that institutions can significantly reduce adverse medication events if they develop formal processes to reconcile medications at admission, when a patient is transferred from one level of care to another, and at discharge. In response to these findings, the Joint Commission and IHI have developed goals to promote medication reconciliation.

In 2004, the Joint Commission announced National Patient Safety Goal (NPSG) Number 8: "Accurately and completely reconcile medications across the continuum of care." Click to: *www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals*

This goal requires organizations to implement a standardized process for creating an accurate list of medications at admission, transfer, and discharge. The list must also be communicated to the next provider.

New for 2007, a complete list of medications must be provided to the patient upon discharge from the facility.

The IHI recommended implementing medication reconciliation as a strategy for preventing ADEs in their "100,000 Lives Campaign"; a recommendation that continues in their current "5 Million Lives Campaign." Click to: *www.ihi.org*

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The Patient Safety Initiative Encourages Creativity

By Susan Yeh, NCPS program assistant

The Patient Safety Initiative (PSI) was established to stimulate creative approaches to complex patient safety issues, and many successful projects have been funded in the first two years of the program.

VA patient safety professionals have used PSI as an opportunity to develop projects with a demonstrable impact on their patient safety programs; projects with well-defined measures and strong rationales.

We hope the projects listed below will encourage others to participate in PSI 2008 – or to implement one or more of the projects at their facilities.

Many accomplishments were noted as a result of the 26 proposals funded in 2006, such as a number of reports of increased teamwork among colleagues. Here are some specific examples:

Decrease in fall rate by 25 percent (VAMC Augusta)

- The grant was used for promotional items and costs of a "Falls Fair," which covered topics such use of the Morse Fall Scale and different types of fall preventions and interventions.

Increased flu vaccination rate: 51 percent to 67 percent (VAMC Tomah)

- The facility's promotion strategies were based on incentives. For instance, those who took a flu shot received a T-shirt.
- Employees and patients were offered flu shots in the same area, streamlining the operation.
- To increase accessibility, the shots were also provided in all nursing homes and medical wards and on all shifts.

Increased patient satisfaction due to increased health literacy (VAMC Marion)

- The facility focused on improving patient education regarding disease processes and prevention, as well as improving patient safety education.
- A multi-disciplinary team was formed to develop an education tool, choosing a display that consisted of easy-to-read information and eye-catching visuals.
- Feedback from staff indicated patients used the education tool. For instance, a nurse noticed a patient reviewing the information. When she performed a patient interview, the vet related information from the counter top flip-chart on flu vaccine, and asked for a flu shot.

Decreased length of stay from 4.9 to 4.3 days (VAMC Minneapolis)

- The facility decided to focus on a medication reconciliation project, piloting two pharmacist-led intervention groups to measure the effects. Baseline data was collected prior to starting the pilots.
- The first group involved one residential pharmacist (RPh) admitting and discharging patients, while another did inpatient monitoring. In the second group, one RPh worked on admitting and inpatient monitoring; another covered patient discharges.
- The increase in accountability due to the monitoring not only decreased length of stay, but also resulted in a decrease of adverse drug reactions when compared to the baseline data (a decrease of 6 percent and 18 percent for pilots one and two, respectively).

In 2007, patient safety managers were offered another chance to receive funding for creative projects. The projects were judged on creativity, rationale, utility, and impact. Overall, proposals funded this year were creative and had potential for global use.

Some highlights from this year's proposals include:

VA North Texas Health Care System

- The facility will record three videos about Supply, Processing, and Distribution responsibilities related to accepting instrument sets from outside the VA facility (e.g. loaner sets), packaging and handling of instruments, and checking instrument functionality.

VA Maryland Health Care System

- The facility will develop a "drive-thru clinic" to promote flu vaccinations, which is expected to reduce the time a veteran spends waiting for vaccination, taking as little as 10-15 minutes.
- Ventilated, collapsible drive-thru huts will help to decrease the potential exposure to carbon monoxide (which will be measured) and protect against the elements.

Amarillo VA Health Care System

- The facility will design a medication label template that highlights key points of information and displays them in uniform locations on the prescription label.
- Patient focus groups will be involved in the evaluation process.
- The analysis will also include current labeling rationale and patient behavior vis-a-vis medication use.

A number of proposals were from second year participants. Here are two examples:

VAMC St. Louis

- The funding in 2006 was used to develop a training lab where caregivers could practice central line placement, intubations, and procedure kits on mannequins.
- This year, cardiac arrest drills will be filmed to identify systems issues for use in debriefing code teams.

VA Central California Health Care System

- Last year, the facility developed a "red sock" fall prevention program, using socks to make fall-risk patients more visible and decrease the chance they were left to ambulate unattended.
- PSI 2007 will fund an effort to use UV lights to disinfect electronic patient care equipment, which is difficult to disinfect with water-based cleaning products. The facility, located in Fresno, Calif., hopes that UV sanitation will have a greater effectiveness than conventional sanitation methods, decreasing MRSA incidents.

A list of 2006 funded proposals can be found in the May/June 2007 TIPS: *www.patientsafety.gov/pubs.html#tips*

Learn More!

VA employees can click on our intranet web site to learn more: *vaww.ncps.med.va.gov/Initiatives/psi/index.html*

Funded 2007 PSI Projects and Points of Contact

Falls Prevention

- *Rejuvenation of facility fall and injury prevention program.* VA Black Hills Health Care System; Betty Nettleton.
- *"Move the Caregiver"* proposal for Sioux Falls VAMC, S.D. Sioux Falls VA Medical/Regional Office Center; Connie Siverton.

Hand Hygiene

- *Germ scene investigators.* VAMC, Chillicothe; Pamela Nichols.
- *Hand hygiene education plan for medical center staff.* Hayden VAMC; Judy Schriver.

Infection Transmission and Risk Screening

- *Utility and effectiveness of UV light disinfection of electronic patient care equipment.* Central California Health Care System; Greg Wike.

Medication Management and Reconciliation

- *What does your prescription label say?* Amarillo VA Health Care System; Joe D. Youngblood.

Patient Safety Culture

- *Reducing the risk of injury and loss of property of patients receiving home oxygen.* VAMC Martinsburg; Kent Wagoner.
- *Using education to empower patients, health care professionals, and students to enhance safe care.* VA Western New York Healthcare System; Barbara Leisner.
- *Use of perioperative slider boards to improve communication among surgical teams.* VAMC Martinsburg; Kent Wagoner.
- *Improving patient safety manager retention through structured mentoring.* Kansas City VAMC; Tim Anderson (Columbia).
- *Filming cardiac arrest drills to identify system issues to debrief with a code team.* St. Louis VAMC; Tony Lantzer.
- *Provide safe transition from hospital to outpatient/home care setting for heart failure patients.* VA Western New York Healthcare System; Robyn Jordan.
- *"SPD is key" to improve patient safety inside and outside the OR.* VA North Texas Health Care System; John A. Bender.

Pressure Ulcer Prevention

- *Educational program for patients and their families on skin safety and prevention of skin breakdown.* Hayden VAMC; Donna Rogers.
- *"Healthy Foot Care Kits" – preventing foot ulcers and amputations in high-risk patients.* VAMC Memphis; Melinda Kincade.
- *Pressure ulcer documentation using digital photography and front-line staff involvement/education.* Marion VAMC; E. Diane Randall.

Vaccination

- *Expanding veterans/employees access to flu vaccine using a drive-thru flu method.* VA Maryland Health Care System (Baltimore Rehabilitation and Extended Care Center and Perry Point); Kathleen Agnes.

Other

- *Improving therapeutic diagnostic services through the technology of human/machine system interaction.* White River Junction VAMC; Deborah Cutts.

Medication Reconciliation

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VA Response to the Problem

VA medical centers have worked diligently to meet medication reconciliation safety goals. Several VA medical centers have had difficulty developing operational solutions in support of these goals, and many specific questions have arisen.

The Joint Commission has committed a large part of its NPSG web site in an attempt to address many of these questions about NPSG Number 8; a 17-page Frequently Asked Questions (FAQ) is available. Click to this Joint Commission site, then scroll down to the FAQ for NPSG 8: *http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/*

The VA has responded by sharing software processes developed by Robert Silverman, Pharm D., Hines VA Hospital, that can assist other VA medical centers in meeting the medication reconciliation safety goals.

An IT Service Request has been made to develop a national IT solution. In addition, NCPS has developed medication reconciliation patient education placards, which are informative and solicit the veteran to participate in the medication reconciliation process. VA employees can view these on the NCPS Web site: *http://vaww.ncps.med.va.gov/Guidelines/NPSG/index.html*

Patient safety officers and managers can order these placards via the NCPS program manager assigned to their VISN or facility.

VAMCs should have defined policies and procedures (P&P) that address the following three levels of medication reconciliation communication between health care providers:

- *Communication between VA-to-VA medical providers.* Use of CPRS should satisfy this element.
- *Communication between a VA medical provider and contracted medical provider.* The P&P should specify how medication information flows to the contracted provider and how information will flow back to the VA and be reflected in CPRS.
- *Communication between a VA provider and one that has no formal relationship with the VA.* A recent VA study indicated that virtually 100 percent of veterans over 65 years old and 50 percent of younger veterans see medical providers outside the VA. The P&P must specify how the medication reconciliation data will be shared with the next non-VA provider of care, if one is identified by the patient.

What Can be Done Today?

Do a self-assessment! Ask yourself four key questions:

- *Do we have a policy and procedure that outlines the roles, task, and steps in the reconciliation process?*

Without a policy and procedure, it's hard to make a case that a VA medical center is conducting medication reconciliation on a routine basis. The VA's electronic medical records system allows complete tracking of current medications dispensed or administered within the VA: State this in your policy.

In addition, the procedure for collecting and documenting medications dispensed outside the VA should be a part of your policies and procedures.

- *Do we have a process that addresses inpatients, outpatients, changes in level of care, and ambulatory clinic patients?*

Make sure a current list of medications is available at all levels of care. Document where this information is stored and how it can be made available.

Staff should be able to answer this question: How do I know the medication reconciliation process is consistently happening in my organization?

- *How do we educate veterans and solicit them to participate in the medication reconciliation process?*

Use the medication reconciliation placard available through NCPS and support the use of the current medication list found on the VA's My HealtheVet Web site: *www.myhealth.va.gov* Although not a specific requirement of the NPSG Number 8, these actions do help meet NPSG Number 13, "Encourage patients' active involvement in their own care as a patient safety strategy."

- *Is the veteran receiving a list of current medications at discharge from an inpatient unit or when leaving a clinic?*

At discharge, the Joint Commission does expect the current provider of care to communicate with the next provider of care. If the next provider of care is unknown, it is acceptable to give a medication list to the patient.

VA employees can use VA software to meet this new requirement: *http://sharepoint.v12.med.va.gov/hin/cccc/Shared%20Documents/Medication%20Reconciliation_Instructions%20for%20installation%20of%20Hines%20Class%20III%20Tools.doc*

For more information, contact the author: Keith.Trettin@va.gov

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