FIRST

Do No Harm

In this Issue:

Quality and Patient Safety Division, Board of Registration in Medicine

April, 2010

NEW CHANGES!

Tracy Gay, JD, MHSA, Director, Quality and Patient Safety Division

The Patient Care Assessment (PCA) Division of the Board of Registration in Medicine (BORM) has changed its name to the Quality and Patient Safety (QPS) Division. * This is just one of many changes going on within the Division. Change began in August, 2009 when BORM announced the appointment of the Director of the PCA Division, Stancel M. Riley, Jr., MD, MPH, MPA, as the agency's new Executive Director. In November 2009, Tracy L. Gay, JD, MHSA, was appointed as the new Director of the PCA Division. She was previously the Deputy Director for the Betsy Lehman Center for Patient Safety and Medical Error Reduction, where she worked to develop, evaluate, and disseminate best practices for patient safety and medical error reduction. Peter Paige, MD, vice chair of Emergency Medicine at UMass Memorial Medical Center and clinical associate professor of Emergency Medicine at the University of Massachusetts Medical School, was named chair of BORM and became the new chair of the PCA Committee in December 2009.

The PCA Division and Committee became the QPS Division and Committee in early 2010. New guidelines for the operation of the QPS Committee were developed to provide a framework for: terms of service, membership expertise and scope of work. The new membership represents expertise that will allow responsive feedback and thorough consideration of the issues brought before the QPS Committee. This includes membership from the Boards of Nursing and Pharmacy and a patient representative. Many thanks to former members of the PCA Committee for the hard work, dedication and enthusiasm they brought to their role as a member of the Committee.

The QPS Committee supports the QPS Division's work through: feedback and direction to hospitals' quality and patient safety operations; learning about hospitals' work to improve patient safety and quality; visiting hospitals with QPS Division staff.

Like the QPS Division, the QPS Committee operates under confidential, peer review protection and does not share any information with any BORM divisions or committees of BORM.

Work within the QPS Division is also changing. We are looking at all of our internal processes to assess their effectiveness and consider ways to enhance our feedback. This includes exploration of the QPS Division's data base and how to better utilize it to demonstrate areas of patient safety concern and areas of improvement. Hospitals will notice a change in their Health Care Facility Reports (HCFRs) through simplification and consolidation of the information.

Hospitals will soon receive an electronic version of QPS's new booklet entitled "Healthcare Facility Patient Care Assement Programs." It will provide a description of the QPS Division, its regulations, reporting requirements and frequently asked questions. The booklet is available at http://www.massmedboard.org/pca/.

The QPS Division is also planning to hold two half day workshops on June 3rd and 4th for PCA Coordinators to learn more about our statutory and regulatory reporting requirements. We will offer CEUs and CMEs. If you have not received an email invitation and would like to attend or would like more information; please contact Jennifer Sadowski at Jennifer.Sadowski@state.ma.us.

The QPS Division is striving to be a meaningful, high value organization that works to support Massachusetts hospitals in providing quality, patient centered health care. We look forward to hearing from you and would welcome an invitation to visit your hospital to learn more about the high quality care you are providing.

*As an important note: our name change does not affect a hospital's PCA regulatory processes, reporting requirements or its daily work.

"As the new Chair of the QPS Committee, I am excited to be leading the Committee during this time of change. The vision of quality and patient safety has evolved in the last twenty years; one of my goals is for the QPS Committee to work with the QPS Division to promote high quality patient-centered care through a system-based approach to quality assurance."

Peter Paige, MD Chair, Quality and Patient Safety Committee

TRIGGERS: A RAPID RESPONSE APPROACH

Pat Folcarelli RN, PhD, Michael Howell MD, MPH, Kenneth Sands MD, MPH*

The nurse's view: When working as a clinical staff nurse on a general med-surg unit on the evening or night shift, I would often need to exercise my clinical judgment about a change in a patient's status. Imagine this scenario: it is 2:00 a.m. and one of my patients developed a respiratory rate of 32. After my initial assessment of the situation, I needed to decide whether or not to call the doctor. When the doctor returned my call, he or she needed to decide whether or not to actually come to the bedside to evaluate the patient or just make recommendations over the phone. Some of the doctor's decision might have been based on how well I described the clinical condition, how worried I sounded, or how well the physician knew me and trusted my assessment skills.

The physician's view: When working as an intern on the wards at night, I relied on the assessment skills of the nurses and really hoped they always knew when to call. Imagine this scenario: it is 2:15 a.m. and I've just admitted a sick patient who I'm worried about. If he is with a nurse I know well, then I'm very comfortable. But, if he has a nurse I have not worked with much before, then I am nervous. In fact, with these kinds of patients (cared for by nurses I was unsure of), I would always try to sneak by in the middle of the night to double check, because I just wasn't certain that I would get a call if something changed. Of course, when I did get those calls, I had several decisions to make: Go and see him? Just make recommendations over the phone? Call my supervising resident? (sometimes) The attending? (rarely).

In 2005 the Institute for Healthcare Improvement launched the 100K Lives Campaign.[1] One of the recommended practices was that institutions develop rapid response teams to provide earlier intervention to the decompensating patient.[2] For 2008, The Joint Commission hospital accreditation standards include a new National Patient Safety goal which calls for improved recognition and response to changes in patient's condition.[3] Understanding that studies have yielded conflicting results and less resource-intense approaches have not been tested, Beth Israel Deaconess Medical Center (BIDMC) approached these recommendations by launching the Triggers: Rapid Response process—a clinically resource-neutral approach to standardizing the response to decompensating patients.

BIDMC started by identifying a standard set of "triggers" first described by Bellomo (see Figure 1).[4-5] When a non-ICU patient meets the trigger criteria, the result is a standard communication from the nurse to the intern or resident caring for the patient. "Mr S. has triggered with a BP of 82/50." The intern or resident, and a senior nurse (clinical supervisor or clinical nurse specialist) then must come to the bedside to see the patient. If the trigger is a respiratory event, a respiratory therapist also comes to bedside. Once the evaluation is complete, the intern or resident informs the attending that his or her patient has "triggered," then they discuss the plan of care.

To assist in this new process, BIDMC's Information Systems department created a "Trigger" multidisciplinary event note. Nurses can generate a "Trigger" event note by a single click in BIDMC's CPOE system. The note pulls a list of the active medications, recent lab results, advance directive status, and allergies so that when the team responds to the bedside, it has this key information at hand without needing to scan through the record. This event note provides the documentation of the interventions and helps to capture the truly multidisciplinary discussion of the plan of care for that patient with all team members. It has also provided access to day-to-day data on activity of the Triggers program helping team members track and follow up on the patients who Trigger and to review the response and the interventions that occurred. Clinicians can also review the care of patients who require resuscitation to see if a Trigger was called prior to a cardiac arrest or ICU transfer. Knowing which patients did or did not Trigger prior to an event has allowed BIDMC to learn more about its systems of care and to identify areas of practice where educational reinforcement was needed.

One example of this was in management of oxygen therapy for medical and surgical patients. In several instances BIDMC discovered that nurses would increase the oxygen delivery by turning up a nasal cannula delivery from 2L to 4L to 6L without calling a "Trigger" because the oxygen saturation was remaining above 90. Retrospective review of several of these instances over time lead to adding a new, more specific Trigger criteria in 2007 and also lead to enhanced nursing and physician education about oxygen management.

We also discovered that there were more episodes of aspiration requiring intervention than we had appreciated. A review of triggers for marked nursing concern or hypoxia demonstrated that we had opportunity for better systems to assess and flag certain patients as being at high risk for aspiration. This led us to develop an enhanced initial nursing assessment tool, new flags in the patient's electronic profile and new signage for the patient rooms so that all caregivers and even visiting family members knew about the risk of aspiration.

So what have we accomplished?

Better Outcomes: BIDMC looked at the risk of full-code patients dying outside of an ICU—what the literature generally calls "unexpected mortality" or "non-ICU, non-DNR mortality." Since beginning the Triggers program in 2005, unexpected mortality at the BIDMC has fallen by more than 50 percent, even after adjustment for age, case mix, and comorbidities.

A New Verb in Clinical Language: The Triggers: Rapid Response process has helped to enhance collaborative communication by standardizing the expectations for response when a

(Continued on page 3)

TRIGGERS: A RAPID RESPONSE APPROACH, continued

patient becomes unstable. The criteria and the naming of the program with the "Trigger" phrase provides rule-based communication that eliminates ambiguity in expected response. Over the past two years, the Triggers program has become a part of the day-to-day work in the care of BIDMC's non-ICU patients. In interdisciplinary rounds, it is now common to hear "Mr S triggered at 1300 for a low blood pressure." BIDMC now has a new verb!

We are particularly proud of the decision to use the existing primary care team to respond to the bedside; the patient is best served by an initial response by the physician who knows him or her.[6] This level of response also fits with BIDMC's teaching mission. And finally (and not insignificantly), this level of response did not require the addition of staff resources.

So if we think back to that long ago the night shift of our medical surgical unit…

We no longer rely on the nurse to decide if a call is necessary, knowing that there are other factors that might influence the decision to call for help. We no longer rely on the intern or resident to decide whether the attending should be called, since there are other factors that might influence the decision to notify the attending physician of a change in the patient's status. We have standardized the rules and, in doing so, we have developed a new collaborative process for communication.

TRIGGERS

The acute, new development of any of these constitutes a Trigger:

- Heart rate <40 or >130
- Blood pressure decrease to <90
- Respiratory rate <8 or >30
- Sa O_2 <90% with oxygen therapy
- Any need for non-rebreather O2
- Urinary output <50 cc in 4 hours
- Acute change in consciousness
- Marked nurse concern

The Trigger Team includes:

- the patient's House Officer
- the patient's Nurse
- the floor's designated Senior Nurse
- the floor's Unit Coordinator, if staffed
- Respiratory Therapy, if needed
- other providers, as needed

Figure 1

References

1. Institute for Healthcare Improvement. 100,000 Lives Campaign. March 20, 2005; http://www.ihi.org/IHI/Programs/Campaign/Campaign.htm.
2. Institute for Healthcare Improvement. Getting Started Kit: Rapid Response Teams. http://www.ihi.org/NR/rdonlyres/6541BE00-00BC-4AD8-A049-CD76EDE5F171/0/RRTHowtoGuide.doc. Accessed 19 January 2007, 2007.
3. Joint Commission on Accreditation of Healthcare Organizations (JCAHO). 2008 National Patient Safety Goals: Hospital. http://www.jointcommission.org/NR/rdonlyres/82B717D8-B16A-4442-AD00-CE3188C2F00A/0/08_HAP_NPSGs_Master.pdf. Accessed 21 September 2007, 2007.
4. Bellomo R, Goldsmith D, Uchino S, et al. A prospective before-and-after trial of a medical emergency team. Med J Aust. Sep 15 2003;179(6):283-287.
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6. Howell MD, Folcarelli P, Aronson M, et al. Can an intern lead a rapid response team? Crit Care Med. December 2006 2006;34(12):A23.

**Dr. Folcarelli is Director of Patient Safety, Silverman Institute for Health Care Quality and Safety, at Beth Israel Deaconess Medical Center, Boston. Dr. Howell is Director of Critical Care Quality for BIDMC's Silverman Institute for Healthcare Quality and Safety. Dr Sands is the Sr Vice President for BIDMC's Silverman Institute for Healthcare Quality and Safety.*

MEDICAL MISSION TO THE HAITIAN BORDER

Rick Weiner, MD, FACS, *

Tuesday, January 12th, a powerful earthquake ripped through the vulnerable nation of Haiti. Hundreds of thousands of people were killed and scores more injured. Pictures of the devastation jarred the world. Many of us made contributions to agencies such as the American Red Cross, but somehow we wished we could do more. Within a week, Dr. Ben Levine, an upper extremity surgeon at Winchester Hospital, found a group named Children of the Nations and made plans to go with them to the Good Samaritan Hospital in the town of Jimani, DR, on the Haitian border. Hundreds of injured Haitians were already there, and the existing staff was overwhelmed. I decided to accompany him, along with two of our operating room nurses, Stephanie Celata RN and Leigh Ferrante RN. We had our immunizations, started our anti-malaria medications, and flew to Santa Domingo, DR. We spent the first night in Barahona before the next day's bus ride to Jimani.

When we arrived, we found hundreds of patients suffering from a wide range of injuries. The more common ones were crush injuries requiring amputations. Facilities and equipment were in stark contrast to what we were accustomed to back home. There was no suction and only one cautery device for five operating rooms (three of which were converted procedure rooms). Everyone's hard work and inventiveness however was inspiring.

The Haitian people themselves were wonderful, kind, and extremely appreciative of all of our efforts. The need was so great and the work so rewarding that the most difficult part of the trip was leaving. Each one of us is trying to find a way to get back so that we can continue to give back. We benefited tremendously from the experience.

**Dr. Weiner is Chief Medical Officer and PCA Coordinator at Winchester Hospital*

QPS DIVISION STAFF AND COMMITEE MEMBERS OUT IN THE COMMUNITY

The QPS Division has been visiting hospitals to learn more about their PCA Programs. Below are pictures from some of our trips. Please let us know if you would like us to visit your hospital.

Dinesh Patel, MD QPS Committee member, with Maureen Keenan, JD Associate Director and Tracy Gay, JD Director

Dinesh Patel, MD , with Jane Mihalich , RN, Quality Analyst and Tracy Gay.

SIGNATURE HEALTHCARE BROCKTON HOSPITAL ED CALLBACK PROGRAM

Timothy R. Lynch, MD PCA Coordinator Signature Healthcare Brockton Hospital

It is well known that patient complaints tend to be more common and Press-Ganey scores lower when the volume is high in the Emergency Department. In addition to addressing throughput issues, Signature Healthcare Brockton Hospital attempted to deal directly with patient perceptions of their care. After reviewing the literature and Press Ganey recommendations, the decision was made in January of 2008 to institute day after visit callbacks for Emergency Department patients in an effort to change that trend.

Process:

Patients discharged from the Emergency Room are called the day after they are seen to check on their condition, answer any questions and facilitate follow-up care and visits. A form was designed that is affixed to each patient record by the Emergency Department secretary after discharge and placed in a "callback" container for the next day.

Patients with psychiatric issues, those under arrest, or patients returning to nursing facilities are excluded. Physicians, Physician Assistants, and Nurses working the day or evening shifts are expected to participate in the program with the more complex patients being assigned to the physicians. We average about 170 patients a day. The calls take about three to four minutes and rarely does anyone have more than two or three callbacks to make per shift. If someone is too busy to get to all of them, others will pitch in to help.

The callback form has a template with some simple guidelines and scripting. The patients are asked about their condition, the care they received, the degree of satisfaction or dissatisfaction, observations about what could have been done better and the need for any further assistance. The callers were reminded about privacy laws, and told to be aware that the person answering the telephone may be unaware of the visit.

As part of the process, the charts are reviewed for adequacy of documentation and completeness of aftercare instructions, with appropriate feedback to the care providers. Contrasting the discharge instructions to the patient's understanding often highlights areas for improvement in patient education and discharge planning. Just reviewing the record often provides insight about the importance of good documentation.

Results

There was general improvement in Press-Ganey scores and much less variation, even during periods of peak volume. But there were many other positive impacts from the program. Speaking with the patient the day after their visit gave more meaningful, more detailed and highly personal feedback that Press-Ganey surveys just can't provide. Knowing that the patient you care for today will be offering feedback the next day resulted in a heightened awareness of the impact of the way care is given in terms of patient satisfaction and addressing issues during a patient's visit.

We became aware of how little patients truly retain at the time of discharge from an Emergency Department visit. They are often there unexpectedly, often under stressful circumstances and although teaching is technically done throughout the visit, the bulk of the education is done at time of discharge. The callback gave staff an opportunity to answer questions and really determine the patient's degree of understanding. Interpreter services became involved in the process within a few weeks of its inception to call back our non-English speaking patients. This has typically been a population who do not consistently return Press Ganey services, and it was important to identify their issues, as well.

Some patients' experience in the Emergency Department was so pleasing they would request a new primary care physician within the Signature Healthcare organization. Others would tell us of difficulty getting an appointment or follow up, which gave us an opportunity to help. The program has made the care more patient-centered and satisfying for everyone involved. Getting prompt feedback has helped to drive and sustain process improvements.

ED SQRs

In 2009, the QPS Division received 47 Safety and Quality Review reports describing unexpected events that occurred in Emergency Rooms.

SQR CORNER

Event Description:

An elderly patient was admitted to the ED for evaluation of abdominal pain and vomiting, with a question of a gastrointestinal bleed. On arrival her INR was 5.42 and she was given 2 mg Vitamin K per the facility's protocol for non-bleeding patients with this INR. The repeat INR the following morning was 5.26 and hemoglobin/hematocrit were essentially unchanged. The patient was admitted as a DNR to the med-surg unit but later transferred to telemetry with atrial fibrillation. She remained in atrial fibrillation despite Diltiazem XL and Digoxin, and developed new ST and T wave changes. Her oxygen saturation declined despite a change to a non-rebreather. The patient voiced her wishes to be DNR/DNI and continued to deteriorate, developed agonal respirations and died that afternoon. Following her death a large amount of emesis suggestive of a GI bleed was noted.

Internal Review

The hospital noted that they reviewed the case as an unexpected mortality despite the patient's co-morbidities and DNR status, because the death was unexpected at that time and because they identified opportunities to improve care for future patients. Reviewers noted that the family had reported a history of brown vomitus, although in the ED the patient was hemodynamically stable, stool was guiac negative, hemoglobin/hematocrit were normal and the abdominal exam was benign. The ED physician acknowledged that the patient was at risk for a GI bleed, but found no evidence of active bleeding. The hospital's guidelines for reversal of anticoagulation were followed for a patient with this INR who was not actively bleeding. Following admission the INR was not rechecked until 15 hours later; the repeat INR showed no significant change. Vitamin K was ordered and a recheck INR was ordered for 24 hours later. Given that the patient had presented with a possible bleed it was reasonable to check the INR at shorter frequencies until the patient was within the desired range. Her BUN/creatinine levels were significantly elevated; the hemoconcentration may have given false reassurance that hemoglobin and hematocrit were acceptable. The patient's potassium level was also low that morning (3.0) and may have contributed to her atrial fibrillation. The oral dose of Diltiazem was not effective; the XL version does not peak until 11-18 hours. When the patient was transferred to telemetry her respiratory rate was 40, evidencing considerable distress. Her EKG suggested ongoing ischemia. An option that could have been considered was cardioversion with anesthesia support, but the patient had a longstanding DNR status which she reaffirmed that day.

Issues/Concerns Identified by the Facility:

Communication at transfer, delays in treatment and health care provider skill/judgment.

Lessons Learned and Actions Taken:

The chief medical officer discussed the case with the involved provider in order to learn his approach and to discuss alternate approaches that could have been used. They discussed: the benefits of transferring the patient to telemetry sooner; management with IV Diltiazem rather than oral while on telemetry; and using higher doses of Vitamin K , with more frequent lab checks of INR. The anticoagulation guideline was reviewed, and medical and nursing staff were re-educated and updated. Communication at transfer of care was reinforced, with a recommendation for direct communication between providers.

The Quality and Patient Safety Division continues to receive Safety and Quality Review reports involving patients who suffer respiratory compromise associated with the administration of hydromorphone (dilaudid) and morphine. These analgesics were the subject of a PCA Advisory, published in May 2007. The Advisory recommended the development of monitoring guidelines and protocols for administration and storage of hydromorphone and morphine. Health care facilities should review current practices to ensure the safe administration of these two analgesics and avoid medication errors. The link to the Advisory is at http://www.massmedboard.org/pca/pdf/hydromorphone_advisory.pdf.

QUALITY AND PATIENT SAFETY DIVISION NOTES

QPS Welcomes the new Quality and Patient Safety Committee

Peter Paige, MD (Chair) *Emergency Medicine Chair, BORM*
Nicolas Argy , MD, JD *Radiologist*
Janet Nally Barnes, RN, JD *PCA Coordinator*
Deborah DeMarco, MD *GME Program Director*
Jasen Gundersen, MD, MBA ,FHM *Hospitalist*
Susan Haas, MD *Obstetrician/Gynecologist*
John Herman, MD *Psychiatrist, Former Chair BORM & PCA Committee*
Mark Hershey, MD *Anesthesiologist*
Sophia Pasedis, Pharm D, RPh *MA Board of Pharmacy*
Dinish Patel, MD *Orthopedist Former Chair BORM & PCA Committee*
Marc Rubin, MD *Surgeon*
Arthur Russo, MD , FACP *Chief Medical Officer*
Robert Schreiber, MD *Long Term Care Specialist*
Nicola Truppin, JD *Patient Representative*
Cllorene Weekes-Cabey, RN, MS *MA Board of Nursing*

The Quality and Patient Safety Division recently issued: *Advisory on Safety and Quality Reviews and Serious Reportable Events in HealthCare*. The Advisory is intended to reinforce the QPS Division's expectations for health care facility reporting of unexpected patient outcomes that meet both Massachusetts Department of Public Health (DPH) and PCA reporting requirements. The link to the Advisory is at http://www.massmedboard.org/pca/pdf/AdvisoryPCAreporting_March2010_pdf.pdf

The struggle to maintain a safe patient environment is one of the most important, and most difficult, challenges on an inpatient psychiatric unit. Westborough State Hospital recently trialed new, secure, trash receptacles on its inpatient units, and reports that this has contributed to patient safety by helping the staff to reduce patient access to discarded foodstuffs. Similar low-cost units may prove useful in any milieu in which patients with self-care deficits may endanger themselves if allowed access to discarded materials.

Studies show that there is a trend towards a reduction in the risk of fall among patients treated with vitamin D(3) alone compared with placebo, suggesting that vitamin D(3) should be an integral part of effective osteoporosis management. Jackson C. *The effect of cholecalciferol (vitamin D3) on the risk of fall and fracture: a meta-analysis*. QJM. Apr 01 2007; 100(4): 185-92

CONTACT THE QPS DIVISION

To be added to the QPS Newsletter and advisory mailing list, update hospital contact information, submit an article, request an SQR form, or obtain additional information, contact QPS: Jennifer.Sadowski@state.ma.us or (781) 876-8296.

Send mail to Massachusetts Board of Registration in Medicine, QPS Division, 200 Harvard Mill Square, Suite 330, Wakefield, MA 01880.

The PCA Newsletter, FIRST Do No Harm, is a vehicle for sharing quality and patient safety initiatives of Massachusetts healthcare facilities and the work of the Board's Quality and Patient Safety Division and Committee. Publication of this Newsletter does not constitute an endorsement by the Board of any studies or practices described in the Newsletter and none should be inferred.