Since the STARS incident reporting system (internal.bmc.org/stars/) went live on September 15, 2005 the number of incident reports has increased by 78%. This is not because we have had more incidents over the last few months. It is because we are doing a much better job of reporting. I applaud the BMC staff for the diligence and enthusiasm with which you have increased or begun to report incidents and I encourage everyone to participate in this process. You can reach the STARS online system from the BMC internal web page, under @ Work, Incident and Medication Safety.

A number of people have asked “what happens now?” The medical leadership will respond in a way that is consistent with the following concepts: transparency, culture of safety, and a just culture. Transparency means that we all actively work to make visible actual errors, near misses and circumstances with the potential for error. We are working toward transparency by reporting incidents on line, adding in information and responses from those involved, and giving access to front line management so that they can report back to staff. Since we have just closed the first quarter of use of the new system, you will soon be seeing summary information about incidents in forums such as Leadership for Change and Medical Dental Staff meetings. Please share and discuss this information with your peers and others.

A culture of safety refers to the relentless focus on fixing unsafe operating conditions and fixing them in a way that assures that the fixes stick. Band-aids or working around a system that is clearly broken is not a fix, and often leads to repeated errors. My commitment to you is to work diligently to decrease errors that are due to system failures.

“The single greatest impediment to error prevention in the medical industry is that we punish people for making mistakes.” – Dr. Lucian Leape

One particular question people have is how we can use this data to identify persons responsible for errors and hold them accountable. I strongly believe that individuals are not accountable for system failures.

Safety event reports
(a.k.a. incident reports)

We will look for trends or patterns of occurrences that will show us where we have system failures, and talk with staff involved to find out why something went wrong. We will look to make improvements in processes that will prevent the same errors from happening again. I do believe that if we ‘do the same things, in the same way, we will get the same outcomes.’ This is a main characteristic of a just culture: individuals are not responsible for system failures, while they do have clear-cut accountability for actions under their control (their personal actions). The vast majority of errors are related to system failures; the problem is seldom the fault of an individual. Thank you for ‘reporting for learning.’

S Haas

THE INPATIENT TIMES

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THE INPATIENT TIMES
ALL THE NEWS THAT MAKES YOU MORE FIT TO TREAT

BMC creates a Rapid Response Team

Sheilah Bernard, MD and Patti McCabe, RN announce the pilot phase of a Rapid Response team to start at BMC in late February. The team is composed of a critical care level nurse and a respiratory therapist who are deployed to an unstable patient before there is a full cardiopulmonary arrest.

The Rapid Response Team, one of six healthcare initiatives proposed by the Institute for Healthcare Improvement to 100K Lives Campaign (www.ihi.org) will be piloted on both campuses. The other initiatives (applying evidence-based care to myocardial infarction management, reducing adverse drug errors through the medication reconciliation process, reducing infections of central lines and surgical sites, and reducing incidence of ventilator-acquired pneumonias) are also being implemented on campus.

The concept is “to prevent a spark from turning into a fire”. Only 7-8% of current cardiopulmonary arrests on BMC campus occur outside of the ICU’s, in contrast to the 48% of arrests reported nationally in community hospitals. We know that 70% of all patients have significant changes in HR, BP or RR prior to code situations. Our goal is to bring critical care expertise to the patient who has these early warnings, to prevent the code situation.

An RN or MD deploys the Rapid Response Team to obtain an extra level of assistance in attending to an unstable patient. Our goals are to improve planning (assessment, treatment, and goals), communication (patient to RN/MD, RN to MD, MD to MD), and recognition of a deteriorating patient*. The parameters to implement the system include HR, BP, RR, active bleeding or mental status changes that are progressive and symptomatic. The RRT will be used to document the Situation, Background, Assessment and Response (called SBAR) by the RT, RN responder, staff RN and MD/PA.

Implementation of this team is expected to halve the number of arrests occurring outside of the ICU, reduce the number of arrests prior to transfer to the ICU, and reduce the number of post-surgical transfers back to the ICU. The RRT is not intended to replace the call to the house officer for change in condition, but rather to help patients in time of clinical instability. It is an opportunity to educate all staff in the management of the acutely ill patient by experienced caregivers, and to help anticipate change in level of care. The ability to provide 1:1 care will also aid other floor staff members.

The RRT will be deployed as an order in SCM, which will activate RT and RN beepers automatically. Responders are expected to arrive within 10 minutes, by which time effective communications on the patient’s situation and background can be prepared.

The pilot will be trialed on Newton 6W, SICU, Menino 5W, 5ICU, 6W, and MICU. After review of the pilot, we expect to feedback information on patient outcome, look for lessons learned hospital-wide, share success stories, and use our data to drive further educational programs. Hospital-wide rollout is planned April 2006. Contact Dr. Bernard or Patti McCabe for details.

P McCabe
S Bernard
A kick off luncheon attended by Elaine Ullian CEO, Kathleen Davidson Vice President of Nursing, and Linda Guy, Director of Nursing was held on the 6th Floor Menino and the attendees included the staff of the three pilot units, managers, and BMC employees from various disciplines including physician, care management, dietary, transport, housekeeping, and respiratory.

Now that the program is in full swing on the three pilot units, staff are wearing Red Falls Prevention buttons and are participating in the program by putting patients at risk on fall precautions and the patients then are wearing RED SOCKS (slip resistant socks) to identify them to staff. Physicians are commenting on how great this program is and are asking when it will be rolled out house wide.

A recent interaction between a housekeeper who does not normally work on the 6th floor and a patient who was wearing RED SOCKS and needed assistance back to bed was an "ah ha!" moment because she understood what the RED SOCKS meant and that she could help this patient in their time of need and she did.

The plan is to roll the program house wide. Opening Day will be on Valentines Day (everyone should wear red). Prior to opening day, our RED SOCKS Ambassadors will be distributing buttons and stocking all units with RED SOCKS and doing brief training so that everyone knows how to participate.

As you can see, it is as easy as A, B, C.

A = AWARENESS
   (watch out for those red socks players)

B = BE THERE FOR OUR PATIENTS
   (never leave a red sock player alone)

C = CALL FOR HELP
   (show our red socks players we care)

LET’S HIT A GRAND SLAM FOR OUR PATIENTS!!!

L Guy
S Doherty
C/Weekes
J O’Shea

Understanding the Boston HealthNet

In 1997, BHN established a Rounder System at BMC. The Rounder System brings together physicians from the health centers and the BMC Department of Family Medicine to care for patients from these sites while they are in the hospital, thereby, coordinating and enhancing the quality and continuum of care.  When first established, the Rounder System included five health centers and BMC’s Department of Family Medicine. Today, a total of twelve CHCs and Family Medicine participate in the Rounder System.

BHN’s Associate Medical Director serves as a hospitalist for the Rounder system. The hospitalist and three rotating physicians from Family Medicine and the health centers share the Rounder service caseload. In addition, BHN employs two Nurse Partners who help coordinate inpatient care and discharge planning. A transitional care manager is also on call to evaluate patients with substance abuse problems and domestic violence issues. On average, there are 60 patients on the Rounder service each day.

In July 2002, the Rounder System began a teaching service for Family Medicine house staff on the B4 team. The attending has the responsibility of supervising work rounds, providing bedside teaching and teaching rounds twice a week.

Last year, a new Physician Assistant service through the Department of Medicine was initiated for the Rounder System. The service is now available to provide additional coverage for BHN Rounder patients at East Newton who are deemed appropriate. The HealthNet attending works with the PA’s to determine the level of care necessary.

In the summer of 2004, Boston HealthNet completed its fourth physician satisfaction survey of the Rounder System. Overall survey results continue to be very positive. Some highlights:

• 85% of respondents rated the Rounders’ efficiency as good to excellent
• 85% of respondents rated the Rounders’ clinical skills as good to excellent
• 83% of respondents believed the Rounder System has improved the quality of inpatient care and would recommend the adoption of a similar Rounder program for other primary care medical groups.

Continued →
C. difficile associated diarrhea: a review

Antibiotic-associated diarrhea is an increasingly common problem in hospitalized patients, increasing morbidity and mortality. *Clostridium difficile* is the most common cause of antibiotic-associated diarrhea in the late 1970’s. *C. difficile* is a gram-positive anaerobic toxin-producing bacterium which is associated with 20-30% of antibiotic-associated diarrhea, 50-75% of antibiotic-associated colitis and > 90% of cases of antibiotic-associated pseudomembranous colitis. It produces two toxins (A and B) which cause colonic mucosal inflammation and colitis. Rates of C. difficile associated diarrhea vary greatly, with an estimated 12-15 cases per 100,000 in the United States. The incidence of C. difficile has been increasing, with an estimated 500,000 cases per year in the United States. The most common risk factors for C. difficile infection are antibiotic use, age ≥65, and immunosuppression. The symptoms of C. difficile infection include abdominal pain, fever, and diarrhea. The diagnosis is made through the detection of the toxin, the presence of characteristic pseudomembranes or the detection of the organism itself. Treatment options include antibiotics, such as metronidazole or fidaxomicin, and supportive care. Prevention strategies include infection control measures and the use of prophylactic antibiotics in high-risk settings.
New Time Cut-offs for Requesting Blood Draws by Phlebotomy

Effective January 9th, lab orders with a priority of "7AM Phlebotomy Draw" will not be accepted after 05:25 AM. Users will receive a warning and will be required to change the priority or collection date.

If the priority of "Next Phlebotomy Draw" is selected, the system automatically places the order in the next appropriate phlebotomy round and displays the collection time for that round. The cut off times in SCM for each phlebotomy round are listed below.

<table>
<thead>
<tr>
<th>Phlebotomy Round</th>
<th>SCM Cut Off Time</th>
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<tbody>
<tr>
<td>07:00 AM</td>
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<tr>
<td>04:00 AM</td>
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If you have additional questions regarding, you can contact Trisha Roderick (x41841). C Shanahan
MEDICARE PART D: IMPLICATIONS FOR INPATIENT CARE

The new Medicare Drug benefit, Medicare Part D, went into effect on January 1, 2006. While hailed by some as the most important advancement for Medicare beneficiaries since the inception of Medicare in 1965, many others have characterized the benefit as poorly designed with large gaps in coverage and of more benefit to drug companies than to Medicare beneficiaries. What cannot be disputed is the incredible complexity of the benefit, and the difficulty that beneficiaries are having in understanding what it is they need to do. Not all medications prescribed during a hospitalization are covered after discharge.

The basics. All Medicare beneficiaries are eligible. In Massachusetts, beneficiaries may choose to sign up with one of 44 plans offered by 17 organizations. (Those in Medicare Advantage plans such as First Seniority must enroll in a plan offered by their HMO). While costs borne by the beneficiary vary from plan to plan, a standard plan requires payment of a $250 annual deductible, a monthly premium, which averages $37 nationally, and co-insurance or co-payments for each drug. After the deductible, the beneficiary pays 25% of the next $2000 in drug costs. After that, the beneficiary receives 10% of all costs until s/he spends another $2,850. Once the $2,850 is spent, the beneficiary becomes eligible for catastrophic coverage and pays 5% of the costs of further prescriptions for the rest of the calendar year. This translates into the beneficiary having to pay $3,600 annually in drug costs plus the monthly premium before the catastrophic coverage begins.

Low-income beneficiaries. Those with low incomes and assets can have their premiums and out-of-pocket costs paid for, but they must apply for “extra help” through the Social Security Administration. While it is unclear whether benefits will outweigh costs for many eligible for Part D, those who qualify for full extra help will almost certainly benefit from enrollment. Dual eligibles—those with both Medicare and MassHealth (Medicaid)—have been automatically enrolled in a Medicare D Plan, with all costs covered except for a co-payment of between $1 and $5 depending on income and type of drug. Medicare beneficiaries who have been getting drugs through the Uncompensated Care Pool (Free Care), will be urged to enroll in a Part D Plan. The Pool will then act as an insurance “wrap,” covering co-pays, deductibles, and other gaps in coverage. The Pool cannot cover monthly premiums; they will be covered for BMC patients through a variety of mechanisms including some instances where BMC itself will pay the premiums.

Formularies. Each Drug Plan has its own formulary, with the requirement that at least 2 medications are available in every therapeutic class. If the beneficiary is on a drug not on the formulary, there are 3 alternatives: 1) the physician will need to find a substitute drug, 2) the physician will need to request an exception, or 3) the patient will need to change to a plan that has the drug on its formulary. There are, however, constraints on when a beneficiary can change plans.

Ramifications for the Inpatient Service. Medicare covers all medications while a beneficiary is an inpatient, but once discharged, only those on the Medicare D Plan’s formulary will be covered. For this reason, it is important to be conservative when making substitutions. If a medication needs to be substituted because it is not on the hospital formulary, you should, when appropriate, change the medication at discharge back to what was prescribed prior to the hospital admission. This will minimize the number of problems that patients will encounter when they go to their pharmacy to fill their prescriptions.

Want to write an article for The Inpatient Times? Contact: Jeff Greenwald

Making discharge medications safer: introducing the medication calendar

The vast majority of doctors and nurses have now undergone online training (on New Innovations for the MDs and on Health Stream for the RNs) to learn about medication reconciliation. This important initiative, which is part of the Institute for Healthcare Improvement’s 100K Lives Campaign, is designed to reduce the number of medication errors and adverse events that occur in the hospital and after discharge. A new component of the system that has been put in place is the medication calendar. This new form is a complete medication that is given to the patient at the time of discharge, in addition to the discharge summary, and contains the medication instructions in lay English rather than doctor jargon (e.g. 1 po qd is translated to 1 by mouth daily) to minimize patient confusion. It also indicates which medications are new or changed.

Every patient leaving the hospital on medication must have a medication calendar at the time of discharge. To create one for your patient, use the following simple steps:
1. Open a Logician update for your patient.
2. Type “discharge prescriptions” to bring up the appropriate update form. This is the ONLY form you should use for all discharges on Logician. Do not simply go to the MEDS tab on the desktop and do an update from there.
3. You will see the screen below. Press the MEDS tab and correct the medication list, discarding old medications and adding any new ones. When complete, this list should indicate ALL the medications, standing and prn, the patient should take upon discharge. Print the prescriptions from this page.
4. Press the “Add Comments” to note any instructions you would like added (e.g. “take with food” or “for diabetes”) so the patient understands better why/how to take the medication.
5. Press the “Handout” tab. This will automatically print out a copy of the medication calendar to the same printer you printed the prescriptions on. Give this and the prescriptions to the nurse discharging your patient or put them in the patient’s chart.
6. Press the “Jump to list” tab to get a final list of the medications which you can cut and paste into your discharge summary in SoftMed directly.

Thank you for taking an extra minute to make sure your patients get the correct medications and understand how, when, and why they need to take them. It is just good patient care!

J Greenwald

Contact: Jeff Greenwald
**Sweeter on steroids**

Hyperglycemia on steroids… physicians see this in many patients, and should expect it in most, sure as the WBC elevation on tomorrow’s CBC. Corticosteroids, which are commonly used in the treatment of acute respiratory illnesses, neurosurgical emergent, post-traumatic, and connective tissue diseases, have effects on carbohydrate metabolism that either exacerbate existing diabetes or cause “steroid diabetes.” This should not be ignored, but rather treated as iatrogenic hyperglycemia, which has adverse effects on infection (prevention or treatment), wound healing, hydration status and electrolyte stability.

Like all new-onset, or newly-exacerbated, hyperglycemia, in order to diagnose and treat it properly, it is important to understand the pattern, effective treatments and natural history.

1) **What is the typical pattern of steroid-induced hyperglycemia?** Hyperglycemia induced by glucocorticosteroids is primarily an exaggeration of postprandial hyperglycemia. Most patients will not have significantly different fasting blood glucose levels when they are receiving corticosteroids, but will be progressively hyperglycemic as the day goes on and they eat meals. The known physiology explains this somewhat, since corticosteroids inhibit insulin-stimulated glucose uptake in peripheral tissues and also increase hepatic glucose production.

In the hospital, most patients on steroids who were previously well-controlled or nondiabetic, have a good A.M. glucose only to have marked hyperglycemia by late afternoon. The degree of elevation is correlated with previous glucose tolerance. Patients with pre-existing diabetes can have profound increases in blood glucose.

2) **What are reasonable treatment strategies?** “Sliding scale” is particularly ineffective in achieving safe, effective glycemic control in steroid-treated patients. Therapy for corticosteroid-induced hyperglycemia should target postprandial hyperglycemia. If the patient is on insulin at home, like all Type 1 diabetics, they will require adjust-

**REFERENCES**


**Changes coming to Sunrise Clinical Manager!!!**

Over the next few months you will start to see here about new functionality being added to Sunrise Clinical Manager (SCM). One of the changes will be the revision of all the medication ordering forms. The Pharmacy Department is replacing their current Cerner application with a new GE Centricity system. One change that you will notice will be the reduction of the number of drug items available to order. You will have a limited number of available options when ordering a specific drug. Each individual dose will not be listed but all the available forms (tablet, solution, IV, etc) will continued to be displayed. When you order a warfarin tablet you will no longer see all six different strengths. You will only see one warfarin tablet and you can enter the dose requested in the required field. When you order IV gentamicin, you will have only one option compared to the 5 options that are currently available.

Another change you will see with in medication ordering module is a redesign of all the order forms. All medication order form will have multiple columns and they will fit on one page. Therefore the need to scroll will be reduced. These two changes will effect all individual drug items and all medications contained in Order Sets.

**Activation for the pharmacy changes is scheduled for mid-March 2006.**

Currently, on-line documentation in Sunrise Clinical Manager is being worked on. The goal for this initiative is to have one central application for all inpatient documentation. In the future, residents will use SCM to create a patient’s history and physical, discharge summary and all transfer notes. Daily progress notes will also be automated. Work is currently being done to map out the necessary data elements and design templates for clinical review.

The SCM documentation plans also involve nursing documentation. Flow sheets and data tracking forms will be included. Interfaces between monitoring devices and the on-line flow sheet are in the plans.

The project teams working on the documentation initiatives include residents, attendings, physician assistants, nurses, ITS specialists and ancillary staff. The plans are for a pilot in Pediatrics and Cardiothoracic surgery in the spring of 2006. Based on the successes of the pilots, the SCM on-line documentation will be rolled out throughout the campus and across all services during the calendar year.

**Interested in a career in academic Hospital Medicine?**

**Come to the next meeting of the Boston Association of Academic Hospitalists in Medicine!**

**Our next meeting is February 6th.**

It is open to Junior and Senior Residents.

Contact Jeff Greenwald