## A Note From Your Future Chiefs

With about 88 days left in this academic year, most interns and residents are fondly (or pensive-ly in the case of seniors facing big moves and new responsibilities) looking ahead to their next great transition on 1 July. The match list is posted on the residency office door, sure proof that internship does end and relief is just a few short months away. As your chiefs in waiting, we (Ari, Bryan, Craig, Lida, Terese and Tony) are also beginning our transition into new roles that promise to be as rewarding as they are challeng-ing.

Undoubtedly, the BMC residency class of 2003-2004 will help shape and redefine the program for years to follow as we grapple with historic changes in resident work hour require-ments, quality assurance and information systems. Each of us, from new intern to chief resident, has the potential to impact profoundly and positively the daily lives of all BMC house officers as we debate and adopt policies that will bring our program into compliance with the 80 hour work week and 24+6 duty hour cap. We are excited about the opportunity to help create a positive, creative and intellectually challenging work and learning experience for the class of 2003-2004.

Our agenda is taking shape and is certain to include a strong chief resident presence on the wards, an open door office policy, an intern mentoring program, an expansion of cultural diversity programs, a reevaluation of admitting procedures and, most importantly, "new and improved" afternoon candy rounds. We guarantee that our enthusiasm will be contagious as we strive to nurture and bolster the real asset of BMC– you, the wonderfully altruistic, dedicated, hard working and courageous individuals who make a profound difference in the lives of an underserved, disenfranchised population.

*The "soon to be" Chiefs*

*Ari Berman*
*Bryan Batch*
*Craig McMackin*
*Lida Nabati*
*Terese Hammond*
*Tony Shum*

## We're Over the Flu!

The flu season is about at the end and the vaccination campaign is over. Thanks to the hard work of the housestaff, BMC wrote 593 orders for this vaccine this season. That may not seem a lot given the thousands of patients who cross our threshold on the inpatient service but it represents a **634% increase** over last flu season!

Of those ordered, 457 doses were given. Why this discrepancy? Some patients refused. Others left before the vaccines were given. There were a myriad of reasons and we are looking at this as an area for improvement.

Next flu season, our goal will be to cross the 500 threshold of doses given, a mere 10% increase. We can do it. Thanks for your assistance with this important health project.

Keep in mind, while flu shots are done, Pneumovax is still here and we should be continuing to give it all year long to appropriate patients.

*J Greenwald*

## THE INPATIENT TIMES

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The 2003-4 Chief Residents

Jeff Greenwald, Editor

Would you like to write for The Inpatient Times? Do you have an idea for a great topic? Are there systems or organizational questions you want clarified? Email Jeff Greenwald at Jeffrey.Greenwald@bmc.org.

# The Inpatient Times

*All the News that makes you more fit to treat*

**Vol 2; April 2003**

## New Program Requirements Go Into Effect July, 2003

There are two new major changes to the program requirements recently adopted by the Accreditation Council for Graduate Medical Education (ACGME). The ACGME is the overarching accreditation organization for all of graduate medical education. The Residency Review Committee for Internal Medicine (RRC-IM) reports to the ACGME and develops specific Internal Medicine criteria for training programs. The RRC-IM updates the program requirements about every three years. This year for the first time in many the ACGME and the RRC-IM have both made major revisions to the program requirements. Of particular note is the ACGME changes are not specific to just Internal Medicine programs but rather to all graduate medicine programs.

The two major areas of change can be summarized in to 1) the new Duty Hours Regulations and 2) The New General Competencies. While many house officers and faculty have heard a lot of buzz about the duty hours, the General Competencies are an equally new and broad initiative.

Briefly summarized the highlights of the Duty Hours are: 80 hour work week averaged over 4 weeks; 1 day off in 7 averaged over 4 weeks; overnight call no more frequent than 1 in 3; 8 hour breaks between work shifts; on call shifts limited to 30 hours (24/6).

The New General Competencies are: Medical Knowledge, Patient Care, Professionalism, **Practice Based Learning and Improvement**, Interpersonal and Communication Skills, and **Systems Based Practice**.

Of the six general competencies the two new competencies, highlighted in bold, draw from a vision of Graduate Medical Education that must adapt to the changes in health care delivery including and responding to the Institute of Medicine's report, " To Err is Human." Practice Based Learning and Improvement focuses on the physicians' reflection on past performance and changes necessary to improve future performance. Systems Based Practice focuses on the skills, knowledge, and attitudes necessary to deliver health care in a system whereby quality and patient safety are prime objectives.

The Residency Program leadership will be working closely with the Residency Council, faculty and Office of Graduate Medical Education to insure that we meet the new requirements while at the same time providing the best educational experience possible. The department has been gathering data on duty hours by surveying housestaff over the past two months as well as reviewing number of admissions and census at the three main inpatient facilities. There will also be a series of faculty development seminars for each section within the department as well as residents and fellows.

Although there seems to be limitless opinions of how to best accomplish quality medical training there appears to be general agreement that "duty hours" must be regulated to avoid the acute and chronic fatigue that can lead not only to errors but also increase the complexity of the lives of today's trainees. Hopefully, the new general competencies will help us address the myriad issues of providing outstanding clinical training while promoting patient safety and integrated health systems delivery. We anxiously look forward to working together as a program to meet these new mandates and continue to improve our overall educational experience for all trainees.

*D Battinelli*

## What should I know about my patient with cancer?

Patients who carry a diagnosis of cancer often have a complex course and history gathering can sometimes be challenging. The following is a guideline for the elements that are most helpful in drawing an accurate picture of the disease:

1. A *brief* description of the symptoms at presentation. Note should be also made of the presence or absence of constitutional symptoms (B symptoms) or symptoms suggestive of metastatic spread.
2. How tissue diagnosis was established.
3. PATHOLOGY report: in detail, including: histological type, grade, surgical margins and results of special staining.
4. Metastatic work-up (eg. CT scans, X-Rays)
5. Tumor markers (if applicable), or markers of specific prognostic value.
6. TNM classification
7. Treatment(s) received. Was there curative or palliative intent.
8. Tolerance to treatment: If possible, toxicity should be graded according to the NCI common toxicity criteria.

Example:

A 43-year-old female presented in 10/02 with a left-sided breast mass which was painless and there was no associated nipple discharge or bleeding. No weight loss, bone pain or abdominal discomfort. Mammography demonstrated a 2.5cm spiculated mass in the left breast with microcalcifications. Core biopsy was obtained on 10/17/02 (Dr. Smith): pathology reveled a moderately differentiated adenocarcinoma, SBR 2/3. Estrogen and progesterone receptors were strongly positive. Her-2-neu receptor was negative. The patient underwent a lumpectomy with sentinel lymph node biopsy on 10/26/02. Biopsy confirmed the presence of a 2.1cm moderately differentiated adenocarcinoma. Surgical margins were negative. Sentinel lymph node biopsy was free of tumor. Metastatic work-up (CXR and abdominopelvic CT scan) identified no metastatic disease. CA 27.29 was normal at 25. The patient was diagnosed with a stage II (T2N0M0) adenocarcinoma. Between 11/02 and 2/03, she

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received 4 cycles of adjuvant Adriamycin and Cyclophosphamide. Chemotherapy was complicated by: a) grade 2 neutropenia without associated infection and b) grade 3 alopecia. These did not require any dose modification. She is currently due to start her loco-regional XRT, which will be followed by 5 years of adjuvant tamoxifen.

*K Malek*

## THE LASIX VIRGIN MYTH

Several house officers have told me that the reason they gave Lasix 10 mg IV for cardiogenic pulmonary edema was that that "patient's kidney had never seen Lasix before," and they feared a massive diuresis from the usual recommended dose of 20-40 mg IV.

I am unaware of this phenomenon over the 38 years that I have seen IV Lasix given, have asked several nephrologists if they believe this theory, and have never seen it in the literature. When patients are fluid overloaded, they are more likely to have a more significant diuresis than from subsequent doses.

Figueras and Weil (Circulation, vol. 57, pg 349, 1978) prospectively studied 11 patients given 40 or 80 mg of IV Lasix for cardiogenic pulmonary edema, repeating the same dose one-hour later, if there was no response. None of these patients had received diuretics previously. Despite the fact that they diuresed on average more than 2800cc over the first 24-hours, measurements of their blood volumes showed either an expansion or no change due to the venodilation and resultant rapid fall in hydrostatic pressure and, therefore, more favorable Starling forces. The 10 mg dose of IV Lasix is sub-therapeutic, and should not be used.

*J Caslowitz*

## Page 31-RISK

If you identify or are involved in an adverse event while in the hospital, please notify Risk Management. The service is available 24 hours a day and will help you with the appropriate next steps. Activate the pager RISK (7475) early. Do not wait or try to manage the situation without assistance.

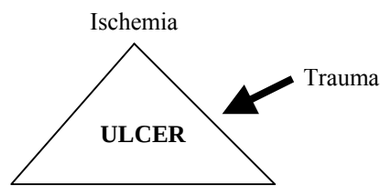
*J Greenwald*

## Foot Osteomyelitis: How can you tell if it's there?

A major concern of all patients with diabetes is the fear that blindness and amputation is in their future. Although they are also greatly at risk of heart disease, renal failure, neuropathy, and peripheral vascular disease, amputation and blindness remain at the forefront. It is because they are external factors.

The prevalence of Diabetes Mellitus in the United States is about 5-6%.

- Up to 15% of people with Diabetes Mellitus will develop a foot ulcer during the course of their lifetime.
- 60-70 of every 10,000 patients will need a major amputation each year.
- Neuropathy accounts for 70 % of lower extremity amputations.
- Ischemia accounts for 30 % of lower extremity amputations.




The Diabetes Triad above shows the problem as it relates to the lower extremity. Repetitive trauma such as walking that causes a break down in the skin. Neuropathy presents with limping and impairs sensory warnings of local trouble. Continue trauma allows infection to develop from skin flora, and ischemia minimizes the chance for healing.

The severity of a foot ulcer is determined by its depth, not by its area. The ability to probe bone is a valuable and inexpensive technique to diagnose osteomyelitis. The table below shows comparison between various scanning technique, including "probe to bone" data, for diagnosis of osteomyelitis.

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| | Sens | Spec | PPV | NPV |
|---|---|---|---|---|
| MRI | 77% | 100% | 100% | 84% |
| X-ray | 60% | 81% | 67% | 76% |
| Bone scan | 100% | 25% | 33% | 100% |
| Indium | 80% | 29% | 44% | 67% |
| Probe | 66% | 85% | 89% | 56% |

**Operating Characteristics of Tests Used to Diagnose Pedal Osteomyelitis**

Despite the impressive operating characteristics of MRI, a plain radiograph and efficient probe to bone technique are all that is needed in most cases. The forceps from suture removal kits can be straightened and used to probe wounds. They must be probed at the 3, 6, 9, and the 12 o'clock positions. The probe should be held like a pencil, not a screwdriver. The force used should by gentle, so a sinus is not produced. A sinus will be easily entered if it is present. Hitting bone with a metal probe can be felt as a hard, gritty sensation.

Pedal osteomyelitis is a surgical problem and is always originates from direct extension, not hematogenous spread.

Plain radiographs should always be taken and if there is bone destruction along with a positive bone probe, no more tests need be ordered. Probing to bone with a negative plain radiograph does not need further testing, because surgery will remove the involved bone for pathology and microbiology. The surgical care of pedal osteomyelitis not only cures the osteomyelitis, but also removes the mechanical cause of the ulcer.

There is a learning curve to master procedures and probing wounds is no exception. To complete the examination of foot ulcers, they should all be probed before definitive treatment is recommended. Need help? Ask any of us at Foot Care Specialists of Boston Medical Center:

- Geoffrey Habershaw, DPM., Clinical Director, Chief of Podiatry
- Christopher Locke, DPM.
- Hau Pham, DPM.
- Gary Gibbons, MD. Executive Director, Vascular Surgery

*G Habershaw*

## Application for
# The 2003-4 Hospital Medicine Innovations and Research Grant

Offered by: Boston Medical Center

Offered to: Department of Medicine and Family Medicine Residents and Interns

Deadline: May 30, 2003

Purpose: The purpose of this grant is to offer money for an innovative project's creation and implementation for the inpatient Medicine service. The funds may be used to initiate a creative project that will move Inpatient Medicine forward in a positive direction. Alternatively, the monies may be allocated towards a new clinical research project that will develop important areas of the field of inpatient Medicine at Boston Medical Center.

Areas of particular note for research and innovations include:

- Improvements in communications
- Maximizing patient safety
- Enhancing patient care
- Expediting systems for efficient patient care

The awarding of the funds will be product-driven, not simply concept driven. The recipient of the funds will supervise the project and be responsible for the ongoing maintenance of the project selected. All implemented projects should be continued under the applicant's supervision for a minimum of six months from initiation.

If necessary and applicable, this process may involve the recipient's submitting an application to the Boston Medical Center IRB.

Amount: $250 to selected house officer as an award. (This amount will be shared if the application is shared between more than one house officer.) Up to $750 for supplies and other expenses.

# of Grants: One

Applicants: Current interns and junior residents in good standing with either the Departments of Medicine or Family Medicine.

Requirements:
1. Completed application (one per project)
2. Copy of applicant's CV (one per applicant)
3. Letter of support of your project by one faculty member willing to act as a project advisor

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## Application for
# The 2003 Hospital Medicine Innovations and Research Grant

The following information should be submitted for each project. If there are more than one individuals on a project, please submit the following pieces of identifying information for each person: Name, Home Address, Work Address, Phone Number, Social Security Number, Email Address, Current PGY, and Title of Project.

Please address each of the following sections below on a separate page. Please adhere to length limitations. Please type in 10-point font with standard margins and double spacing. Include the title of you proposal and your name(s) as a centered footer on each page used to address the sections below.

Section 1: Provide a discussion on the background of your proposal, including comments about any existing similar projects and/or any literature to support your proposal (with references). **Maximum length: one page.**

Section 2: Provide an in-depth description of your innovation or research project. Discuss your research methods, initial implementation, ongoing monitoring, and interim and final evaluation of the project. Identify what outcomes you will be attempting to identify and why those outcomes are relevant. Be sure to include any anticipated barriers to your project which you have identified and note your plans to address them. **Maximum length: five pages**

Section 3: Provide a summary of the benefits you anticipate this work providing and why it should be funded. **Maximum length: one page.**

Section 4: Provide a detailed budget of known and anticipated expenses. No salaries may be supported with these funds beyond the award amount of $250.00. **Maximum length: one page**

Section 5: Please also identify a faculty member who is willing to act as your project advisor and request a letter in support of your project from that individual. Please submit all completed applications to the address below. Please ask you faculty advisor to send letters directly to the address below as well.

Submit all applications to: Jeffrey L. Greenwald, MD
NIF 6W-138

Direct all questions to: Jeffrey L. Greenwald, MD
Jeffrey.Greenwald@bmc.org
(617) 414-4373

Applications will be reviewed and decisions made by June 27, 2003. The recipient(s) will be notified at that time.

## Heparins for ACS

A meta-analysis of two large clincal trials comparing unfractionated heparin (UFH) and the low molecular weight heparin (LMWH) enoxaparin in patients with Acute Coronary Syndrome (ACS) showed a significant reduction in the rate of death, MI, or need for urgent revascularization in the LMWH group. Given this data and the ease of use of LMWH, BMC cardiology recommends that enoxaparin be the utilized in patients with ACS.

Because the level of anticoagulant activity cannot be easily measured and because LMWH is not readily reversed by protamine, interventional cardiologists and cardiothoracic surgeons have expressed concern about its use in patients scheduled for percutaneous coronary intervention (PCI) or coronary artery bypass graft (CABG) surgery. However recent observational and randomized studies have suggested that the use of enoxaparin in such patients is relatively safe and effective. On the basis of these studies we recommend the following strategy for patients with ACS:

1. Aggressive **medical therapy** – aspirin, β-blockers, nitrates, clopidogrel when appropriate.
2. Antithrombotic therapy
   a. **Enoxaparin** 1 mg/kg SC BID is preferred for all ACS patients unless: Cr > 2.0, weight > 120kg., same day cath/PCI procedure or CABG. Enoxaparin should still be used if cath/PCI/CABG is to be performed on subsequent days. In this case, hold the LMWH on the morning of the procedure. If patients go urgently to the cath lab and enoxaparin has been given within 8 hours of a PCI procedure, the sheath pull can be delayed.
   b. **UFH** if contraindications to enoxaparin exist [60-70/kg IV bolus (max 5000u) then 12-15 u/kg/hr infusion (max 1000u) titrated to aPTT of 1.5-2.5 times control]. See ACS Pathway.
3. Consult cardiology to institute **GP IIb-IIIa** inhibitors and consider cardiac cath if patient has one of the following high risk features: recurrent/refractory ischemia on ASA, β - blockers, heparin, positive serum markers (CK-MB or troponin), ischemic EKG changes, recent MI, PCI, or CABG.

*G Philippides*

## "2-4-6-8," TYPE 2 DIABETICS WON'T APPRECIATE

When diabetic patients come to the hospital with acute illness, they are likely hyperglycemic related to the acute stress. Diabetologists commonly recommend adjustment of their usual regimens to meet these needs, but the exigencies of acute care may lead house officer to use sliding scales for glycemic control. The commonly used "2-4-6" scale, which many trainees use for all hyperglycemic patients, might be appropriate for some type 1 diabetics, but is rarely satisfactory for insulin resistant type 2 diabetics. I usually recommend at least a doubling of this dosage in the latter group with further upward adjustment according to response. I am neither a diabetic nor significantly obese and, therefore, my pancreas likely puts out between 40-50 units per day. I will respond to my dinner meal with 15 units or more, during which time my blood sugar might go from 95 to 140 to necessitate that insulin release. I hope this puts two units of insulin in perspective.

*J Caslowitz*

## Text Paging Has Finally Arrived!

Did you know that you can now page someone from the comfort of your chair without lifting the telephone? By utilizing the BMC Intranet home page and selecting "Directory Services" under the "@Work" tab and then typing the person's name in, you will find a page with the person's name, address, title, and beeper. A shortcut to this screen is from the BMC Intranet home page. On the left column, type the desired individual's name in the "Find Employee" box and hit Enter.

To text page the individual, click on the beeper number listed on the person's screen. This will bring you to the text box for text messaging. Click the "Submit" tab when you are done.

There's one caveat, of course. The individual you are paging must have a text ready pager (called an "alphanumeric" pager), otherwise he or she will not receive your message. Hopefully, in the coming period, all the pagers will be changed to permit alphanumeric paging for all housestaff.

*J Greenwald*

## Top 10 Code Tips
## Out of Our Home Office at BMC

Running a code is as much art as science in many ways. It takes as much "knowing *what* do" as "knowing how to get it done." Here are 10 tips to help you run better codes:

**10. Identify yourself clearly as the leader.** It is important for all involved to know who the decision maker ultimately will be.

**9. Stand at the foot of the bed.** Make sure to place yourself where you can watch the patient, the monitor, and the others helping.

**8. Identify someone who knows the patient.** Whether it's the nurse, house officer, attending, or consultant, find someone who can give you details about the medical issues with the patient. If no one fits this bill, assign someone to review the chart quickly.

**7. Assign roles to helpers.** Clarifying each person's role helps keep things organized. For example: one person should do chest compressions, one should obtain access, etc.

**6. Talk and think, don't work.** Assuming you have enough help, direct and oversee, don't do physical work yourself. You can't put in a line *and* oversee activities as well.

**5. Minimize crowds.** It's important for junior folks to learn about codes but crowds will only impede care. Ask extra individuals to wait outside in case you need them.

**4. Feel free to ask for help.** Consult your colleagues for ideas, especially if things are complicated or the patient isn't doing well.

**3. Keep noise down.** Noise impedes communication. You should be the directing voice and need to be clearly audible.

**2. Stay calm.** As it says in "The House of God" you should begin a code by *taking your own pulse*. If you're calm, things run more smoothly.

**1. Debrief after the code**. Codes are hard and potentially emotionally difficult. Ask for and offer feedback on how the code ran. This is how folks improve. Also, offer support and thanks to those who helped out.

*J Greenwald*

## Two Weeks in the Life of 4 Ward Interns

In an effort to evaluate the amount of time interns spend creating discharge summaries, an experiment was performed in which 4 interns (2 at MP and 2 at ENC) were asked to keep a two-week diary in which they recorded the time spent doing this activity each day. Additionally, they recorded the number of pages they received. In order to maintain confidentiality, the interns were given pseudonyms – Shmikalaen, Shmoyama, Shmighe, and Shmisbano.

The paging diary revealed an average of 22 pages/day on the Menino side, and 27 per day on the ENC, with a range of 9 to 73 (that's right, 73!). This information has raised the question of the role of alphanumeric (text) paging options to minimize the number of return calls that are needed and also to reinforce the concept of protected "page-free" times, especially during scheduled educational activities.

The discharge summary data was also informative. On the East Newton Campus, the average time spent typing discharge summaries was 119 minutes per day, with a range of 0 minutes to 360 minutes. At the Menino Pavilion, the average was 45 minutes per day with a range of 0 minutes to 140 minutes.

A number of interns have suggested that the 1-2 hours per day required to generate discharge summaries outweighs the real but small educational benefit this task offers. Also, although discharge summaries are necessary in order to provide referring physicians with important clinical information, there may be ways available to achieve the desired results that are less time consuming.

Suggestions have included creating a standard for summaries that would minimize the need for lengthy write-ups that are sometimes produced, or adding a computerized template that can create summaries by "cutting-and-pasting" available information.

If you have any suggestions as to how to improve the process, please contact Rob Lowe or Jeff Greenwald.

*R Lowe, J Greenwald*

## Got a patient with *C. difficile* diarrhea?

Don't use the alcohol-based hand cleaner. Use soap and water. It gets rid of spores but the alcohol-based system does not.

*J Greenwald*

## The Page One

The last minute rush to discharge a patient to another facility (nursing home, sub-acute unit, or rehabilitation facility) seems like a race to push papers into an envelope to hand to the ambulance driver. Once that task is accomplished, the patient vanishes from the computer screen and often "out-of-mind." Discharge complete. Yet, within a half-hour, the patient arrives at the new facility and the ambulance driver hands the forms to a nurse at the new facility and interventions start anew.

The page one is the legal record of orders to begin the care for the patient. The page one will set the course for the person's care for at least the first day, if not longer. Therefore, the importance of the page one must be emphasized. In the nursing home, the nurse begins the process by verifying the page one orders via telephone with their admitting team. When the medications and treatments are also on the typed discharge summary, it allows the nurse to compare in order to check for discrepancies. If a problem arises, the house officer or attending can be paged based on the discharge summary or the signature on the page one, if present. If they cannot be contacted, the page one takes preference.

Another quagmire can be follow up appointments. Since nursing homes are not part of BMC, it is imperative that explicit directions given. For example, "Follow-up Tuesday in Surgical Clinic" is valueless. If this is done, chaos will likely ensue. The patient arrives at the clinic and the clinic calls the nursing home to ask why the patient is there. Another problem arises when the consultant wants follow-up is a specified time (e.g. two weeks), but the clinic is booked for one month. Hours may be spent trying to identify the consultant who saw the patient and the reason for the follow-up. If an appointment cannot be made upon discharge, the name of the consultant should be included in the discharge follow-up so an appointment can be made with that person.

Still another area often neglected on the page one is the therapy section. While there is section on the three page referral for therapy services, the discharging team (physician, nurse practitioner or physician assistant) needs to indicate at least →

the weight bearing status of the patient, especially if the patient was admitted after trauma or a fracture.

In summary, the page one is the legal orders to initiate care for a patient transferred to another facility. The treatments, medications and follow-up appointments are based upon what is written. The discharge summary, while invaluable, must coincide with the page one.

*G Brandeis*

## Room Air Oxygenation

Dr. Edward Brown, a BUSM graduate and VA resident, made the following observation in the mid-1970s: In ten patients with indwelling arterial catheters, he measured PO2s every two minutes after nasal cannulae had been removed. In these patients studied, it took between 10 and 15 minutes before the PO2 bottomed out. Therefore, we must be alert when we hear about a "Room Air" Hbg saturation, which, I find, is commonly performed after only a few minutes off O2.

*J Caslowitz*

## Tired of Sitting on Hold to Make Follow-up Appointments?

If the answer is "YES!!!" then you either have never cultivated an appropriate appreciation for Musak or you are an Intern. Either way, in the coming weeks, your prayers should be answered.

Yes, good brothers and sisters in the trenches, soon, all you will need to do to make appointments for patients *you feel cannot make them for themselves* is type "follow-up" in SCM and up will pop an order set. There you can fill in a few boxes, shoot the order to the unit secretary, and bing, bang, boom, the appointments will be made for you (assuming you have given the unit secretary *one day's notice*). The unit secretary will print out your order, make the appointment(s), and place this information in the chart for you to include on your discharge summary.

Remember, this plan can be utilized for PCP or specialist appointments ***but*** should be reserved for patients who cannot do so for themselves. Stay tuned for the official start date. *J Greenwald*

## Inpatient Heart Failure Management

The goals of medical therapy for heart failure are to help patients to live longer and live better. Additional therapy is directed at the prevention of dysrhythmias and embolic events and the treatment of anemia and other possible exacerbating factors. A number of drugs are commonly used in HF for symptom relief and improvement in outcome:

- Improvement in patient **survival** has been documented with ACE inhibitors, beta blockers, and, in patients with advanced disease, spironolactone.
- Improvement in **symptoms** can be achieved by digoxin, diuretics, beta blockers, ACE inhibitors, and ARBs.

ACC/AHA Guidelines recommend the following approach to the management of patients with HF.

***ACE inhibitors*** improve survival in patients with left ventricular (LV) dysfunction (NYHA Class 1 to 4). Beginning therapy with low doses (eg, 6.25 mg of captopril TID) will reduce the likelihood of hypotension and azotemia. If initial therapy is tolerated, the dose is then gradually increased to a maintenance dose of 50 mg TID of captopril, or up to 40 mg/day of lisinopril or quinapril unless side effects occur. If the target doses cannot be administered or are poorly tolerated, lower doses should be used with the expectation that there are likely to be only small differences in efficacy between low and high doses.

***Angiotensin II receptor blockers*** (ARBs) appear to be as or possibly slightly less effective than ACE inhibitors for the treatment of HF. **They should not be used as first line therapy in place of ACE inhibitors**. ARBs can be considered as an alternative in patients who cannot tolerate ACE inhibitors.

***Angiotensin II receptor blockers*** (ARBs) appear to be as or possibly slightly less effective than ACE inhibitors for the treatment of HF. **They should not be used as first line therapy in place of ACE inhibitors**. ARBs can be considered as an alternative in patients who cannot tolerate ACE inhibitors. →

The administration of an ARB with an ACE inhibitor is not currently recommended.

***Hydralazine plus nitrates*** — The combination of hydralazine (started at 25 mg TID and titrated upward to 100 mg TID) and isosorbide dinitrate (40 mg TID ) or mononitrate (30 to 120 mg/day) produces modest benefit in patients with HF but is less effective than ACE inhibitors . This regimen has generally been poor because of the large number of tablets required and the greater incidence of adverse reactions. The main indication for hydralazine and nitrates is in patients who **cannot tolerate** an ACE inhibitor or an ARB.

***Beta blockers*** – particularly carvedilol and metoprolol – improve overall survival in patients with New York Heart Association (NYHA) class II – IV. The improvement in survival is additive to that induced by ACE inhibitors. Carvedilol and metoprolol are recommended for all patients with symptomatic HF, unless contraindicated. *Relative* contraindications in patients with HF include: heart rate <60 bpm, systolic arterial pressure <100 mmHg, signs of peripheral hypoperfusion, PR interval >0.24 sec, second- or third-degree atrioventricular block, severe COPD, history of asthma, or severe peripheral vascular disease.

Because of the need for careful attention to initial dosing and the risk of transient worsening of symptoms, it is recommended that beta blocker therapy be initiated under consultative guidance. Therapy should be begun at very low doses and the dose doubled at regular intervals until the target dose is reached or symptoms become limiting. Initial and target doses are:

- **carvedilol:** 3.125 mg BID and 25 to 50 mg BID (the higher dose being used in subjects > 85 kg)
- **metoprolol:** 6.25 mg BID and 50 to 75 mg BID (for extended-release metoprolol: 12.5 or 25 mg daily and 200 mg/day)

Although data about the duration of beta blocker therapy in HF are lacking, it has been suggested that patients who are doing well should not have the beta blocker withdrawn, since clinical deterioration and sudden death or death from progressive HF has been observed.

*D Gauthier*
*F Sam*

## Isolation Precautions: Painful but Necessary!

With rampant MRSA and high levels of VRE, all hospital employees with patient contact, must be aware of contact precautions. Think about situations you have seen. What stays on the phone after the HCW wearing gloves hangs up? Or on the buttons in the elevator? How much microbial contamination are you leaving on the secretary's desk when you label blood cultures (or stool samples!)? Healthcare workers (HCW) should not wear precaution gear (e.g. masks, gloves, cover gowns) in public areas of the hospital, including hallways.

**Contact precautions** are rather difficult to implement correctly. For example, a HCW must cover or wrap equipment which is not easily disinfected (e.g. stethoscopes) to prevent contact with the environment or a patient on Contact Precautions. The HCW must use caution to avoid contaminating clean equipment with soiled gloves when removing the protective covering. Think about how many times have you put down an item such as history form, ophthalmoscope, doctors bag, scut box, etc. in the patient's room; then picked it up and moved it to the next work area.

The nursing staff is responsible for ensuring that the appropriate precaution sign is posted and that any necessary precaution gear or equipment is available. Our policy mandates that all staff should cooperate to minimize spread of infection. HCW may call the Epidemiology Unit [414-4958] to assist in achieving compliance among those HCW who repeatedly fail to comply with posted precaution instructions.

What is your role in complying with Contact Precautions?

*Example:* Your patient has a UTI with VRE. Place the patient in a private room. When a private room is not available, put the patient in a room with a patient who has the same microorganism. Wear gloves when entering the room. Upon leaving, remove gloves and sanitize your hands with soap and water or the waterless (alcohol based) germicide. If hands are visibly soiled, use soap and water. Use a precaution gown when entering the room if you anticipate direct "hands on" contact → with the patient, or if the patient has diarrhea, an ileostomy, a colostomy, or significant wound drainage. The gown should also be worn if you will have "substantial" contact with the environment (not clearly defined by CDC). Sitting in the room for a prolonged period or manipulating objects that could be contaminated with VRE (bed curtains) would be included as "substantial contact." Remove the gown *before* leaving the patient's room, prior to sanitizing your hands.

Contaminated patient-care equipment can contribute to the spread of VRE. When possible, noncritical care equipment should remain in the room. Disinfect equipment that will be shared with other patients (i.e. stethoscopes). An alcohol wipe is acceptable for small items. For larger items, or any item contaminated with blood, use the hospital-approved disinfectant (Virex-tb).

Summary: Follow precaution signs, wash your hands, and don't contribute to spreading infections!

To read more, go to www.cdc.gov/ncidod/hip/isolation/isolat.htm.

*C. Sulis*

## Considering SARS

Whether on the inpatient service, urgent care, the clinic, or the emergency department, patients presenting with respiratory symptoms of unclear etiology must be considered as potentially having SARS or Severe Acute Respiratory Syndrome. You should consider SARS in patients with:

- With travel (last 7 days) to Hong Kong, the Guandong Province of China, or Hanoi or close contact with someone recently from one of those locations. AND:
- Fever > 100.4˚F AND:
- Any of the following: cough, SOB, hypoxia, pneumonia on CXR, or respiratory distress.

If you suspect SARS:

- Put the patient in TB (negative pressure) isolation.
- Wear gowns, gloves, TB masks, and eye shields or glasses with side protection.
- Notify the ID fellow ***immediately***.
- Follow universal precautions.

*J Greenwald*

## "Nyama, nyama" Bugandan for ninety-nine

Did you ever spend time in the MICU and wonder if we do too many tests on patients? When I, too, have doubts, I consider my memories of academic medicine in Uganda where physicians can usually only read about the "high tech tests." While working for Health Volunteers Overseas as a teaching academic attending in the Department of Medicine at Uganda's Makerere University in Kampala, I came to feel fortunate for the opportunities of American medicine.

Medical students and housestaff at Makerere University are the best and brightest of minds from around Uganda. Although gifted, dedicated, and well-read physicians, most Ugandan doctors may have only ordered one or two CT scans from the one scanner available in that region. None have seen an MRI except in American text books in this hospital where 2000 patients overflow ballroom sized wards. In Uganda where 15% of the population was HIV+ in 1997, the hospital was overwhelmed with AIDS related infections and the ICU had 4 beds and 2 old ventilators. ICU monitoring involved sharing the one available pulse oximeter. Several EKG machines donated by American organizations had run out of paper and could not be used.

Unlike our reliance on quoting "the literature" to guide therapy, Ugandan residents learn to look for their own important prognostic signs: a family member present sleeping on the floor beside the patient's bed predicts that the patient will get some oral nutrition and will get their sheets laundered and dried by their family on the lawn outside the hospital. No family present predicts that a patient will almost surely die.

A chest x-ray at Makerere University costs the patient about $5, a sizable sum to many Ugandans whose family takes days to round up the money. Once the x-ray is done, it belongs to the patient who usually keeps it underneath his hospital bed mattress. Hence, radiology rounds in Uganda involve the medical team lifting up the patient's mattress. →

Still, we share much in common with our counterparts in Ugandan medicine: the language of medicine, histories and physicals, and the art of differential diagnosis. Morning rounds are conducted with Talmudic discussions of differentials; resident report progresses with presentations of interesting cases; and young medical students are introduced to patient examination in introduction to medicine courses.

Take for example, the technique of eliciting tactile fremitus in their Bugandan population. In their language the physician asks the patient to say "Nyama, Nyama" while palpating the patient's thorax. What a wonderful sound to elicit vibrations in the thorax, I thought. I was amused to find that "Nyama, nyama" is Bugandan for "ninety-nine," a simple translation from English medical textbooks. So next time you wonder why you are ordering that CT, angiogram, V/Q scan, or rheumatalogic panel, feel fortunate that you work in an environment that is ripe with the investigative techniques that much of our planet only reads about with envy. Think about the house staff and students of Makerere University who can't always get the study they'd like to evaluate their patient's positive "Nyama, nyama" sign.

*D Kotton*

## CC-ing Improves Communication

In order to ensure that primary care doctors and specialists get copies of your discharge summaries, please make sure to CC them in SoftMed. This is particularly important for those outside of BMC who may not be able access an online version.

For a BMC faculty member, click on the "Edit CC" tab on the toolbar. Type in the first few letters of the name and hit enter. Find the doc's name and click on the ">>" tab to accept the correct name and than click "OK." This will enter the name and address in your summary, permitting medical records to send out copies.

For non-BMC docs, you have to enter the name and address manually on the "Other CC:" line. ***Full addresses*** are needed for outside physicians.

If an intern in the forest writes a discharge summary but no on reads it, is it really worth the effort? Thanks for making the effort.

*J. Greenwald*