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Hospitalist Update

Physician Quality Reporting Initiative (PQRI): Is it worth an Investment by Hospitals?

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PQRI is a voluntary individual reporting program that provides an incentive payment to identified Eligible Professionals who satisfactorily report data on quality measures for covered Physician Fee Schedule (PFS) services furnished to Medicare Part B beneficiaries (1).

In December of 2006, President Bush signed the Tax Relief and Health Care Act (TRHCA). Under section 101 of the Act, TRHCA authorized the establishment of PQRI measures by CMS. Over the past few decades, the Medicare fee schedule was based on quantity and resources consumed and gave less significance to the quality and value of services. In the last few years, Medicare emphasized and incentivized the quality of care given to patient populations and the avoidance of unnecessary costs (2).

Providers (including physicians, podiatrists, dentists, chiropractors, optometrists, NPs and PAs), certified RNs, social workers and therapists (PT, OT, qualified speech therapists and psychotherapists) can report PQRI measures to CMS (3). One hundred and seventy nine Physician Quality Reporting measures have been established in 2010 by various organizations and have been approved by CMS.

These measures are established methods of practice which may result in improved patient care and outcomes. Amidst the variety and extent of PQRI measures, there are a few that may be appropriately assessed and reported using our current EMR. These measures can be reported from the hospitalists' documentation, ranging from admission to discharge notes (8); this mode of formulating a report is easy and remains conducive to the current workflow. The process can be streamlined for all patient populations by utilizing EMR reported categories combined with billing codes provided by the medical billers. CMS guidelines stipulate the need to report a minimum of three measures in up to 80% of the patient population in order to be eligible for the incentivized payment plan. The breadth of the list allows practices to (cont)

(cont) choose the PQRI measures which can be best harvested from their current data storage and processing systems. At the University of Missouri, the following measures have been identified by our Quality Improvement Department:

Inquiry into smoking habits of patients (measure #114)

Prescribing DVT prophylaxis in stroke patients (measure #31)

Prescribing ACE Inhibitors in heart failure (LVD) patients (measure #5)

Documentation of advance health care directives (measure #47)

Measuring Hemoglobin A1C levels in poorly controlled diabetics (measure #1)

Prescribing antiplatelet therapy in patients with coronary artery disease (measure #6)

As of 2010, the following methods were approved by CMS for reporting the PQRI measures (2):

1. to CMS on their Medicare Part B claim form
2. to a qualified PQRI registry
3. to CMS via a qualified electronic health record (EHR) product

The advantages of participating in the PQRI program are many fold. It helps in the collection of data and improves the quality of care. It also provides a basis for incentive payments tied to performance. In addition, this program may serve as an adjunct to Quality Improvement projects throughout the institution. Finally, it may lead to improved documentation by providers, an area in which we are often deficient.

One of the most common reasons for hospitalist groups not to participate in the PQRI program is the need for extra resources to initiate the process and to incorporate it into their existing practice. Many administrators conclude that it is a cumbersome and time-consuming process; some consider it to be a financial burden, concluding that the CMS reimbursement is not sufficient to cover the overhead costs of the program (9). Physicians may also feel pressured to alter their management style, knowing that their records will be monitored and reported.

What does the future hold? PQRI reporting by hospitalists broadens the horizon for incentives tied to performance. However, this plan may be a harbinger of penalties that CMS might impose if PQRI measures are not documented (10). The program may serve as a platform for future investment strategies by hospital administrators who might also use the reporting data to advertise the quality of their services.

CMS has set up three help desk resources to assist participating professionals (5): the Provider Call Center Directory, External User Service and the Quality Net Help Desk. Many organizations, including the AMA and Society of Hospital Medicine, are actively promoting use of PQRI measures by hospitalist groups (6,7).

References:

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3. See reference 1

4. http://www.cms.gov/PQRI/Downloads/EligibleProfessionals.pdf

5. http://www.cms.gov/PQRI/36_HelpDeskSupport.asp

6. http://www.hospital medicine.org/Content/NavigationMenu/AdvocacyPolicy/ThePhysicianQualtiyReportingInitiative/The_Physician_Qualit.htm

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HOSPITAL MEDICINE VIRTUAL JOURNAL CLUB

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Abstracts and Full-text Links from recent journals of interest to Hospitalists:

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CASE OF THE MONTH

Sivakumar Ardhanari MD & Maen Nusair MD

A 72 year old female presented to the ER after she suffered a traumatic hip fracture following a dizzy spell. She was trying to stand up when she suddenly became light headed and fell to the ground. She denied any loss of consciousness, nausea, sweating or palpitations prior to the fall. She recalls having had milder episodes similar to this over the prior few days, all developing when she tried to stand up.

The patient has a history of coronary artery disease and severe ischemic cardiomyopathy. Consequently, a cardioverter-defibrillator had been implanted. Her functional class was estimated to be NYHA Class III at baseline. Current medications included aspirin, Carvedilol, lisinopril, spironolactone and furosemide; no recent change in her regimen had occurred.

Physical examination revealed a BP 105/71, HR 109; orthostatic vitals were not obtained due to the hip fracture. Jugular venous pressure was estimated to be 16 cm H2O and examination of the carotids revealed normal upstroke without bruits. Auscultation of the lungs revealed bilateral crepitations. The left lower extremity was mildly abducted and externally rotated; 2+ pitting edema was present bilaterally.

Abnormal lab findings included Hemoglobin 8.2, serum glucose 217, BUN 28, Creatinine 1.4 and serum BNP of 1500. Imaging of the left hip demonstrated an oblique intertrochanteric fracture. AP Chest film showed bilateral increased pulmonary markings with cephalization; a dual lead implantable cardiac device was noted. An EKG revealed NSR without evidence of acute ischemia. A 2D transthoracic echocardiogram demonstrated a mildly dilated left ventricle with an ejection fraction of 20% and an estimated RV systolic pressure of 45 mm Hg. No valvular abnormalities were noted.

Hospital Course: At the time of admission, the patient was believed to be in decompensated heart failure (DHF). After discussion with the Orthopedic Team, it was decided to delay surgery until her cardiovascular condition was optimized. She was treated with IV furosemide and her background heart failure therapy was continued; we held off on additional vasodilator therapy in light of her borderline hypotension.

Though her presyncopal episode suggested postural hypotension, her AICD was interrogated to look for possible arrhythmias; none were found. The patient responded well to the above therapy and was euvolemic by the third hospital day. On day 5, she underwent intramedullary nail placement to repair the left intertrochanteric femur fracture; antitachyarrhythmia functions of the AICD were suspended intraoperatively. She tolerated the surgery well and had no postoperative complications. The patient was discharged to an inpatient rehabilitation center and was seen in the Orthopedic Clinic one month later; she was doing well and had started to ambulate.

Discussion: Heart Failure (HF) is a common condition that internists encounter during perioperative consultations. HF is not only the most common postoperative cardiac complication but it is also considered to be a strong predictor of various other cardiovascular and pulmonary perioperative complications. Although the focus of preoperative cardiac risk assessment is often on coronary artery disease (CAD), some studies suggest that underlying HF poses a higher risk for perioperative complications than does CAD. For example, in one study of patients older than 65 undergoing major noncardiac surgery, the complication rate in HF patients was 11.7% compared to 6.6% in CAD patients without HF [1]. We will discuss some of the questions raised during the management of this patient.

Why delay non-emergent surgery in patients with decompensated heart failure? How long should the operation be delayed?

It is believed that the presence of DHF roughly doubles the risk of perioperative cardiac complications. Current ACC/AHA guidelines consider DHF as a major predictor of increased perioperative risk of myocardial infarction, heart failure and cardiac death. Accordingly, DHF requires intensive management which may delay or cancel non-emergent surgeries [2]. It is not clear how long the patient must be asymptomatic following treatment of their DHF in order to be considered "optimized" for surgery; studies on this topic are lacking but some experts suggest a period of one week, if possible. The urgency and nature of the surgery must be taken into account when making decisions regarding the appropriate timing of the procedure.

How do we manage DHF perioperatively?

Diuretics, ACE inhibitors, ARBs, beta blockers and aldosterone antagonists constitute the primary pharmacotherapy for DHF.

Diuretics: Patients with HF are usually maintained on loop diuretics to control the congestive features of the disease. There is no consensus on whether or not these medications should be continued in the immediate perioperative period [3]. However, it is generally safe to continue these medications as long as proper attention is given to the patient's volume status and electrolyte balance throughout the perioperative period. Despite the paucity of evidence, the benefits of continuing diuretics seem to outweigh the risks in patients recovering from preoperative DHF.

ACEIs and ARBs: these medications are cornerstones in the management of heart failure but there is still controversy regarding their perioperative use. One study demonstrated that patients who took ACEIs through the morning of surgery were more likely to develop hypotension requiring vasopressors than did those who stopped their medication 12-24 hours prior to surgery [4]. Another study found that stopping ACEIs preoperatively caused significant postoperative hypertension [5]. It merits mention, however, that patients in the former study were on ACEIs for chronic hypertension and it is not known how many of them had heart failure; in the latter study, the majority of patients had normal LV systolic function. The decision whether to continue these medications should be individualized, weighing the risk of intraoperative hypotension against the risk of postoperative hypertension. Based on current available data, it seems appropriate to hold ACEs and ARBs in patients who have HF or hypotension preoperatively; on the other hand, it is likely best to continue them in patients who are normotensive or hypertensive preoperatively, thereby preventing postoperative hypertension and a secondary increase in afterload.

Beta blockers (BB): Patients with HF who are taking BB preoperatively should continue these medications on the morning of surgery. Initiation of BB therapy in patients with HF requires slow titration and close monitoring since they might induce worsening of congestive symptoms. Accordingly, perioperative initiation of BB is not recommended, especially in patients with DHF [2].

Aldosterone Antagonists: Clinical trials have demonstrated that aldosterone antagonists reduce mortality in subsets of patients with systolic heart failure. The benefit of these medications in heart failure is believed to be primarily through blocking the deleterious effect of aldosterone on the heart and by elevating serum potassium and thus decreasing the likelihood of hypokalemia facilitated arrhythmias. Accordingly, in patients with normal serum potassium, it is expected that stopping or continuing these medications perioperatively is unlikely to affect the control of HF.

(continued)

What is the role of Pulmonary Artery Catheters in monitoring patients with DHF during the perioperative period?

PACs provide important and clinically relevant data in selected patients; however, their use involves an invasive procedure with increased risk of bleeding, infection and arrhythmias. Earlier studies suggested that the use of a PAC was associated with increased mortality and length of stay in the hospital. However, more recent studies demonstrated no difference in in-hospital mortality, 6 month mortality rate or postoperative heart failure when patients were randomized to perioperative management with or without a PAC [6,7]. The American Society of Anesthesiologists Task Force on Pulmonary Artery Catheterization concluded that, given the accumulating data showing benefits from PAC use, the decision to place a PAC should carefully weigh the potential risks and benefits [8]. Current ACC/AHA guidelines support this approach and recommend against the routine use of PACs; these guidelines recommend considering PAC use in patients at high risk for hemodynamic disturbances that are best detected by such monitoring [2].

How do we deal with implantable cardiac rhythm management devices (CRMD) perioperatively?

The potential for electromagnetic interference with an implanted device is related to the amount of current generated in the vicinity of the device (pacemaker or AICD). Current produced by electrocautery can alter the function of the devices: e.g. resetting the backup pacing mode, temporary or permanent inhibition of pacemaker output, an increase in pacing rate due to activation of the rate-responsive sensor or induced firing of an AICD by the electrical noise [2].

A task force on perioperative management of patients with CRMD by the American Society of Anesthesiology recommends the preoperative assessment of these patients should include: 1. determining the risk of electromagnetic interference during the planned procedure, 2. determining whether reprogramming the CRMD pacemaking function to an asynchronous pacing mode or disabling any special algorithms is needed, 3. suspending antitachyarryhthmia functions if present, 4. advising the individual performing the procedure to consider use of a bipolar electrocautery system or ultrasonic (harmonic) scalpel to minimize potential adverse effects of electromagnetic interference on the pulse generator or leads and 5. assuring the availability of temporary pacing and defibrillation equipment. The same task force recommends that, if electromagnetic interference is likely to occur, the conventional pacing function of a CRMD be altered by changing to an asynchronous pacing mode in pacemaker dependent patients and suspending special algorithms, including rate-adaptive functions. These alterations may be accomplished by programming or by applying a magnet on the pacemaker. However, the task force cautions against use of a magnet over an AICD since this may permanently disable the device; for this reason, the function of an AICD should be altered by programming[8].

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FROM THE JOURNALS — Syed Ahsan MD

The following articles should be of interest to hospitalists:

Long term treatment with metformin in patients with type 2 diabetes and risk of vitamin B-12 deficiency: a randomized placebo-controlled trial.

De Jager, J et al., BMJ 2010; 340:e2181

Safety and efficacy of continuous insulin infusion in noncritical care settings

Journal of Hospital Medicine; DOI: 10.1002/jhm.646

Hospital Acquired Infections due to Gram Negative Bacteria

Peleg, AY and DC Hooper, NEJM, May 13, 2010; Volume 362: 1804-1813

Duration of Dual Antiplatelet Therapy after Implantation of Drug-Eluting Stents

Park, SJ et al., NEJM, April 15, 2010, Volume 362: 1374-1382

ID CORNER — William Salzer MD

HELICOBACTER PYLORI INFECTION

A nice review on the diagnosis and treatment of H. pylori infection:

McColl, KEL, Helicobacter pylori infection.

NEJM 2010; 362: 1597-1604

http://content.nejm.org/cgi/reprint/362/17/1597.pdf

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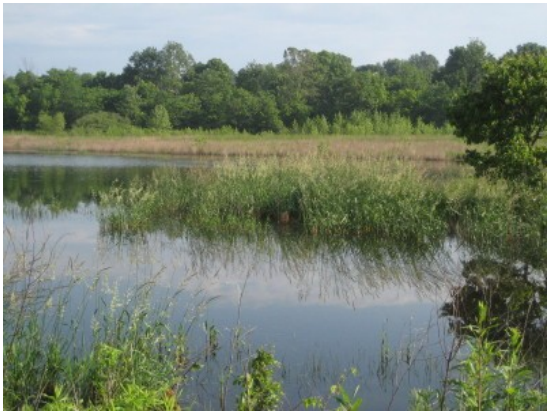

Cardiology Update, Saturday, June 12, Eric P. Newman Education Center, Washington University Med Center; register via http://cme-online.wustl.edu **LOCAL**

20th Annual Conference: Caring for the Frail Elderly, August 20-21, Holiday Inn Select Executive Center, Columbia, MO: call 573-882-5661 or register at som.missouri.edu/CME **LOCAL**

Brain Attack! 2010, Comprehensive Stroke Care Door-to-Door, Saturday, October 9, Eric P. Newman Education Center, Washington University Medical Center, St. Louis, register at http://cme-online.wustl.edu **LOCAL**

Chest 2010, October 30-November 4, Vancouver, BC, register online via: www.chestnet.org/accp/chest/chest-annual-meeting

Hospitalist Lunch Conference, Missouri ACP Meeting, September, 2010; presentations from MU, UMKC, Washington University; details to follow **LOCAL**

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