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For Medical Staff members  
at CCH, HRMC, and PBH

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### **Quality Leads: Disruptive clinician behavior and the threat to patient safety**

By HF Chief Quality Officer Jim Palermo, MD

In March 2006 an Oakland, California, Neurosurgeon was wrestled to the ground by police and arrested after he became angry because he had to wait for surgical instruments to be sterilized and wanted the surgical team to skip the sterilization so he could operate immediately. [Read complete article](#)



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It takes only a few examples of Operating Room (OR) fires to drive home why this is such a serious threat to patient safety. [Read complete article](#)

### **NEW! Medical Library Spotlight**

Have you been to your Health First Medical Library lately? Did you know that Health First offers a full array of Medical Library services, most of which are available at your fingertips!

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## Quality Leads:



### Disruptive clinician behavior and the threat to patient safety

By HF Chief Quality Officer  
Jim Palermo, MD

#### A case in California

In March 2006 an Oakland, California, Neurosurgeon was wrestled to the ground by police and arrested after he became angry because he had to wait for surgical instruments to be sterilized and wanted the surgical team to skip the sterilization so he could operate immediately. Two consulting surgeons had determined that the patient's injuries were not life-threatening and that surgery could wait. Police were called after the Neurosurgeon threatened a nurse. According to a report in *USA Today*, the patient's surgery was performed uneventfully the following day.

#### Joint Commission directives

Disruptive clinician behavior may make headlines in such extreme cases, but each day around the country such outbursts pose a serious threat to patient safety. Here's how The Joint Commission explained that threat when issuing a Sentinel Event Alert in July 2008:

*“Intimidating and disruptive behaviors can foster medical errors, contribute to poor patient satisfaction and to preventable adverse outcomes, increase the cost of care, and cause qualified clinicians, administrators, and managers to seek new positions in more professional environments.”*

All of those ramifications of unprofessional behavior are a serious concern, leading The Joint Commission to include two new Accreditation Standards for this current calendar year:

- **The hospital/organization has a code of conduct that defines acceptable and disruptive [as well as] inappropriate behaviors.**
- **Leaders create and implement a process for managing disruptive and inappropriate behaviors.**

#### HF policies on disruptive behavior

Because we know that professional communication fosters safe care and is a vital component of good patient outcomes, Health First does not tolerate disruptive or intimidating behaviors anywhere in our system. Our hospitals' Medical

Staff Bylaws as well as our policies and procedures provide for a professional, objective approach to the management of disruptive behavior, which includes detailed due diligence of every incident involving a breach in the Medical Staff Code of Conduct.

#### Research shows that disruptive behavior is widespread

Alan Rosenstein, MD, medical director and a vice president at healthcare consultant VHA West Coast, has been a leading researcher in this area for more than a decade. In one study, his team found that more than 90 percent of the 2,500 survey participants (physicians, nurses, and senior level administrators) witnessed disruptive behaviors in physicians and more than one third were aware of a nurse who left the hospital specifically because of a physician's disruptive behavior. Physicians' misbehavior may be more prominent because of their role in the healthcare system, but Dr. Rosenstein has found what he calls a surprising number of nurses and other clinicians also guilty of disruptive behavior.

A survey on intimidation conducted by the Institute for Safe Medication Practices found that 40 percent of clinicians have kept quiet or remained passive during patient care events rather than question a known intimidator. That same survey found that intimidation ranges from subtle questioning of judgment to more explicit, threatening behavior. Nearly a fourth of respondents often encountered condescending language or tone of voice (21%) or impatience with questions (19%). Almost half of those responding said they had been on the receiving end of strong verbal abuse (48%) or threatening body language (43%) at least once in the previous year. Perhaps most troubling was that 69 percent of Pharmacists said a prescriber had at least once in the last year responded, "Just give what I ordered," when asked a question about a prescription. That's exactly the kind of behavior that jeopardizes patient safety since exploring the question may prevent a medication error.

For most of us, the satisfaction we derive from the practice of medicine is directly related to gratifying relationships forged with our patients and fellow healthcare providers. Anything that poses a threat to those relationships and our ability to provide quality, safe care cannot be tolerated. That's why Health First expects, requires, and facilitates an environment that fosters healthy, constructive collegial communication, so no one is afraid to speak up due to intimidation.

## e-Physician

What IT can do for YOU, and what YOU can do with IT



### Healthcare-associated infections (HAIs) and IT

By HF Medical Director of Clinical Informatics  
David P. Hurwitz, MD, FACP

Healthcare-associated infections (HAIs) are estimated to affect one of every 10 to 20 patients hospitalized in the United States.<sup>1</sup> HAI refers to four device/procedure-associated infections, which include:

- **Central line-associated bloodstream infections (CLABSIs);**
- **Ventilator-associated pneumonia (VAP);**
- **Catheter-associated urinary tract infections (CAUTIs); and**
- **Surgical site infections (SSIs)**

These infections contribute to substantial morbidity, mortality, and increased healthcare costs. In the case of CLABSIs, it's estimated that 20,000 patients per year die from these infections.<sup>2</sup> In addition, the average cost of care for a patient with CLABSI is \$45,000. In addition, the Center for Medicare & Medicaid Services (CMS) has recently designated certain hospital-associated infections as so-called "Never Events" and will no longer pay for care required to treat these infections.

While HAIs are prevalent, successful strategies have been developed to significantly reduce their incidence. For instance, the ICUs at Johns Hopkins Hospital nearly eliminated central line-associated blood stream infections through adherence to a central line "bundle" (hand hygiene, maximal barrier precautions, chlorhexidine skin antiseptis, optimal catheter site selection with subclavian site preferred, daily

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review of line necessity with prompt removal of unnecessary lines).<sup>4</sup> Using the same approach, a large number of ICUs across the University of Michigan demonstrated a significant and sustained 66 percent reduction in CLABSIs over 18 months.<sup>3</sup> In addition, adherence to specific practices to prevent VAP, SSIs, & CAUTIs have been shown to reduce incidence of these infections.

A strong underlying patient safety culture and interdisciplinary approach is needed to successfully implement these HAI risk reduction strategies. Healthcare information technology (HIT), which has recently assumed an indispensable role in helping to improve patient care quality, might also be a useful tool.

### Health First HAI measures

Health First has already implemented a number of well-established HAI risk reduction measures in all three of its hospitals. How might HIT further help in these efforts? For the past nine months, an interdisciplinary group of physicians and HF representatives from Quality, Nursing, Infection Control, and HIT has been meeting regularly to examine ways of utilizing HIT, and SCM in particular, to assist in HAI risk reduction. We've been utilizing recently published evidence-based guidelines<sup>5</sup> that specifically address prevention of these infections. Using CLABSI guidelines<sup>6</sup> as an example, our group has identified important processes to address, particularly ones that can be integrated into SCM at key points (*see diagram on next page*) in the physician and Nursing workflow to optimize central line insertion/removal documentation, catheter surveillance, end-user alerts and analytics, which includes real-time reporting, internal QA and external reporting.

### CVC processes

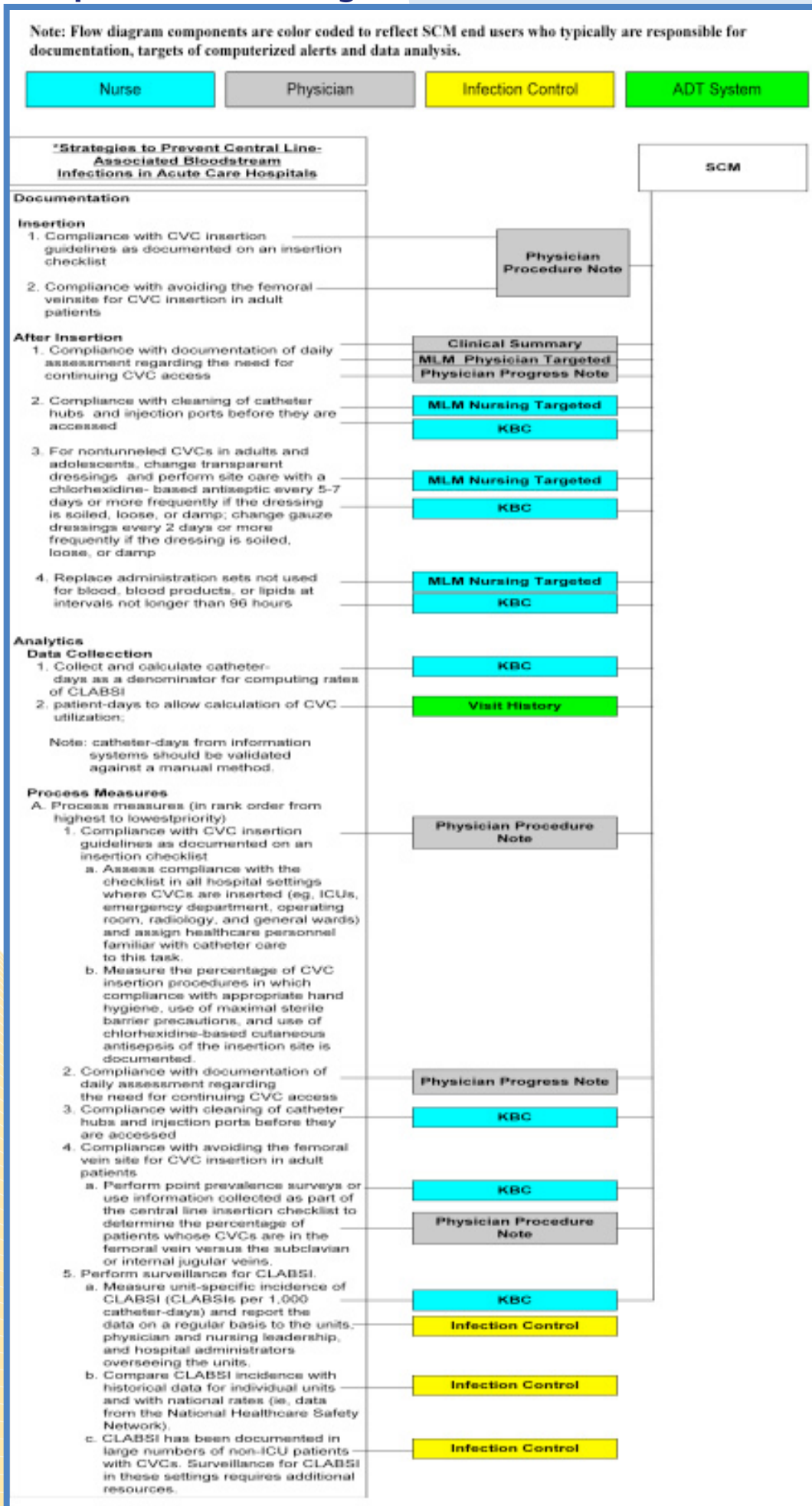
CVC processes that are being addressed in SCM, include:

#### Documentation:

- **CVC insertion procedure note:** Developed with the guidance of two Intensivists (Jim Schaffer, MD, and Zaki El-Magrabhy, MD), the note consists of a simple, yet thorough checklist that can be rapidly completed in 15 to 20 seconds and is immediately available for review by other caregivers.

(continued on page 5)

# Sample HAI flow diagram



Article continued on page 5 from page 3.

- **CVC insertion date/time:** integrated within Nursing documentation in the ED and on inpatient units, which enables calculating the number of line days for surveillance, alerting the end-user, and Infection Control reporting (CLABSIs/1000 catheter days).
- Daily documentation to assess ongoing need for a CVC as well as documenting daily catheter cleaning and care by Nursing staff. Surveillance and clinical decision support (under development)
- Display line days on Clinical Summary Screen (“Invasive Line Dashboard”) on Nursing flowsheet and in physician electronic Progress Note
- Consider alerting end user of line day number and assess continued need for CVC

**Analytics/Quality Improvement (under development):**

- Calculate catheter days
- Calculate CLABSIs/1000 catheter days
- Assess documentation compliance

**When the above are in place and broadly utilized:**

- CVC insertion notes will be rapidly generated and immediately viewable in SCM.
- CVC insertion date/time capture in SCM will be immediately available for catheter documentation, catheter surveillance, and clinical decision support and analytics.
- Analytics will give us insight about CVC use and CLABSIs, not just retrospectively, but in real time, which will be particularly helpful to quickly detect adverse trends in CVC infection rates, which could trigger early investigation by Infection Control staff. CLABSI rate information can be calculated for individual units, an individual hospital, or for all hospitals across Health First. CLABSI rates can be periodically given to individual units for feedback.

We are applying a similar approach to catheter-associated urinary tract infections and plan to begin additional work on other HAIs in the near future.

Reducing the risk for HAIs is a very high priority for our patients, particularly since there are a number of well-established measures that can significantly reduce their incidence. This requires utilizing evidence-based information along with a team approach that leverages our strong patient safety culture. As a tool to aid in these efforts, HIT can streamline and improve documentation, assist clinical decision-making, and provide valuable insights about the day-to-day status of these infections across our healthcare system. Given the above, HAIs should become uncommon events and one less hazard for hospitalized patients who entrust us with their care.

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## Operating Room fires: A focus on prevention



By Christopher Hanger, MD,  
CCH Assistant Medical Director,  
Department of Anesthesia\*

It takes only a few examples of Operating Room (OR) fires to drive home why this is such a serious threat to patient safety. Here are a few real cases, some of which involved patient

fatalities:

- **Case 1:** After exposing a patient's colon, the surgeon entered it using a bovie. The hot **electrosurgical unit (ESU)** tip caused the explosive ignition of the bowel gases, which led to an explosion and a 10cm tear of the colon.
- **Case 2:** During a lung resection, dry gauze pad was placed near an incision site and a bovie was being used to cauterize a bleeder. Oxygen was flowing out of the resection area, enriching the operative site itself. The oxygen, in turn, enriched the gauze causing it to be easily ignited by the bovie.
- **Case 3:** During emergency surgery, a contaminated ESU pencil wasn't placed in a protective holster, but dangled over the side of the operating table. An OR nurse unknowingly leaned against the pencil, causing it to activate, arc through the drapes to an instrument table, and ignite the drapes. The flame spread rapidly up the drapes and onto the

### 'FIRE TRIANGLE' PREVENTION POINTS

**1. Heat (surgeon):** The bovie or ESU generates sparks that are several thousand degrees Fahrenheit. Also sparks from high-speed drills and burrs can cause fires. Lasers, and even fiberoptic light sources can generate temperatures above a surgical drape's flash point. Even glowing bits of charred tissue can provide enough heat to cause a fire or an explosion.

**2. Fuel (Nursing/OR staff):** In an oxygen enriched environment almost anything will burn and some materials can even detonate. Alcohol from tissue prep such as DuraPrep or alcohol vapor from a suture pack combined with an oxygen-enriched environment can result in an explosive fireball capable of knocking down the surgical team. Incidentally, isopropyl alcohol and oxygen are being used as fuel for rocket-powered airplane races in the upcoming Rocket Racing League, giving you a good idea of that combo's power. Petroleum-based ointments will burn like gasoline in an oxygen-rich environment. Surgical drapes will often burn along the bottom edge causing a fire that's barely visible before grave damage to the patient has occurred. Burning plastic is especially dangerous in that it flashes over its surface and forms individually burning beads of molten plastic that can coat the area that had been covered by the drape. Cellulose-based drapes can burn like magician's flash paper, rapidly, and with much flame and little ash. Even parts of the patient, human hair, tissue, & skin will burn in an oxygen-enriched environment.

**3. Oxygen (anesthesia)** — Although newer, halogenated anesthetic gases are non-flammable, both oxygen and nitrous oxide support vigorous combustion of many materials. They are also, unfortunately, heavier than the room air nitrogen, displacing it and pooling in low-lying areas such as under drapes around a patient.

patient, burning with such intensity that all other flammable materials on and around the patient were easily ignited and quickly burned. The patient died.

- **Case 4:** A physician was removing skin lesions from a patient's eyelid and neck. General anesthesia was administered by mask and was maintained with a 2:3 oxygen:nitrous oxide mixture and a small amount of halogenated anesthetic. A petroleum-based ophthalmic ointment was applied to the eyes. When the surgeon used an **electro-cauterizing unit (ECU)** to remove a mole on the eyelid, a flash fire occurred on the patient's eyelids.
- **Case 5:** A surgeon was cleaning an ECU tip with a dry gauze pad, something the doctor did routinely, but this time it ignited. The doctor threw the burning pad to the floor and stamped it out with his foot, but not before it ignited the bottom edge of the vertically hanging legging drape. Within seven seconds, the fire had spread up the drape. The drapes were pulled off the patient as they were burning; however, the patient sustained severe burns on the left leg.
- **Case 6:** Ignition of a tracheal tube during a tracheostomy resulted when a surgeon attempted to cut through the cartilage rings of the trachea. In doing so, he ignited the tracheal tube cuff, which started the plastic tube burning in the presence of 100-percent oxygen. The

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surgical team, which was slow to recognize that the fire was in the airway, gave three breaths of 100-percent oxygen while trying to extinguish the fire. Each breath re-ignited the smoldering tracheal tube. The patient died several weeks later because of injuries from the fire.

- **Case 7:** A surgeon was operating through a microscope on a patient's eye. Because he wanted the bovie ready to use, he turned it on immediately. As the device approached the operative site, the red-hot tip grazed the drapes over the patient's nose. Oxygen was being delivered through a nasal cannula at a rate of 3 L/minute. When the cauterizer touched the drapes, a large ball of flame erupted on the patient's face. In a startled reaction, the surgeon scratched the patient's cornea with the red-hot cauterizing probe. The patient was also burned along the right nostril and right orbit.

**Scared yet?** The goal is not to scare us, but to remind us all that it takes preparation and training to prevent fires during any special procedure — and that we must know the proper way to respond if the unthinkable happens. Every year there are about 65 million surgical procedures in the United States. By extrapolating from three years of data provided through the Pennsylvania Patient Safety Authority, **there are between 550 to 650 surgical fires in the United States each year.** This ranks surgical fires as probable as a retained sponge or surgery on an incorrect site.

Due to improved safety laws and the national electrical code, most fires in the OR will not be equipment fires, but rather, on or in the patient and can be undetected until life-changing damage has occurred. Most (65%) of surgical fires take place on the upper body or inside a patient's airway; another 25 percent occur elsewhere on the body and less than 10 percent happen inside the body. Roughly 70 percent are ignited by bovies, with 20 percent initiated by hot wires, light sources, burrs, or defibrillators. Only 10 percent are ignited by lasers.

**Fire Triangle:** The key to prevention—the Fire Triangle—heat, fuel, and oxygen, has been adopted as a mechanism to help prevent intraoperative fire, mainly because it's easy to understand and because each part of the triangle—the heat source, fuel, and oxidizer—symmetrically correspond to the different teams most responsible for each triangle component in the OR setting. (See sidebar on page 6.)

**Fire response:** Slow, confused, or incorrect reactions can be catastrophic. Within HF hospitals

and facilities annual OR fire prevention and response training is required as well as an e-learning module. Stopping the flow of oxidizers is critical. OR fires burn fast and hot, but in doing so, they rapidly deplete the oxygen-enriched atmosphere that sustains them, so the prompt interruption of oxygen flow can be life-saving. At the same instant, remove anything burning or smoldering from the patient. If this is impossible, use sterile saline to extinguish the fire on the patient. Once the fire is out, ensure that no other parts of the patient have been injured.

Five-pound, carbon dioxide, Class BC fire extinguishers are available in every OR, C-section suite, and Cardiac Cath Lab at Health First. A fire extinguisher that includes a Class A rating is not intended for OR use because it contains a dry powder that's a respiratory irritant. Also the cloud it creates, when mixed with smoke, can obscure visibility. HF does require that sterile saline or water bottles are nearby the procedure to douse any Class A type fires involving wood, paper, cloth, and most plastics. Remember not to use water on electrical fires.

## FIRE PREVENTION GUIDELINES

Studying the Fire Triangle leads us to guidelines aimed at preventing fires. These guidelines include:

- Not every sedated patient needs 100 percent oxygen saturation. Open delivery of 100 percent oxygen is no longer recommended for surgery of the head, neck, face, and upper chest, with only a few limited exceptions. The **Anesthesia Patient Safety Foundation (APSF)** announced the change in October and highlighted it in a video produced by the ECRI Institute, a respected non-profit medical researcher. As long as a spontaneously breathing, sedated patient can maintain adequate blood oxygen saturation without extra oxygen, giving medical grade air, not 100 percent oxygen, is therefore indicated.
- Drape the patient to avoid gaps or voids where oxygen can pool. An extra suction hose can be used to scavage oxygen that might pool under an operative drape.
- Use warning tones with laser and bovie equipment and remove unneeded foot switches so there's no unintended equipment activation.
- Avoid high-intensity settings on the bovie.
- When working around hair, wet it down with water.
- Remove pooled prep liquids and allow prep solutions to dry thoroughly before starting surgery.
- Make fire-hazard review part of the standard Time-Out before the procedure in cases where conditions elevate fire risk.

In summary, surgical fires represent a huge potential for personal and economic disaster. Understanding what causes OR fires through knowing the fire triangle, can help us prevent them. And a focus on proper training, teamwork in the OR, and preparation can ensure that any damage is minimized should the unthinkable happen.

*\*Christopher Hanger, MD, is a diplomate of the American Board of Anesthesiology. He's a member of the CCH Medical Staff and was formerly a National Institutes of Health Research Fellow at the Medical College of Wisconsin.*

## NEW! Medical Library Spotlight

Have you been to a Medical Library lately? Did you know that Health First offers a full array of Medical Library services, most of which are available at your fingertips!

You can also “e-visit” the library from the convenience of your home or office simply by logging in to Ovid, our electronic resource provider. Resources through Ovid include:

- **Full MEDLINE database**
- **Evidence-Based Medicine Review Collection, which includes access to the Cochrane Database of Systematic Reviews**
- **Journals — Full-text access to approximately 40 top medical journals**
- **Books — Full-text access to more than 100 popular medical titles**

In addition to these electronic resources, Health First also offers a full-service Medical Library at HRMC. If you need articles that are not included in HRMC Library holdings, interlibrary loan services are also available. In addition, the Librarian offers ready-reference services and will conduct literature searches for you.

For CCH Medical Staff, there's also the convenience of the **CCH Resource Center**, where **Leslie Becker** is available to assist with your information needs. You can contact **Leslie** at **321-868-2701** or send her an email at: **Leslie.Becker@Health-First.org**

**Contact: HRMC Medical Library**  
**Carol Crawford, Librarian**  
**carol.crawford@health-first.org**  
**321-434-8512 (voice)**  
**321-434-8765 (fax)**



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OvidSP

To access Ovid from any HF network computer, go to <http://ovid.ovidsp.com> and just click on “**Start OvidSP**”. There's no need to log in.

If you wish access Ovid from outside the HF network, you'll need an ID and password. Authorized users may use the following:

ID: Type in “hrc\_ \_ \_” (selecting any number from 101 to 130 with no spaces; for example: “**hrc115**”)  
Password: “**hrctest**”

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## Do a checkup on your calendar!

# Calendar

### December 2009

- 16** PBH Holiday Breakfast, 7 to 9 am, PBH Cafeteria
- 18** CME — Better Outcomes in STEMI: Moving from “Awareness” to “Implementation” of New Guidelines, Michael C. Kontos, MD, University/Medical College of Virginia (11:30 am to 1:30 pm, HRMC Auditorium)\*
- 25** No CME — Holiday Weekend

### January 2010

- 14** Night at the Mandatories “Domestic Violence” (2 hours), Cindy Mitchell, Salvation Army (Light snack at 5 pm; lecture from 5:30 to 7:30 pm)\*\*\*
- 19** CCH General Medical Staff Meeting, 6:30 pm, CCH Medical Plaza Conference Center
- 21** Night at the Mandatories “Prevention of Medical Errors” (2 hours), Joe Putz, LHRM, FPIC Florida (Light snack at 5 pm; lecture from 5:30 to 7:30 pm)\*\*\*

\*For all CME sessions, lunch is from 11:30 am to 12:30 pm, and the presentation is from 12:30 to 1:30 pm. For information and CME records, call **Dee Rogers** at 434-1966.

**Please note:** CMEs at the HRMC Auditorium are video-conferenced to PBH Private Dining Room and CCH Medical Plaza Conference Room B.

\*\*The HRMC General Staff Meeting will begin at 5:30 pm followed by Department Meetings at 6:30 pm.

\*\*\*For all “Night at the Mandatories” (highlighted sidebar boxes) the Live Presentation will be in the HRMC Auditorium and will be video-conference to PBH Private Dining Room and CCH Medical Plaza Conference Room B. Dinner will be served at PBH at 5 pm and a light snack will be served at HRMC and CCH. Call **Dee Rogers** at 434-1966 for more information or a registration form.

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