Maryland Patient Safety Center Emergency Department Collaborative

A Report on the Second Workshop

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The second workshop of the Maryland Patient Safety Center Emergency Department Collaborative took place on the 9th of June. It was a sunny afternoon at the Turf Valley Resort in Ellicott City where 89 representatives from 28 hospitals gathered for an afternoon of idea sharing and collaborative learning.

The single day gathering demonstrated the impressive work taking place in our emergency departments. We started the collaborative realizing that people were doing quite a bit of phenomenal work, though mostly in isolation. The collaborative offered an opportunity to share and build on much of this effort. The willingness of our emergency medicine community to share what works—and what doesn't—is truly impressive. The effort that goes into making our care better and safer is inspiring.

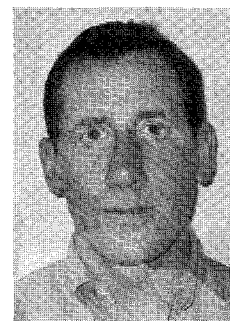
The day opened with a review of the collaborative. In the belief that a picture explains far more than words, I prefer the picture version of the collaborative to my explanation:

In a single diagram, we try to illustrate the many facets of emergency department patient safety. Culture and patient flow anchor all that we do in emergency medicine patient safety, and so culture and flow form the top and bottom of this illustration. Collaborative goals include improving patient safety culture in a selected dimension—such as teamwork or communication—by 50%, based on a patient safety culture survey and decreasing overall length of stay. The four clinical pillars are definitive aspects of patient safety, each focusing on high risk disease states. They include prevention of bloodstream infections through the practice of safe central line placement, appropriately timed treatment of pneumonia, implementation of a sepsis protocol, and efficient and full care in the setting of acute myocardial infarction. Associated collaborative goals include the elimination of bloodstream infections from emergency department-placed central lines and 100% appropriate time-sensitive care.

Not all departments tackle every aspect of flow, culture, and the clinical pillars. Rather, each department selects a number of aspects to address. Many have had impressive successes.

The first session of the workshop was devoted to sharing these successes. Among the topics discussed, each by an individual hospital, were these:

- The emergency department can have a central role in improving data abstraction for core measures. We can be very effective in collecting data to improve both our own systems and those of the hospital. It is key to develop a culture in which data is freely shared and brought "home" to the people who need it—and that data sharing is more informative than threatening.
- Improving pneumonia care requires dedicated and concerted efforts through which many departments have met with significant success. Flagging charts at triage and sending patients to x-ray from the waiting room can work smoothly.
- We are very good at critiquing ourselves, though not always great at celebrating our successes. Ideas for celebration included newsletters, parties, massage sessions, team huddles, and CEO letters of thanks.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- Implementing a central line protocol to reduce bloodstream infection worked nicely in tandem with the efforts made throughout the hospital.
- Thrice daily bed huddles at shift changes improved hand-offs and increased patient throughput. Attended by the hospital bed coordinator, ED manager, nurse managers, and others, these lasted 10-12 minutes each.
- White boards at the bedside improved communication between doctors, nurses, and patients. They kept patients better informed of their course through the ED. Patients who knew the names of their providers tended to put them on feedback surveys—most notably when feedback was positive.

After solid discussion on all these topics, Dale Bratzler, director for Medicare's National Pneumonia Project, presented the data supporting antibiotic measures for pneumonia patients. He presented compelling data, arguing strongly that antibiotics within four hours reduce mortality for admitted patients with pneumonia. He acknowledged that a goal of 100% is impossible—there are always those patients who are difficult to diagnose and in whom we are glad simply to have made the diagnosis. He also presented some good news for those of us frustrated over blood cultures. The

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only blood cultures that are required toward national figures are those in patients headed to the ICU. That said, if blood cultures are drawn in any patient, they should be drawn before antibiotics are given.

Nathan Shapiro recently put a sepsis protocol in place at Beth Israel Deaconess Medical Center in Boston. He shared the story of making the protocol work, including the challenges of picking up the more subtle cases of sepsis. Sending lactate levels freely, including with any drawn blood culture, helped pick up otherwise difficult-to-spot cases. He emphasized the importance of working closely with the ICU staff. The ICU guaranteed that any sepsis patient would spend at least six hours in the ICU, removing any delay for discussing whether a patient could go directly to the floor. The ED committed to the placement of appropriate central lines using appropriate antiseptic technique. How did this cooperative spirit develop? Weekly meetings were held allowing people to get to know each other across the table.

Jeff Doucette, Associate Operating Officer for Emergency Services at Duke, spoke on their approach to the patient with acute myocardial infarction. Successful tactics included developing an Express Team responsive to a phone call once a patient with acute MI was identified, placing all needed paperwork in one combined "blue pack," regular education and feedback, and monthly reports of interval times. Some of their lessons: focus attention on walk-in patients easy to miss; establish clear expectations around triage; assign dedicated staff to data collection and reporting; and share data liberally.

Jon Henkel and Stephanie Tismer, from Regions Hospital in Minnesota, offered their wisdom on reducing bloodstream infection rates. Hospital-wide, including the ED, they reduced central line infection rates from 7% to 2%. They used the Institute for Healthcare Improvement central line bundle and adapted the hospital-wide protocols for the ED. Central to their success was a stocked central line cart, encouragement of hand hygiene, full barrier precautions, and review of central line bloodstream infections. They educated tirelessly, with in-services, orientations, rounds, and "briefs" posted in the restrooms. Infections were reviewed at M & M conferences, quality meetings, case reviews, and via e-mail. Results were posted on the units.

Sharon Eloranta, from Qualis Health in Seattle, rounded out the day with a view outward from the ED doorway. She discussed theories and practicalities for spreading improvement beyond the ED. She noted the importance of specific aims, engaged leadership, measurement, and effective communication. The lesson is straightforward: what we are doing in our EDs has the power to travel.

It was a day filled with lessons and potential. Now the work continues as our departments continue the excellent work started and some pick up new topics or themes. The collaborative team has visited more than half the hospitals participating and will continue to schedule site visits. Upcoming collaborative phone calls, one each month, include a discussion of safety in psychiatric care on July 20th and a discussion of hand-offs and clear communication on August 17th. The third collaborative workshop will take place on November 16th. Themes for consideration include hand-offs, the full capacity protocol (or, boarding hallway patients upstairs), and more sharing of successful techniques.

ED, and after admission is determined to also have pneumonia, then that patient will not be counted in the national performance measures for CAP. Conversely, if that same patient has an admitting diagnosis of CHF and pneumonia, then you will be held to the four hour standard for CAP. Listing pneumonia as part of your differential diagnosis should not trigger the CAP standards. Only your working or admitting diagnosis should.

Why should we have to give pneumococcal vaccine in the ED? I'm uncomfortable with giving a sick patient with pneumonia a pneumoccocal vaccination.

The standard is that all patients be offered vaccination at some point in their hospitalization. The national expert panel never envisioned this as the responsibility of the ED. Within certain institutions, this responsibility has defaulted to the ED simply because the compliance on the inpatient units is so poor. Furthermore, there is no evidence that pneumococcal vaccine is contraindicated in a patient with pneumonia.

To summarize, the national performance measures are as follows:

- Oxygen assessment
- Blood cultures within 24 hours for ICU patients
- Blood cultures prior to antibiotics if drawn (ED patients only)
- Appropriate antibiotic administration within four hours of arrival
- Influenza vaccination
- Pneumocoocal vaccination
- Smoking cessation counseling

The next time you get one of those "Dear Doctor" letters, see if your Performance Improvement Department is following the national performance measures for CAP. If not, maybe they need a little education.