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Re: Hospital Acquired Infections

Good Morning. My name is Sharon Kiely and I am a general internist and the Medical Director, Quality & Patient Safety at Allegheny General Hospital an 829 bed tertiary care teaching hospital in Pittsburgh, Pennsylvania. I would like to thank The Hospital & Healthsystem Association of Pennsylvania for the invitation to speak today and appreciate the Senate Public Health and Welfare Committees' attention to this extraordinarily complex and important issue.

Since 1885, Allegheny General, or AGH, has earned an international reputation for excellence and innovation in patient care, medical education and research. AGH was the first hospital in the region designated as a Level I Shock Trauma Center, and our LifeFlight aeromedical service was the first to fly in the northeastern United States. A member of the West Penn Allegheny Health System, AGH admits nearly 32,000 patients, has 56,000 emergency visits and completes 28,000 surgical procedures annually. Approximately 1,250 physicians and 4,600 employees share the hospital's commitment to excellence. AGH trains over 275 Residents and Fellows in 26 accredited programs and is the western campus of the Drexel University School of Medicine.

When planning for today's hearing, my thoughts turned to something we all fear, the unchecked spread of infection. Microbes and the elements of infection thrive in darkness both within the hospital and the community. At AGH we welcome efforts focused on education which shed needed light on the subject. Since 2003 AGH has refocused our efforts from controlling to eradicating nosocomial infections. AGH has been committed to an open, sharing and honest approach and it has been extremely effective. We defined three main goals in order to meet this challenge.

Goals

Our first goal was to define the problem and educate about what we found. We looked at incidence, epidemiology and outcomes, human and financial cost. We presented these data and most importantly the patient stories associated with them at staff, committee and Board meetings. Over time, C. diff, MRSA, VRE, VAP and CLAB -the alphabet soup lexicon of infection control- spread throughout the organization. House staff and housekeepers, ancillary services, administration and the board learned a new language. During this time the terrain changed and a new threat emerged- infections present on

admission or "POA". Our staff moved beyond AGH to the community, the region and nationally to understand the problems and shape solutions.

Our second goal was to build integrated accountability for success. In isolation, it is difficult to understand either scope or solution. As a community, both come into view. We learned that success came when we empowered everyone, formed teams and reported results. Information services, patient placement, environmental services play key roles along with physicians and nursing in assuring hospital infections are not transmitted to patients. For example, IS and Patient Placement joined forces to identify patients being readmitted to AGH with a history of MRSA/ VRE from previous admission for private room assignment at readmission. We built multidisciplinary teams within AGH and joined others in the region and nationally. We trained 90 administrative and clinical staff in the Perfecting Patient Care quality methods based on the Toyota Production System. We participated in efforts of the Pittsburgh Regional Healthcare Initiative and committed to the goal of "zero" nosocomial infections. We joined to IHI's 100,000 Lives Campaign.

Our third goal was to change the culture from blame to analysis and solution building. In healthcare we come to work everyday to help people, not to hurt them. Blaming leads to hiding, analysis provides for creative solutions and long term success. Some of these were simple such as drew lines across door thresholds as a visual reminder to staff to stop and adopt appropriate precautions to halt transmission of infection. In order to understand whether an MRSA infection was community v. hospital acquired we swab all patients on admission to the ICU. In order to know whether MRSA was transmitted in the ICU we swab discharge. Further enhancement of this effort is through pulse gel technology available on site at AGH. This method is used for any organism where a clonal relatedness can be established to distinguish between community vs. nosocomial MRSA infection, especially in an outbreak. We observed hand hygiene, provided results on performance and asked patients to tell us if we failed. We complete a root cause analysis of HAI's.

Successes

Our successes? Despite the fact that infection present on admission has doubled since we began tracking, in patients colonized with MRSA at admission < 1% develop infection. Since FY2004 the CLAB rate in the ICU's has dropped from 3.2 to 1.1 infections per 1000 line days. Two of our ICU's have had 15 successive months without a CLAB. We achieved this same success in half the time on other nursing units using the principles we learned in the CLAB eradication effort. Our nurses were nationally recognized by the American Association of Critical Care Nursing, winning the Baxter Award at the 2007 National Teaching Institute and Critical Care Exposition. This was for best practice in CLAB improvements. And this month the Association of Infection Control or APIC is planning to launch a National Education Program to Prevent CLAB. This DVD and module is based on the central line best practices codified at AGH and was filmed at AGH. Through this journey, which also includes other significant patient safety efforts, the hospital mortality rate has dropped every quarter. Our cost data has been published in peer reviewed publications demonstrating that infections are costly both in human and financial terms.

Challenges

Healthcare today is extremely complex. We face two significant challenges in helping our staff to do even better- timely and accurate information. The efforts I have described just now are time consuming and labor intensive. As you know information technology is expensive and requires long-term commitments by hospitals. I am pleased to say that AGH is implementing Computerized Physician Order Entry in three days. As you know CPOE is the cornerstone of safe and efficient patient care. Complementing this AGH has invested in Theradoc electronic infection surveillance system to further support starting and stopping antibiotics based on lab evidence of infection in as close to real time as possible. Sharing information is important and AGH participates in a number of reporting relationships. In order for hospitals to benefit from this effort more fully, the data reported back ought to be actionable, understandable and transferable. It should be useful to the hospitals.

What more can be done

What more needs to be done? We do not have time enough. We need to return to public health principles in the community focused on prevention. Screening needs to be conducted in nursing homes and other facilities. We ought to screen patients pre operatively for overuse of antibiotics and other risk factors that pre dispose to HAI. Broadening the registry of persons infected with drug resistant and other organisms would help. We can identify patients at our hospital and in our system with history of infection. But if a patient comes from elsewhere we cannot. There is a need to emphasize coordination and cooperation regionally. If we can eradicate CLAB's C. diff & MRSA in a unit, why can't we do so in a county? If we can put 10,000 songs on an iPod why can't a patient have an essential electronic medical record on a credit card? These are big problems and need big solutions.

National Efforts

At AGH we committed to do the right thing for our patients. In order to do so we must address these issues regionally and nationally. To that end AGH is voluntarily participating in the Institute for Healthcare Improvements' 5 Million Lives Campaign and Leapfrog. We participate in the Surgical Care Improvement Project, the Patient Safety Authority and Quality Insights of Pennsylvania. Connie Cibrone, CEO of AGH has been appointed to the AHA Quality Panel. Dr Jerry Granato and Joy Peters, RN, MSN the physician and nurse directors of the CCU and Cheryl Herbert, Director of Infection Control & Prevention are directly involved with the national CLAB efforts described earlier with APIC and others including SHEA and the CDC. I was appointed to the National Advisory Council of the National Institute for Allergy & Infectious Diseases (NIAID) of the NIH.

Finally, AGH is most willing to work with the legislature on this issue issue. Thank you very much.