

**Annual Report of the
New Hampshire Health Care Quality Assurance Commission**

June 1, 2007

HB 514, Chapter 157:2, Laws of 2005

House Bill 514, which was approved on June 21, 2005, established the New Hampshire Health Care Quality Assurance Commission. Its intent is *to enable health care providers to share information about adverse outcomes and prevention strategies in learning environments which foster candor and self-critical analysis while maintaining the confidentiality of the information submitted to the Commission, the proceedings of the Commission, and the results of the Commission's deliberations.*

The members of the Commission include one representative from each acute care hospital and free standing ambulatory surgical center (ASC) and the designee of the Commissioner of the Department of Health and Human Services. Polly Campion, Director of Clinical Improvement at Dartmouth-Hitchcock Medical Center (DHMC), serves as chairperson, Stephanie Wolf-Rosenblum, MD, Vice-Chair, Ross Ramey, MD, Secretary, Sue Majewski, Executive Committee member representing ASCs, and Rachel Rowe, Associate Executive Director of the Foundation for Healthy Communities serves as administrator of the Commission. (see Membership List, Appendix A)

During its second year, the Commission met five times on the following dates: July 28, 2006, October 13, 2006, January 26, 2007, March 23, 2007, and May 10, 2007.

Executive Summary

The Commission dedicated its work again this year to promoting initiatives and sharing best practices which would enhance patient safety and decrease harm. In addition to two ongoing statewide improvement initiatives, Commission members shared many best practices, exchanged important information regarding their own stories of medical errors and prevention strategies, and continued to establish key networks and partnerships for ongoing individual and organizational improvement activities.

The major accomplishment of the Commission this year was the collection and reporting of statewide ventilator-associated pneumonia (VAP) and central line bloodstream infection (CLBI) rates. The Commission worked collaboratively with the NH Infection Control Practitioners to identify an acceptable methodology for defining, collecting, and reporting these infections in the aggregate. There was improvement in rates for both VAPs and CLBIs from last year to this year; however variation continues to exist, in part due to the lack of evidence-based definitions and a standardized data collection methodology that is reliable. The members also established a commitment for adopting best practice strategies to decrease these infections within their own institutions. They agreed to collaborate on a statewide campaign in Year 3 to promote 100% compliance with hand hygiene, which is often cited as the primary prevention strategy for infections.

The Commission also began some important work to increase the safety of patients who are transferred between facilities. It is clear there is a high potential for medical error or inadequate or untimely care when patients move between facilities. Care providers must have access to thorough and accurate information to be communicated and documented. The members are developing a framework for the key data elements to be recorded and communicated upon transfer.

I. Detailed Activities of the Commission

Infection Prevention and Data Collection

The Commission members agreed that although we are making progress, there continue to be too many dangerous infections in our state's health care facilities, and that this issue needed to be addressed by the Commission again this year. It was also agreed that the most important way to decrease infections is through the implementation of thorough and aggressive prevention strategies. There are a number of these evidence-based approaches that hospitals and ambulatory surgery centers are committed to implementing and monitoring.

The Commission members also agreed that the collection and reporting of Ventilator Associated Pneumonia (VAP) and Central Line Bloodstream Infection (CLBI) rates are an important statewide goal. While our knowledge about these infections continues to evolve (how to detect them, how to prevent them, etc.), confusion remains about the definitions and data collection methods which underlie the reliability of these infection rates. However, the members worked collaboratively with the NH Infection Control Professionals to adopt generally accepted definitions and a data collection methodology. They also proposed clarifying language with the intent of decreasing the unintended variation due to differences in patient mix, number and type of personnel dedicated to this effort, and the reality that there continues to be a subjective element on the part of clinicians in the diagnosis of healthcare-associated infections, particularly VAP.

A. Prevention Strategies

The Commission members recommended that health care organizations adopt several evidence-based prevention strategies for the elimination of ventilator-associated pneumonia and central line bloodstream infections and the reduction of surgical site infection (SSI). These include:

- The central line insertion practices recommended by the Institute for Healthcare Improvement (IHI) and the Healthcare Infection Control Practices Advisory Committee (HICPAC). Every hospital has adopted those practices.
- The recommendations of the national hospital-based initiative, Surgical Care Improvement Project (SCIP) which include: Prophylactic antibiotic received within one hour prior to surgical incision; prophylactic antibiotic selection for surgical patients; prophylactic antibiotics discontinued within 24 hours after surgery end time; cardiac surgery patients with controlled 6am postoperative serum glucose; postoperative wound infection diagnosed during index hospitalization; surgery patients with appropriate hair removal; colorectal surgery patients with immediate postoperative normothermia. All 26 hospitals have joined that initiative.
- The recommendation of the Healthcare Infection Control Practices Advisory Committee (HICPAC) report that hospitals vaccinate all eligible inpatients for

- influenza. Of the state's 26 acute care hospitals, 24 have shown evidence of a policy that addresses that recommendation.
- The recommendation made by the Commission that NH Ambulatory Surgery Centers will educate high risk patients (during the months October-May) about the need to be vaccinated. Over half of the ASCs have established policies which address this recommendation.
 - The recommendation of the Commission that all Ambulatory Surgery Centers adopt a set of recommendations for the prevention of surgical site infections based on the Centers for Disease Control document, *CDC Recommendations for Prevention of Infection – All Invasive Procedures* (Adapted from Mangram, HICPAC and CDC 1999). Over half of the ASCs have submitted evidence that they are complying with those recommendations.

B. Infection Rate Collection and Reporting

This is our second year of data collection, and the results reflect 6 months of data (July-December 2006). There was considerable work done to enhance the uniformity of data collection for those elements that did not depend on case identification or risk stratification. For example, the Commission members agreed to count ventilator and central line days at a point in time as they do with length of stay. They also agreed on how to count infections for those patients who are transferred in and out of an Intensive Care Unit or between facilities. Although this enhanced uniformity does not ensure comparability, it increases the meaningfulness of the data within the given constraints of small numbers and subjective case identification.

For the second year, all acute care hospitals in New Hampshire reported information regarding the number of ventilator-associated pneumonias (VAPs) and central line bloodstream infections (CLBIs) that occurred in their institutions. For the 3rd and 4th quarters of 2006, institutions tracked VAPs and CLBIs along with “at risk” days associated with those infections and submitted these data to the Foundation for Healthy Communities. The definitions and methodology adopted for this initiative were established by the Institute for Healthcare Improvement (IHI), as part of their 100,000 Lives Campaign.

Ventilator Associated Pneumonia (VAP) statewide rate: There was apparent improvement in the rate of ventilator associated pneumonias from 2005-2006.

- 2005 (3 month period): 41 pneumonias for a statewide rate of 8.64 VAPs per 1000 ventilator days
- 2006 (6 month period): 48 pneumonias for a statewide rate of 4.8 VAPs per 1000 ventilator days

Variation continues to exist given the lack of evidence-based definitions and reliable data collection methodology. Key considerations when interpreting these data:

- This statewide rate includes data from 25 hospitals.

- These data were submitted by the hospitals to the Foundation for Healthy Communities and have not been validated by an external organization. As such, the results cannot be considered valid or comparable with other studies until there is consensus on definitions and collection methodology at the state and national level.
- There continues to be a need to more clearly define what is classified as a pneumonia and who assigns that classification since controversy exists over the optimal method of VAP diagnosis (clinical and culture data).
- There continues to be no national consensus on how pneumonias are classified and what data collection methodology should be used to reduce unintended variation.

Central Line Bloodstream Infection (CLBI) statewide rate: As with ventilator-associated pneumonia rates, there was seeming improvement in central line bloodstream infection rates from 2005 to 2006.

- 2005 (3 month period): 22 CLBIs for a statewide rate of 3.49 CLBIs per 1000 central line days
- 2006 (6 month period): 28 CLBIs for a statewide rate of 2.3 CLBIs per 1000 central line days

The same questions regarding variation should be raised given the lack of a reliable data collection methodology. Key considerations when interpreting these data:

- This statewide rate includes data from 25 hospitals;
- These data were submitted by the hospitals to the Foundation for Healthy Communities and have not been validated by an external organization. As such, the results cannot be compared with other studies until there is consensus on the data collection methodology at the state and national level.
- Hospitals continue to refine their processes for diagnosing CLBI and counting ‘central line days’ (i.e. concurrent vs. retrospective and electronic vs. manual);
- There continues to be some variation in definitional issues and collection methodologies continue to exist among hospitals across the state and country.

The Commission members reviewed the results and engaged in a lengthy discussion about the challenges and opportunities associated with identifying and collecting this information. The most important challenges are those resulting from the small numbers associated with these infections and the methodological issues regarding data collection that remain despite the CDC definitions. It is clear to Commission members that the variation in reported rates is due primarily to differences in how “at risk” days (i.e. ventilator days and central line days) are counted and how pneumonias and infections are classified. These issues continue to be significant enough to the members that they have questions regarding the meaningfulness of the aggregate rate reported in Year 2 of this data collection.

The opportunities for New Hampshire healthcare facilities with this initiative are significant. Although the numbers of central line bloodstream infections and ventilator-associated pneumonias are clearly and significantly below last year, it is difficult to assign complete attribution of that decrease to changes in practice or improvement initiatives given the unknown variation which still exists with identification and collection methodologies. The Commission members all agree however, that the uniformity of the data collection is better than last year and that the increasing attention being placed on decreasing these infections and greater transparency of these infections has been an important ‘call to action’ and likely has contributed to a measurable decrease in infection rates.

The Commission members also collected and reported on two evidence-based process measures that, if carried out for certain surgeries, have been proven to decrease a patient’s risk of infection. These include:

Surgical Infection Prevention measure 1 (Antibiotic received within 1 hour of surgery): 3837 patients received an antibiotic within 1 hour of surgery of the 4491 patients who underwent the specified surgery or, 85% of patients received an antibiotic within 1 hour of surgery for the specified procedures. This compares to a rate of 76% in Year 1.

- This statewide rate includes data from 26 hospitals;
- 22 hospitals submitted these data to the federally designated “Quality Improvement Organization” (QIO) where it went through a validation process; 4 hospitals submitted these data to the Foundation for Healthy Communities;
- The national average for this measure is 70%.

Surgical Infection Prevention measure 3 (Antibiotic discontinued within 24 hours after surgery): 3600 patients had their antibiotics discontinued within 24 hours of surgery of the 4354 patients who underwent the specified surgery or, 83% of patients had their antibiotic discontinued within 24 hours after surgery. This compares to a rate of 74% for Year 1.

- This statewide rate includes data from 26 hospitals;
- 22 hospitals submitted these data to the QIO where it went through a validation process; 4 hospitals submitted these data directly to the Foundation for Healthy Communities;
- The national average for this measure is 53%.

The meaningful increase in rates of compliance for these two evidence-based process of care measures shows that hospitals are working hard to systematize the processes which have been proven to decrease infection rates. These measures are clearly defined; the collection of these data has been systematized within hospitals, and the results are validated by an external agency.

Next Steps

The Commission members continue to discuss how best to use this information to advance best practice in the state. In addition, the Commission members understand that although these metrics will not be perfect in the absence of national consensus based standards, we will improve upon our own efforts to both collect more meaningful information and more importantly, improve care to patients by sharing best practices.

Interfacility Transfer

The Commission members agreed that the movement of patients between institutions constitutes one of the greatest risks to patient safety. This is primarily due to the lack of reliable and thorough communication regarding a patient's current and immediate care needs and treatment plan. A subcommittee of the Commission presented a revised version of the "I Pass the Baton" tool which was developed by the Department of Defense for promoting the safe transfer of patients between facilities. The Commission members agreed that this form contained most of the key data elements that need to be communicated at transfer and that it should be piloted. This work continues in Year 3.

Summary

Year 2 has been another successful year for the New Hampshire Health Care Quality Assurance Commission. The members continued to share best practices and improvement strategies as well as agree to adopt several evidence-based practices that have been proven to improve care and decrease adverse events.

The members of the Commission worked to refine the definitions and methodology to collect important information on the incidence of specific hospital-acquired infections. Although the rates for ventilator-associated pneumonias and central line blood stream infections are below last year's pilot collection project, the lack of standardized definitions and data collection methodology make the comparison between institutions less meaningful. However, given the decrease in rates of infection, the members agreed that their commitment to adopting best practices and focus on transparency could have contributed to this improvement.

The Commission will begin Year 3 in July with our priorities in place including the continued collection of VAP and CLBI rates, implementation of best practices to reduce these infections, a new focus on hand hygiene compliance, and the safe transfer of patients between institutions.

Stephanie Wolf-Rosenblum, MD, will assume the Chair of the Commission beginning June 1, 2007, and Polly Campion agreed to stay on as immediate past Chair. Ross Ramey will become Vice Chair and Jean Corvinus was elected Secretary.

The Commission voted to adopt this second year report of the New Hampshire Health Care Quality Assurance Commission.

If you have any questions, please call: Polly Campion, Commission Chair: 653-0410 or Rachel Rowe, Administrator 225-0900