Annual Report of the New Hampshire Health Care Quality Assurance Commission

June 1, 2008
HB 514, Chapter 157:2, Laws of 2005

Chapter 157:2, of the Laws of 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.*

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. Stephanie Wolf-Rosenblum, MD, Chief Medical Officer, Southern New Hampshire Medical Center, serves as Chairperson; Ross Ramey, MD, Monadnock Community Hospital, Vice-Chair; Jean Corvinus, Director, Performance Improvement, Secretary; Sue Majewski, Chief Operating Officer, Bedford Ambulatory Surgery Center, Executive Committee member representing ASCs; and Rachel Rowe, Associate Executive Director of the Foundation for Healthy Communities serves as administrator of the Commission. The officers serve two year terms.

During its third year, the Commission met five times on the following dates: August 3, 2007, October 12, 2007, December 7, 2007, March 14, 2008, and May 16, 2008.

Executive Summary

The Commission dedicated its work again this year to promoting initiatives and sharing best practices to enhance patient safety and decrease harm. In addition to ongoing statewide improvement initiatives, Commission members shared best practices, exchanged important information regarding their facilities' own stories of medical errors and prevention strategies, and continued to establish key networks and partnerships for ongoing individual and organizational improvement activities with an emphasis on infection prevention and enhanced communication practices. Details regarding the establishment and activities of the Commission can be found on a newly developed web link found at www.healthynh.com .

We continued our collection and reporting of statewide ventilator-associated pneumonia (VAP) and central line bloodstream infection (CLBI) rates. Variation in rates persists due to ongoing differences in data collection methodologies and lack of national consensus regarding case definition. However, some variation can be attributed to greater awareness of these infections and more resources being dedicated to case identification thus causing some hospitals to experience an increase in rates.

The Commission also added three new measures to the two Surgical Care Improvement Project measures already being collected. In addition to being available in this report, these rates are available by hospital on www.nhqualitycare.org.

The Ambulatory Surgery Centers established a pilot project to measure infection rates for all surgeries performed in their organizations. The pilot ends in June 2008 after which every ASC will collect this information to be reported in the aggregate on an ongoing basis. This is a major voluntary initiative and the first of its kind for the ambulatory surgery centers in the state.

The major accomplishment of the Commission this year was the establishment of a statewide campaign to promote 100% compliance with hand hygiene, which is often cited as the primary prevention strategy for infections. The campaign which is called "High Five" consists of 5 components: *Leadership Commitment, Availability/Convenience of Products, Hand Hygiene Training and Competency, Measurement, and Feedback* and *Accountability*. The program was developed in collaboration with the infection control practitioners in the State. We were successful in achieving 100% commitment by the hospitals and the participating freestanding ambulatory surgery centers. This makes New Hampshire unique in the country and addresses the major reason for healthcare associated infections.

The Commission also completed its work to increase the safety of patients who are transferred between facilities. Care providers recognize the importance of communication and documentation of thorough and accurate information upon transfer of patients. Several of the members pilot tested a tool called, "I Pass the Baton" to communicate critical information on transfer. After a number of important revisions, this tool is now available for use by all facilities in New Hampshire.

DETAILED ACTIVITIES OF THE COMMISSION

Infection Management and Prevention

Commission members agreed that although we are making progress, there continue to be too many infections in our state's health care facilities, and that this issue needed to be addressed by the Commission again this past 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.

A. VAP and CLBI Data Collection and Reporting

The Commission members agreed that the collection and reporting of Ventilator Associated Pneumonia (VAP) and Central Line Bloodstream Infection (CLBI) rates continue to be an important statewide goal. While our knowledge about these infections is improving (how to detect them, how to prevent them, etc.), confusion remains regarding the definitions and data collection methods which underlie the reliability of these infection 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.

The Commission is committed to transparency regarding quality of care and understands that despite the limitations of the reporting; we can use these data to identify some significant elements of best practice and engage in meaningful discussion regarding the prevention and management of these infections.

For the first time, we collected and reported these data for the full year

Results:

This is the Commission's third year of data collection, and the results reflect 12 months of data (January-December 2007). As with the past two years, there continued to be considerable work done to improve the uniformity of data collection. Although this enhanced uniformity does not ensure comparability, it increases the meaningfulness of the data within the given constraints of small numbers and case identification which is sometimes subjective.

All 26 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. The definitions and methodology are drawn from the Centers for Disease Control and the evidence gathered by the Institute for Healthcare Improvement for their *5 Million Lives Campaign.* 2007 represents our first full year of data collection and reporting.

Ventilator Associated Pneumonia (VAP) statewide rate:

- 2007 (12 month period): 96 pneumonias for a statewide rate of 4.75 VAPs per 1000 ventilator days
- 2006 (6 month period): 48 pneumonias for a statewide rate of 4.8 VAPs per 1000 ventilator days
- 2005 (3 month period): 41 pneumonias for a statewide rate of 8.64 VAPs per 1000 ventilator days

Key considerations when interpreting these data:

- These statewide rates include data from 26 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 the 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.
- These rates show no statistical difference from 2006 to 2007.

Central Line Bloodstream Infection (CLBI) statewide rate:

- 2007 (12 month period): 69 CLBIs for a statewide rate of 2.36 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
- 2005 (3 month period): 22 CLBIs for a statewide rate of 3.49 CLBIs per 1000 central line days

Key considerations when interpreting these data:

- These statewide rates include data from 26 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.
- These rates show no statistical difference from 2006 to 2007.

The Commission members reviewed the results and engaged in a lengthy discussion about the continued 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. However, they also recognize that there are best practices both within the state and on a national level from which to learn and opportunities to improve in all of their institutions. Catholic Medical Center and Exeter Hospital provided outstanding best practice presentations on the use of rapid response teams and the management of infections in the intensive care unit.

The increasing attention being placed on decreasing these infections and greater transparency of these infection rates has been an important 'call to action' and is anticipated to continue to contribute to lowering infection rates.

Next Steps

The Commission members will continue to discuss how to use this information to advance best practice in the state. While Commission members understand that although these metrics will not be perfect in the absence of national consensus based standards, work will continue to improve upon our own efforts; the goal is to both collect more meaningful information and more importantly, to improve patient care by sharing best practices. Beginning in January 2008, hospitals have extended their data collection and reporting for Central Line Bloodstream Infections to include all areas of the hospital, not just the intensive care units.

B. Additional Data Reporting

The Commission members increased from two to five, the number of measures they are reporting related to the care a patient receives during surgery. Measures are focused in 2 broad categories: to prevent infection and to prevent venous thrombosis which can lead to prolonged hospitalization, added complications and even cardiovascular complications such as pulmonary embolism and stroke.

Results:

Antibiotic received within 1 hour of surgery:

4440 patients received an antibiotic within 1 hour of surgery of the 4804 patients who underwent the specified surgery or, **93%** of patients received an antibiotic within 1 hour of surgery for the specified procedures. This compares to a rate of 76% in Year 1 and 85% in Year 2.

- This statewide rate includes data from all 26 hospitals;
- The national average for this measure is 88% compared to the NH average of 93%.

Antibiotic discontinued within 24 hours after surgery:
4198 patients had their antibiotics discontinued within 24 hours of surgery of the 4628 patients who underwent the specified surgery or, **91%** of patients had their antibiotic discontinued within 24 hours after surgery. This compares to a rate of 74% for Year 1 and 83% for Year 2.

- This statewide rate includes data from all 26 hospitals;
- The national average for this measure is 81% compared to the NH average of 91%.

The meaningful increase in rates of compliance for these two evidence-based processes of care measures shows that hospitals are working hard to standardize 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.

Prophylactic Antibiotic Selection:
4711 patients had the appropriate prophylactic antibiotic ordered for their designated surgery of the 4881 patients who underwent one of the specified surgeries or, **97%** of patients undergoing specific surgeries received the appropriate antibiotic before the procedure to prevent infection.

- This statewide rate includes data from all 26 hospitals;
- The national average for this measure is 94% compared to the NH average of 97%.

Recommended venous thrombosis prophylaxis ordered:
3878 patients had the recommended prophylaxis ordered to prevent venous thrombosis following specific surgeries of the 4337 patients who were eligible to receive the prophylaxis or; **89%** of patients undergoing specific surgeries had an order for the recommended venous thrombosis prophylaxis.

- This statewide rate includes data from 25 hospitals;
- The national average for this measure is 85% compared to the NH average of 89%.

Recommended venous thrombosis prophylaxis received:
3786 patients received the recommended venous thrombosis prophylaxis following specific surgeries of the 4334 patients who were undergoing specific surgeries or, **87%** of patients received the recommended venous thrombosis prophylaxis for indicated surgeries.

- This statewide rate includes data from 25 hospitals;
- The national average for this measure is 80% compared to the NH average of 87%.

New Hampshire rates are higher for each of these 5 measures of quality and patient safety than the national average and continue to improve over time.

C. New Data Collection Initiative

Dr. Jose Montero, Director of Public Health and State Epidemiologist, DHHS, invited the Commission to participate in the development of a new data collection initiative related to RSA 151:33 which requires that hospitals identify, track, and report infections to include: Central Line Bloodstream Infection, Ventilator-Associated Pneumonia, and Surgical Site Infections.

Nine hospitals agreed to participate in a pilot project using CDC's internet based National Health Safety Network (NHSN). The pilot will run from February 1, 2008-July 31, 2008. The purpose of this pilot is to examine internal systems for collecting infection information and to assess suitability and feasibility of the NHSN for reporting purposes. The group agreed to seed this project by collecting information on Central Line Bloodstream Infections and on surgical site deep and organ space infections for first time knee replacements requiring readmission. This is an unfunded mandate so the extent to which the State will be able to undertake analysis of reported data is uncertain. The plan is for every hospital to begin this same data collection process once it is determined the data collection and analysis is feasible and meaningful.

D. Infection Prevention: Hand Hygiene

One of the primary ways to decrease infections is by using evidence based practices for cleaning hands before and after contact with patients and with their environment. The Commission conducted a statewide pilot in November and December of 2007 to learn how frequently providers are complying with appropriate hand hygiene practices. Every hospital and Ambulatory Surgery Center used trained observers to document how often practitioners cleaned their hands before and after patient contact. During that time period there were over 4000 observed opportunities for doctors, nurses, or other personnel to wash their hands. The rate of compliance was 69%. The Commission agreed that we needed a major statewide strategy to improve this rate.

Infection Prevention Strategy

The major accomplishment of the Commission this year was the establishment of a statewide campaign to promote 100% compliance with hand hygiene, which is often cited as the primary prevention strategy for infections. The campaign which is called "High Five" consists of 5 components:

- *Leadership Commitment*
  The highest level of organization leaders (i.e. CEO, Board of Trustees) commits the organization and its resources to the campaign and its goal of 100% compliance with hand hygiene.
- *Availability/Convenience of Products*
  Hand hygiene supplies and products must be made as accessible as possible. These include a waterless hand sanitizer, hand washing sinks with appropriate soaps and paper towels.

- *Hand Hygiene Training & Competency*
  All new and current patient care staff members and physicians will be trained in hand hygiene and are required to demonstrate competency.
- *Measurement*
  Observations of hand hygiene compliance will be done at the point-of-care using a uniform measurement process. Observations will be done by trained observers.
- *Feedback & Accountability*
  Organizational leaders know what their overall institutional hand hygiene compliance rate is, and areas in need of improvement.

A subcommittee composed of Commission members and Infection Control Professionals worked for 9 months on this initiative. Dr. Kathy Kirkland, Dartmouth Hitchcock Medical Center, donated the training video she developed on proper hand hygiene for others to use in their institutions. She also served as a spokesperson at a press conference held on April 29, 2008 announcing the Campaign as well as agreeing to several radio and newspaper interviews. All materials for the "High Five" campaign can be found on the Foundation for Healthy Communities website, www.healthynh.com.

New Hampshire is presently the only state in the country to have every hospital and participating ambulatory surgery center committed publicly and at the leadership level to establishing a goal of 100% compliance with hand hygiene.

Interfacility Transfer

Last year 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. During this past year, several Commission members pilot tested the tool. After a number of important revisions, that tool is now available for use by all facilities.

Summary

Year 3 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. All public documents as well as educational materials related to the Commission and its improvement activities can be found as *www.healthynh.com* .

The members of the Commission agreed to collect and report their rates of Ventilator-Associated Pneumonia and Central Line Bloodstream Infection rates on an ongoing basis and learn from identified high performing hospitals. We will continue to monitor the national consensus panels for greater clarity on definitions and data collection methodology and incorporate changes as the scientific evidence suggests. The rates of infection for these two conditions are stable and lower than the nationally available benchmarks. Our goal is to continually work to decrease these rates of infection by identifying and sharing best practices and promoting statewide transparency of this information.

The Commission added 3 additional measures to the 2 already being collected which monitor the care of surgical patients. All 5 measures are well above the national average on a scale where 100% is best practice.

The major accomplishment of the Commission in year 3 was the establishment of a statewide campaign to promote 100% compliance with hand hygiene, which is often cited as the primary prevention strategy for infections. New Hampshire is the only state in the country to have every hospital and participating ambulatory surgery center committed publicly and at the leadership level to achieving this goal.

In addition to these accomplishments, the efforts of the Commission around these initiatives has resulted in enhanced communication practices throughout the State, including better dialogue among organizations, among groups of practitioners, among physicians and nurses, among clinicians and their administrative partners and among members of the Commission. This provides an excellent foundation for continued improvement work for the coming year.

The Commission will begin Year 4 in July 2008 with our priorities of continued collection of VAP and CLBI rates, implementation of best practices to reduce these infections, new data collection on surgical site infections, a major focus on hand hygiene compliance, and a new focus on data collection and the sharing of best practices for reducing infections in ambulatory surgery centers.

Stephanie Wolf-Rosenblum, MD, will continue as the Chair of the Commission.

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

For questions, please call: Stephanie Wolf-Rosenblum, Commission Chair: 577-3044 or Rachel Rowe, Administrator 225-0900.