

Statement of

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before

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National and State Efforts to Reduce Healthcare-Associated
Infections

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New York State Approach to Healthcare-Associated Infection Surveillance, Prevention and Public Reporting

Chairman Obey, Ranking Member Tiahrt, and distinguished Subcommittee members:

Thank you for inviting me here today to discuss New York State's challenges and accomplishments in addressing healthcare-associated infections (HAIs). As you are aware, healthcare-associated infections are an all-too common cause of preventable morbidity and mortality. They are costly for payers, the hospital system, and patients. While New York is indeed a leader in these efforts and great strides have been made, there is still much to be done.

Let me begin with a little background. In July 2005, the New York Legislature passed legislation that the Governor signed into law requiring hospitals to report select hospital-acquired infections to the New York State Department of Health (NYSDOH or the Department). The explicit wording of the legislation with subsequent amendments has provided a sound basis for New York's activities.¹ The key elements of the legislation include the provision of a "pilot phase" to develop the reporting system; training hospitals on its use; standardized definitions, methods of surveillance and reporting; audit and validation of the hospitals' infection data; consultation with technical advisers; modification of the system to ensure that the hospital-specific infection rates, when released, would be accurate and reliable; and importantly, grants to hospitals for infection prevention and control.

Selection of the National Healthcare Safety Network (NHSN) for HAI Reporting

Long before this legislation was passed, NYSDOH had explored using existing data sources to monitor hospital or healthcare-associated infection rates. This option would have been inexpensive, with data readily available but, unfortunately, for HAIs, the data were to be unreliable. Recent studies have found that only 8 percent to 20 percent of infections identified through administrative discharge databases actually meet the criteria for being healthcare-associated.^{2,3}

This was one of the many reasons the Department chose to use the CDC's National Healthcare Safety Network (NHSN) for reporting. Other reasons include:

- The NHSN and its predecessor, the National Nosocomial Infection Surveillance Survey (NNIS), are recognized and respected worldwide.
- Most facilities use the CDC criteria for surveillance definitions.
- Approximately 10 percent of New York hospitals were already using the system, and the rest would be granted access.
- Standard definitions, surveillance and risk adjustment methods had been established and could be used to measure compliance and data integrity.
- The information, once entered, is available and actionable: it can be immediately used by the facility to generate reports, compare to national rates and be used on the hospital units for patient safety and quality improvement efforts.

- CDC and New York State have immediate access to the data and can perform ongoing monitoring for accuracy.
- Health care facilities in networks that cross state jurisdictions could use the system to share data; collaborate on quality improvement, prevention and patient safety initiatives; and evaluate effectiveness.
- A separate system would not have to be established, and the costs associated with development and maintenance would be averted.
- NHSN can be used for an array of infection surveillance and quality improvement activities and is not limited to those mandated by NYSDOH.

New York was the first state to use the NHSN for reporting. Now, at least 19 states have committed to using the network for mandatory reporting, and it has become the national standard. There are more than 2,100 healthcare facilities in all 50 states using the system on a voluntary or mandatory basis. Due to this rapid growth, the NHSN system can be extremely slow, and additional resources are critically needed to enhance capacity and performance.

Ensuring Data Accuracy and Validity

To ensure the completeness and accuracy of self-reported hospital data, the New York State legislation called for the development and implementation of an audit process. Six experienced infection preventionists were hired and dedicated to monitor compliance, audit the hospitals, evaluate risk factors for infection, and survey prevention activities. All reporting facilities have had at least one on-site audit, and 90 percent of facilities have had two. These audits included surveillance and prevention practice surveys and medical record reviews.

Accurate data are essential to identify and monitor target areas in need of improvement and evaluate the effectiveness of interventions. States have the authority and responsibility to ensure compliance with reporting requirements, and New York took regulatory action to ensure complete, timely and accurate reporting from a few non-compliant hospitals. Without these efforts, we know the quality of the data would be compromised and not be uniform across hospitals.

Commitment to HAI Prevention

The Department is committed to not merely collecting, analyzing and reporting infection rates, but also to actively provide support and resources for HAI prevention initiatives. New York State has created a close working relationship with leaders in the HAI prevention community: healthcare associations, infection preventionists, hospital epidemiologists, clinicians and consumers. Many groups, including the Greater New York Hospital Association, United Hospital Fund, Healthcare Association of New York State, Society for Healthcare Epidemiology of America, and Association for Professionals in Infection Control and Epidemiology, have been actively involved and supportive of the implementation of the legislation. They provided critical evaluation of the Department's efforts and fostered patient safety and quality improvement efforts.

Since 2007, nine HAI prevention projects have been funded. One of the criteria for funding is the use of the NHSN to measure infection outcomes. Thus, the system is used as a monitoring tool for facility participation, evaluation and quality improvement. The following infection prevention initiatives are in progress:

- To reduce the incidence of central line-associated bloodstream infections throughout the hospital (i.e., all units including those outside the intensive care unit setting),
- To reduce the incidence of central line infections in regional perinatal centers across the state, with expansion to all neonatal intensive care units,
- To determine the prevalence and incidence of multidrug-resistant organisms in public hospital intensive care units,
- To reduce the incidence of ventilator-associated pneumonia in intensive care units,
- To reduce the incidence of *Clostridium difficile* infections throughout the hospital and expanding to include nursing homes,
- To describe the prevalence, incidence and transmission patterns of methicillin-resistant *Staphylococcus aureus* (MRSA) in select hospitals,
- To evaluate the use of chlorhexadine bathing on the incidence of bloodstream infections in intensive care units, and
- To provide a five-day training program for new infection preventionists across the state.

New York State has already demonstrated a measurable reduction in HAIs through some of its early projects: central-line associated bloodstream infections were reduced by 75 percent, ventilator-associated pneumonias by 50 percent, and very preliminary data have shown a 15 percent reduction in *C. difficile* infections. These efforts would not have been successful without the support from hospital executive staff members and the commitment and resolve of the involved healthcare delivery team.

Importance of National Leadership

Along with CDC, the NYSDOH is actively involved in working with other states as they embark on implementation of legislation. The federal government can and should take a leadership role by providing a national standard and the foundation upon which states can build, rather than each state creating its own separate system and reporting process. The following elements should be considered for a meaningful, reliable and useful reporting system:

1. The selected mechanism and system for reporting must use standard definitions, methods of surveillance and risk adjustment for differences in the population served if the information is to be used to compare one facility to another.
2. States should have the ability to adapt the NHSN to their needs and establish their own reporting requirements based on local infection risks and priorities.
3. Data analyses must be conducted regularly in order to be actionable and enhance patient safety.
4. The system needs to be designed and maintained to provide flexibility and adaptability in addressing new and emerging infection events.

5. Existing infection indicators must be refined.
6. The system must be responsive to the needs of the users – payers, states and healthcare facilities.
7. The federal government should provide the reporting framework to eliminate redundancy and promote economy of scale.
8. The various agencies in the Department of Health and Human Services should ensure that information technology systems are interoperable and should eliminate to the extent possible redundant reporting requirements by healthcare facilities and the states.
9. Information technology tools need to be developed and deployed to enhance the electronic capture of critical data and eliminate the current need for labor intensive data capture, entry and analysis.
10. Ongoing oversight and evaluation of these efforts are imperative to ensure resources are used judiciously and without negative consequences on healthcare.

Future Directions

The NYSDOH HAI Reporting Program was established in 2006. Our achievements to date could not have been realized without the availability of the NHSN, along with support from the CDC, and the significant financial, technical and administrative support and resources from the Governor's office, executive staff and the Legislature. Within a very short time, demonstrable reductions in infection rates have been evidenced. This success was achieved in part by the commitment of resources at every level – federal, state and our hospitals.

In spite of these early successes, there is so much more that needs to be done:

- The infection rates that are monitored and evaluated and the prevention efforts are just the underpinnings of the greater endeavor.
- The NYSDOH continues to receive approximately 1,000 outbreak reports a year from regulated healthcare settings, but many outbreaks go undetected and unreported.
- In addition, there is no systematic evaluation and monitoring of non-regulated outpatient settings where the majority of invasive procedures are now being performed.
- The prevention projects are the first step forward. Resources and dedication need to be maintained and expanded to include the full spectrum of healthcare settings and infection events.
- Other public health infectious disease surveillance systems, which can support HAI reporting, need further development. For example, electronic laboratory reporting (ELR) of infections to public health is easily achievable with current technology. Yet, a national 2007 survey showed that only 14 jurisdictions have implemented ELR that is at least 50 percent operational and that only 28 out of 56 public health jurisdictions responded that their public health laboratory could report via ELR.⁴

Looking ahead, activities need to become proactive and not reactive by focusing on:

- Education and training of personnel in all healthcare delivery settings prior to providing patient care, handling equipment or performing housekeeping or engineering services.
- Medical device and medication manufacturers need to give priority to infection prevention during research, design and development of their products.
- Infection prevention needs to be integrated into healthcare delivery and not merely considered a tangential process.

I hope that the information shared with you today is helpful in better understanding the role of public health agencies in addressing Healthcare-Associated Infections. As noted earlier, significant progress has been made, but there is a vast amount of work yet to be accomplished. The New York State Department of Health looks forward to partnering with you, other national organizations and states to build an effective surveillance, reporting and prevention system to address this critical issue.

Thank you.

References

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