

08-ID-07

Committee: Infectious Diseases

Title: Support of and Enhancement of the National Healthcare Safety Network (NHSN)

Statement of the Problem:

Methicillin-resistant *Staphylococcus aureus* (MRSA) and mandatory public reporting of selected healthcare associated infections are topics that have received intensive media coverage and attention by Congress and state legislatures. Use of the National Healthcare Safety Network (NHSN) for mandatory public reporting of such infections and other adverse events has been very helpful for States that have chosen to use it, especially in those states where reporting requirements to state agencies have been imposed with little or no money appropriated for the purpose.

The standardized methodology, protocols and definitions are invaluable; it would be prohibitively labor intensive and redundant for state health departments to develop these. Using NHSN definitions, software and methodology allows facilities to compare themselves to their own rates over time as well as national rate data. Many more states are considering or planning to use NHSN to comply with mandatory reporting of outcome and process measures related to healthcare acquired infections. NHSN can also be used as a way for hospitals to report hospitalized cases of infections such as MRSA.

Constraints to the wider adoption of NHSN modules by hospitals, whether for voluntary performance measurement or mandated state reporting, include limited numbers of infection control personnel, training requirements, time required for data capture and data keying. Adoption of electronic medical record systems and provider order entry systems by hospitals offer the possibility of cost savings through automated data capture for the purposes of on-site performance measurement and data export to NHSN. Such systems continue to be developed, but are not yet widely adopted, and often do not follow a common architecture that allows for interoperability and data sharing across institutions.

There are tremendous opportunities to take advantage of electronic data exchange to support current and future modules within NHSN. Clinical document architecture specifications and implementation guidance for events and process measures such as central line insertion practices will avoid duplicate data entry and collisions with vendor developed systems. An example of one of the numerous applications and opportunities is importing existing Surgical Care Improvement Project (SCIP) data from the Centers for Medicare and Medicaid Services (CMS) at a patient level and coupling of surgical site infection (SSI) outcome and process measures to assist in the prevention of SSI. Other opportunities for electronic data exchange will allow collection of data in a much smarter, effective manner. This would obviate duplicate data entry and allow infection control professionals to spend time preventing infections and evaluating the impact of prevention measures instead of just counting infections and entering data. CSTE and States place a high priority on the commitment of Federal resources for NHSN system development in conjunction with State resources that are committed to use of NHSN as the infrastructure for mandatory reporting of healthcare-associated infections.

Statement of the desired action(s) to be taken:

- (1) CDC should allocate sufficient resources to NHSN to achieve the following:
 - a. CDC should implement existing standards to allow for electronic data exchange from healthcare information systems and clinical microbiology laboratories to NHSN. These standards should be closely coordinated with the electronic laboratory reporting standards being created. These include microbiology data,

- pharmacy data and admission, and discharge and transfer (ADT) messages to populate data fields within NHSN.
 - b. CDC should work with public and private sector partners to develop standards if they do not yet exist.
 - c. CDC and partners should develop clinical document architecture specifications and implementation guidance for healthcare-associated events, and for process measures such as central line insertion practices.
 - d. CDC and partners, including CSTE, CMS, the Food and Drug Administration (FDA) and the Agency for Healthcare Research and Quality (AHRQ) should work to implement a change management process to assist in prioritizing NHSN change requests to meet State and federal partner requirements and to operationalize those requests in an effective manner.
 - e. CDC should develop and provide online training and competency modules for both hospitals and public health staff.
 - f. CDC should support “train the trainer” sessions for key staff within States.
- (2) CSTE, state and local health departments should work with CDC and organizations active in hospital epidemiology and infection control in a manner analogous to the National Notifiable Disease Surveillance System process to further develop case definitions for healthcare-associated infections and processes for uniformity.
- (3) CDC and CSTE should work on the joint development of methods for data validation. States and hospitals would make primary use of those methods to ensure data quality.
- (4) CDC, CSTE and other organizations should support development of health care organizations' capability to transfer selected data through well-defined messaging systems from electronic health record systems, including laboratory information systems, to both notifiable disease surveillance systems and NHSN.
- (5) CDC, CSTE and other organizations should assess the possible utility of NHSN as an option for transmittal of electronic case reports of hospitalized cases of all notifiable diseases between participating hospitals and the appropriate local and state public health agencies. This would require NHSN to be able to generate and send standard public health notification messages to public health surveillance applications.

Public Health Impact:

Adoption of these recommendations will:

- (1) Strengthen surveillance of hospital acquired infections and multi-drug resistant organisms and enable a tighter coupling between surveillance and prevention activities resulting in a reduction of hospital acquired infections and multi-drug resistant organisms.
- (2) Enable States to define and fulfill their state-specific roles and responsibilities in infection control and healthcare-acquired infections. These roles and responsibilities may be broader than the pure collection and reporting of data and may include responding to high rates of infection. This is achieved by stabilizing the infrastructure for collection and reporting of data.
- (3) Maximize the return on investment at a Federal and State level. This will allow States to use available resources to further develop their roles and responsibilities as public health agencies and to use and respond to collected data.
- (4) Ensure standardization of definitions and data collection. This will allow hospitals to compare their own rates over time as well as to national rate data, thereby encouraging them to use these comparisons to provide an impetus for further prevention activities.

(5) Support the capacity for evaluating the impact of interventions and legislation.

(6) Provide greater population wide coverage and more comprehensive surveillance data for public health analysis and evaluation.

Coordination:

Agencies for Response:

(1) Agencies for Response:

Julie Gerberding, MD, MPH
Director
Centers for Disease Control and Prevention
1600 Clifton Road NE M/S D14
Atlanta, GA 30333
404-639-7000
jyg2@cdc.gov

Agencies for Information:

(1) Scott J. Becker, MS
Executive Director
Association of Public Health Laboratories
8515 Georgia Avenue
Suite 700
Silver Spring, MD 20910
Telephone: 240-485-2745 ext 201
Fax: 240-485-2700: sbecker@aphl.org

(2) Paul E. Jarris, MD, MBA
Executive Director
Association of State and Territorial Health Officials
2231 Crystal Drive Suite 450
Arlington, VA 22202
Phone: (202) 371-9090
Fax: (571) 527-3189
pjarris@astho.org

(3) Pat Libbey
Executive Director
National Association of City and County Health Officials
1100 17th Street, NW, Second Floor
Washington, DC 20036
Ph: (202) 783-5550
Fax: (202) 783-1583

(4) American Health Information Community (AHIC)
US Department of Health and Human Services
200 Independence Avenue, S.W.
Washington, D.C. 20201

(5) Andrew C. von Eschenbach, M.D.
Commissioner
Food and Drug Administration
5600 Fishers Land
Room 14-71
Rockville, MD 20857
(301) 827-2410

6) Kerry M. Weems
Acting Director
Centers for Medicare and Medicaid)
7500 Security Boulevard
Baltimore, MD 21244
202-690-6726
Kerry.Weems@CMS.hhs.gov

7) Carolyn Clancy, M.D.
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850
301-427-1364
Carolyn.Clancy@ahrq.hhs.gov

8) Robert M. Kolodner, MD
National Coordinator
Office of the National Coordinator for Health Information Technology
Department of Health and Human Services
200 Independence Avenue, SW
Washington, DC 20201
202-690-7151
robert.kolodner@hhs.gov

Submitting Author:

Marion A. Kainer MD, MPH
Medical Epidemiologist
Tennessee Department of Health
425 5th Avenue North
Cordell Hull Building
Nashville, TN 37243
615 741 7247
marion.kainer@state.tn.us

Co-Authors:

Gail R. Hansen
State Epidemiologist

Kansas Department of Health and Environment
1000 SW Jackson, Suite 300
Topeka, KS 66612
785-296-1127
ghansen@kdhe.state.ks.us

Richard S. Hopkins, MD, MSPH
Medical Epidemiologist
Acute Disease Epidemiology Section
Bureau of Epidemiology
Florida Department of Health
4052 Bald Cypress Way, Bin # A-12, Tallahassee, FL 32399
850-245-4412
Cell: 850-251-5857
Fax: 850-922-9299
Richard_Hopkins@doh.state.fl.us

Kirk Smith, DVM, PhD
Supervisor, Foodborne, Vectorborne, and Zoonotic Disease Unit
Acute Disease Investigation and Control Section
Minnesota Department of Health
PO Box 64975
St. Paul, MN 55164-0975
651-201-5240
Fax: 651-201-5743
kirk.smith@state.mn.us

(Street address for deliveries)
625 Robert Street North
St. Paul, MN 55155-2538