

# Prevention Status Report | 2013

## Healthcare-Associated Infections

## Massachusetts

The Prevention Status Reports (PSRs) highlight—for all 50 states and the District of Columbia—the status of public health policies and practices designed to prevent or reduce important health problems. This report focuses on healthcare-associated infections (HAIs) and briefly describes why they are a public health problem, both for Massachusetts and the United States as a whole. It also provides an overview of solutions (i.e., evidence-based or expert-recommended policy and practice options) for preventing or reducing HAIs and reports the status of these solutions in Massachusetts.

### PSR Framework

The PSRs follow a simple framework:

- Describe the public health **problem** using public health data
- Identify potential **solutions** to the problem drawn from research and expert recommendations
- Report the **status** of those solutions for each state and the District of Columbia

### Criteria for Selection of Policies and Practices

The policies and practices included in the PSRs were selected because they

- Can be monitored using state-level data that are readily available for most states and the District of Columbia
- Meet one or more of the following criteria:
  - Supported by systematic review(s) of scientific evidence of effectiveness (e.g., *The Guide to Community Preventive Services*)
  - Explicitly cited in a national strategy or national action plan (e.g., *Healthy People 2020*)
  - Recommended by a recognized expert body, panel, organization, study, or report with an evidence-based focus (e.g., Institute of Medicine)

### Ratings

The PSRs use a simple, three-level rating scale to provide a practical assessment of the status of policies and practices in each state and the District of Columbia. It is important to note that the ratings reflect the *status of policies and practices* and do not reflect the *status of efforts* by state health departments, other state agencies, or other organizations to establish or strengthen those policies and practices. Strategies for improving public health vary by individual state needs, resources, and public health priorities.

### More Information

For more information about public health activities in Massachusetts, visit the Massachusetts Department of Public Health website (<http://www.mass.gov/eohhs/gov/departments/dph/>). For additional resources and to view reports for other health topics, visit the CDC website (<http://www.cdc.gov/stltpublichealth/psr/>).

### Suggested Citation

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[www.cdc.gov/stltpublichealth/psr](http://www.cdc.gov/stltpublichealth/psr)

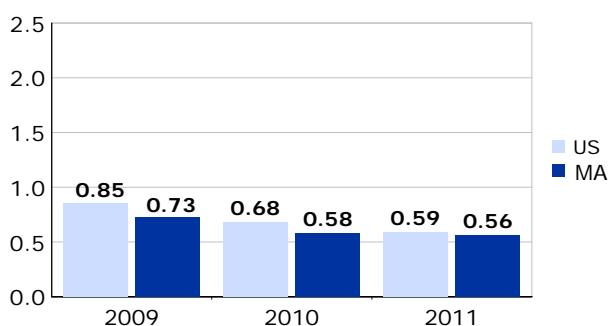


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### Public Health Problem

-  HAIs occur in all settings where patients receive medical care, including hospital and nonhospital settings, and are associated with increased illness and death. CDC estimates that each year in the United States, 1 in 20 hospital patients gets an HAI (1).
-  More than one million HAIs occur across all US healthcare settings combined. For example, *Clostridium difficile* infections kill 14,000 people in the United States each year (2).
-  HAIs result in an estimated \$30 billion in excess healthcare costs nationally each year (3).

Central line-associated bloodstream infection—standardized infection ratio



Source: National and State Healthcare-Associated Infections Standardized Infection Ratio Report (4)

### What is a standardized infection ratio (SIR)?

The SIR is a summary measure used to track HAIs over time. It adjusts for the fact that each healthcare facility treats different types of patients. The SIR compares the number of infections reported to the National Healthcare Safety Network in 2011 to the number of infections that would be predicted based on national, historical baseline data:

$$\text{SIR} = \frac{\text{Observed \# of HAIs}}{\text{Predicted \# of HAIs}}$$

### Policy and Practice Solutions

CDC recommends strategies for surveillance, prevention, and control of HAIs and antimicrobial resistance wherever health care is provided, including hospitals as well as ambulatory and long-term care facilities. CDC works closely with states and the District of Columbia on strategies to implement these recommendations. This collaborative effort among CDC, state and district health departments, and facilities will improve healthcare quality across the nation, working toward meeting the standards and targets set forth in the Department of Health and Human Service's *National Action Plan to Prevent Healthcare-Associated Infections* (5).

This report focuses on state health departments leading and participating in statewide HAI prevention efforts, a practice that helps improve existing prevention strategies by investing in both new and ongoing HAI prevention efforts and prioritizing HAIs as a serious public health concern. State health departments are encouraged to also engage in other practices that will provide actionable HAI data and lead to expanded HAI prevention. These include 1) state health departments validating data sent to CDC's National Healthcare Safety Network (NHSN), ideally including data on central line-associated bloodstream infections (CLABSIs); catheter-associated urinary tract infections (CAUTIs); and surgical site infections; and 2) working with CDC and other partners using NHSN data to target facilities and units most in need of consultation to prevent HAIs and antimicrobial resistance. For information about why certain HAI-related indicators were selected, and for links to additional data and resources, visit the CDC website (<http://www.cdc.gov/stltpublichealth/psr/hai/>).

### Status of Policy and Practice Solutions in Massachusetts

#### State health department participation in statewide HAI prevention efforts

In 2013, Massachusetts led or participated in broad prevention collaboratives to prevent multiple HAIs in acute care facilities, including CLABSIs, CAUTIs, and *C. difficile*, as well as HAIs in long-term care facilities (6).

Implementing HAI prevention strategies and tracking the impact of those strategies have led to improvements in clinical practice and medical procedures, development of evidence-based infection control guidance, and prevention successes (7).



Rating	State health department
Green	Led or participated in a broad prevention collaborative addressing at least one HAI
Yellow	N/A
Red	Did not participate in a broad prevention collaborative addressing HAIs

#### Simplified Rating System

A more detailed explanation of the rating system for HAIs is available at <http://www.cdc.gov/stltpublichealth/psr/hai/>.

##### Green

The policy or practice is established in accordance with supporting evidence and/or expert recommendations.

##### Yellow

The policy or practice is established in partial accordance with supporting evidence and/or expert recommendations.

##### Red

The policy or practice is either absent or not established in accordance with supporting evidence and/or expert recommendations.

### Indicator Definitions

**Participation in statewide HAI prevention efforts:** State health department participation in or leadership of broad prevention collaboratives addressing one or more of the following types of HAIs: central line-associated bloodstream infections, surgical site infections, catheter-associated urinary tract infections, ventilator-associated pneumonia, methicillin-resistant *Staphylococcus aureus*, and *C. difficile*.

### References

1. CDC. Healthcare-Associated Infections: The Burden [website]. Updated Dec 13, 2010.
2. CDC. Vital Signs—Making Health Care Safer: Stopping *C. difficile* Infections. Atlanta, GA: US Department of Health and Human Services; 2012.
3. Scott RD 2nd. The Direct Medical Costs of Healthcare-Associated Infections in U.S. Hospitals and the Benefits of Prevention. Atlanta, GA: US Department of Health and Human Services; 2009.
4. CDC. National and State Healthcare-Associated Infections Standardized Infection Ratio Report. January–December 2011. Atlanta, GA: US Department of Health and Human Services; 2013.
5. US Department of Health and Human Services. National Action Plan to Prevent Healthcare-Associated Infections: Roadmap to Elimination [website]. Updated Apr 2012.
6. CDC. State-Based HAI Prevention [website]. Updated May 10, 2013.
7. CDC. Preventing Healthcare-Associated Infections [website]. Updated Apr 17, 2012.