Improving Patient Safety and Quality of Care: Preventing Healthcare-Associated Infections

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Rockland, Maine
Friday, June 11, 2010

Office of Healthcare Quality (OHQ)

Purpose
- Provide a focal point for coordinating healthcare quality activities across HHS

Priority Areas
- Public Health Quality
- Medication Adherence
- Healthcare-Associated Infections
- Employee Wellness

1. Public Health Quality: Purposes
    to advance the production, research, and application of knowledge on public health quality
    Promote integration and connectivity of public health quality to all sectors of the health system
    Create methodologies to close gaps between health care and public health quality
Identification of Priority areas of greatest need for Public Health Quality Improvement
    Serves to diminish fragmentation in the system
    Promotes and builds system synergy in targeted areas
    Increases likelihood of achieving national goals
    Consistent with IOM recommendations

    2. Poor medication adherence often leads to:
    drug resistance (e.g., antibiotic therapy)
    disease complications
    lower quality of life
    hospital readmissions
    premature death

Patient-related causes include:
    medication costs
    poor health literacy
    patient's lack of belief in the benefit of treatment
    poor provider-patient relationship
    medication side effects

    2. Medication Adherence: Only 50% of patients take their medication as prescribed.[1] (according to WHO)

Huge cost of nonadherence
    125,000 deaths per year in the U.S.[2] (according to American Journal of Health Systems Pharmacy)
    Over $100 billion in both direct and indirect costs.[3] (according to NEJM)
OPHS Response: Provide a coordinated departmental response to:
    AHRQ's media campaign with Ad Council
    Stakeholder groups:
        Approximately 90 stakeholders
        Labor groups, federal agencies, medical and nursing associations, and pharmaceutical companies
    Convene a steering committee of senior agency leaders at AHRQ, HRSA, CMS, FDA, CDC, IHS, NIH, and OPHS.

2009 HHS Action Plan in Response to GAO

GAO

Testimony
Before the Committee on Oversight and Government Reform, House of Representatives

HEALTH-CARE-ASSOCIATED INFECT
IN HOSPITALS

Leadership Needed fro
HHS to Prioritize
Prevention Practices a
Improve Data on These
Infections

News Release

FOR IMMEDIATE RELEASE
Tuesday, January 6, 2009

Contact: OPHS Press Offic
(202) 205-014

HHS Issues Action Plan to Prevent Health Care-Associated Infections

The U.S. Department of Health and Human Services (HHS) unveiled a plan that establishes a set of five-year national prevention targets to reduce and possibly eliminate health care-associated infections (HAIs).

Health care-associated infections are infections that patients acquire while undergoing medical treatment or surgical procedures. These infections are largely preventable.

The Action Plan to Prevent Health Care-Associated Infections lists a number of areas in which HAIs can be prevented, such as surgical site infections. The plan also outlines cross-agency efforts to save lives and reduce health care costs through expanded HAI prevention efforts.

"This plan will serve as our roadmap on how the department addresses this important public health and patient safety issue," HHS Secretary Mike Leavitt said. "This collaborative interagency plan will help the nation build a safer, more affordable health care system."

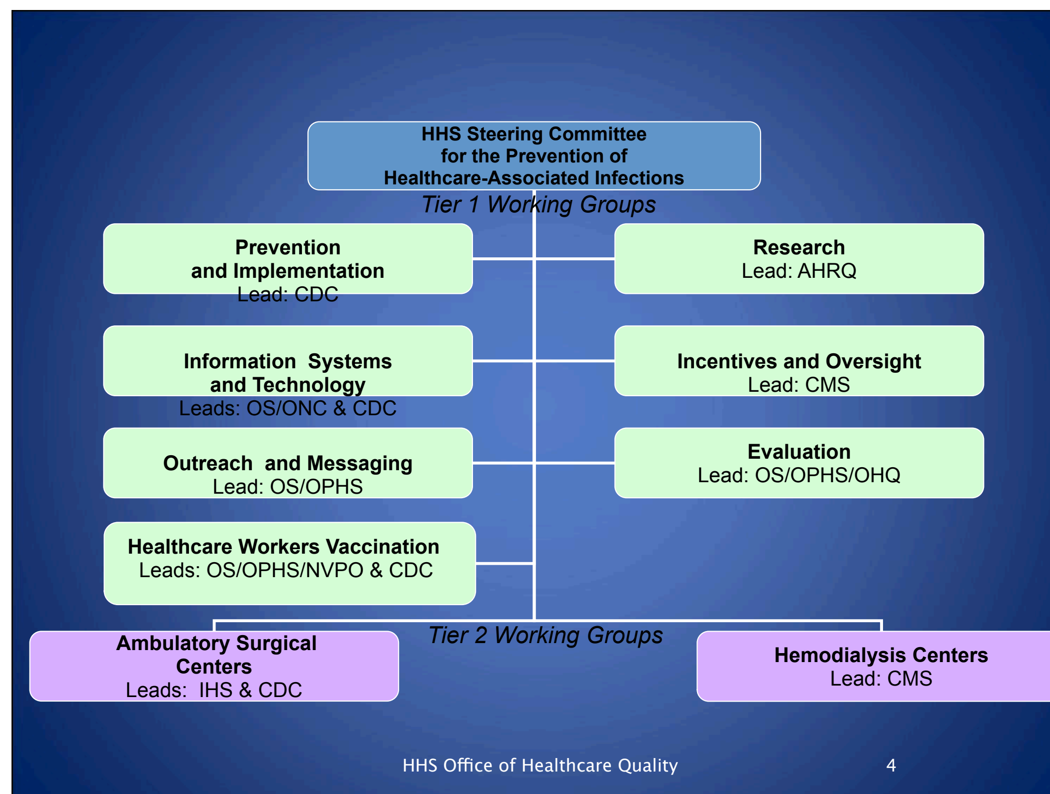
The plan establishes national goals and outlines key actions for enhancing and coordinating HHS-supported efforts These include development of national benchmarks prioritized recommended clinical practices, a coordinated research agenda, an integrated information systems strategy and a national messaging plan.

The plan also identifies opportunities for collaboration with national, state, tribal and local organizations.

HHS intends to update the plan in response to public input and new recommendations for infection prevention. Th plan, and instructions for submitting comments on the plan, can be found online at http://www.hhs.gov/ophs.

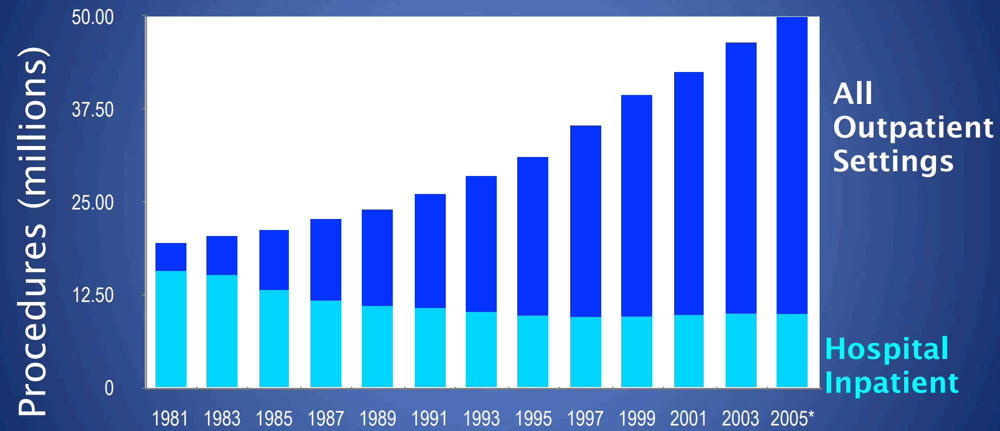
At the national level, Congress has been very interested in HAIs and commissioned a GAO investigation to ascertain what HHS as a department is doing and can do to prevent HAIs. The GAO findings focused on better data, especially across agencies and in prioritizing prevention practices.

The resulting HHS Action Plan to Prevent HAIs has provided a good forum for interagency efforts to improve data and prevention implementation.

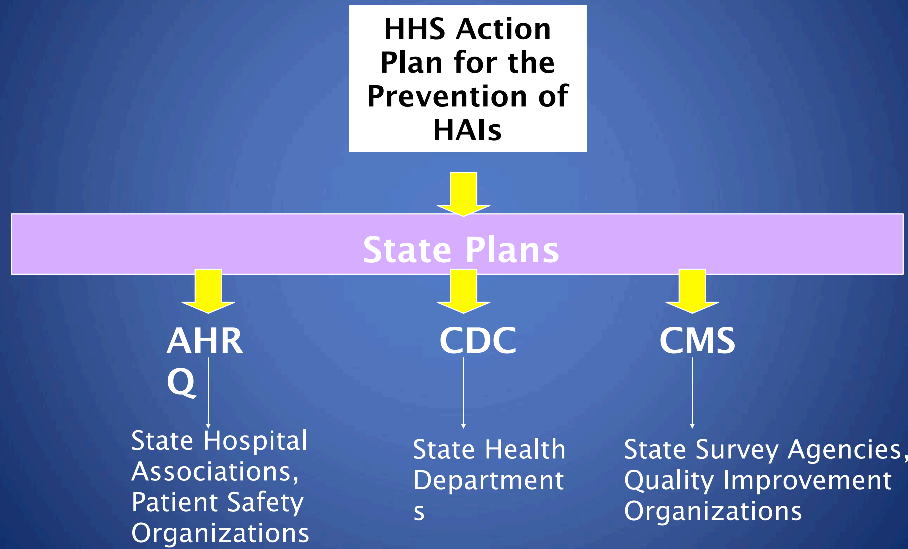


- Establish measurable national goals
- Improve coordination to strengthen prevention, research, surveillance, incentives/oversight, and messaging strategies
- Engage external stakeholders for accountability and to implement strategies
- Approach problem in tiers
  - Tier 1 – Hospitals
  - Tier 2 – Ambulatory surgical centers and dialysis centers
- Maintain plan as living document

Surgical Procedures Moving from Inpatient to Outpatient Settings



Source: Avalere Health analysis of Verispan's Diagnostic Imaging Center Profiling Solution, 2004, and American Hospital Association Annual Survey data for community hospitals, 1981-2004.
*2005 values are estimates.


HAI Prevention Hinges on Coordination of State-Level Activities Across HHS
HHS Action Plan for the Prevention of HAIs
State Plans
AHRQ
CDC
CMS
State Hospital Associations, Patient Safety Organizations
State Health Departments
State Survey Agencies, Quality Improvement Organizations
HHS Office of Healthcare Quality
6

Targets & Metrics

Metric	Source	National 5-Year Prevention Target	Coord
Bloodstream infections	NHSN	50% reduction	CDC
Adherence to central-line insertion practices	NHSN	100% adherence	CDC
Clostridium difficile (hospitalizations)	NHDS HCUP	30% reduction	CDC &
Clostridium difficile infections	NHSN	30% reduction	CDC
Urinary tract infections	NHSN	25% reduction	CDC
MRSA invasive infections	EIP	50% reduction	CDC
MRSA bacteremia (hospital)	NHSN	25% reduction	CDC
Surgical site infections	NHSN	25% reduction	CDC
Surgical Care Improvement Project Measures	SCIP	95% adherence	CMS

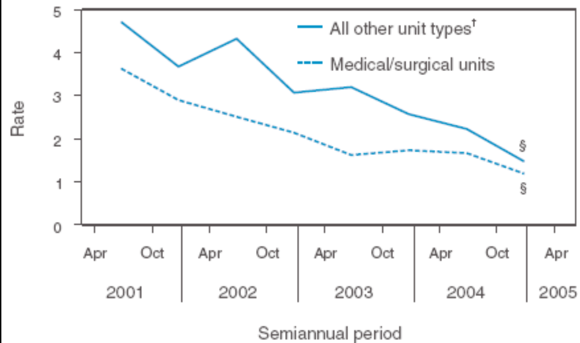
National goals for prevention have been set and the metrics, largely based on CDC data will drive national initiatives, and by extension state and local initiatives on prevention.

The 9 initial goal areas, bloodstream infections, urinary tract infections, surgical site infections, two pathogen specific infections: MRSA and C. Diff, and two process measure sets: central line insertion practices and surgical care improvement project measures were selected based on input from over 70 leading experts in epidemiology, clinical medicine, quality improvement, public health and representatives from HHS OS, CDC, CMS, AHRQ.

State of Prevention:
Successful Implementation of HICPAC Guidelines Prevents Bloodstream Infections

Pennsylvania

FIGURE. Central line–associated bloodstream infection rate* in 66 intensive care units (ICUs), by ICU type and semiannual period — southwestern Pennsylvania, April 2001–March 2005

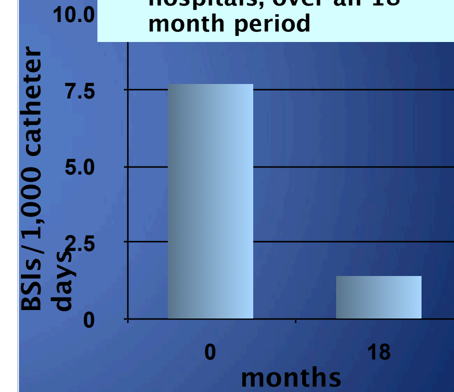


* Pooled mean rate per 1,000 central line days.
† Includes cardiothoracic, coronary, surgical, neurosurgical, trauma, medical, burn, and pediatric ICUs.
§ p<0.001.

MMWR 2005;54:1013-16

Michigan

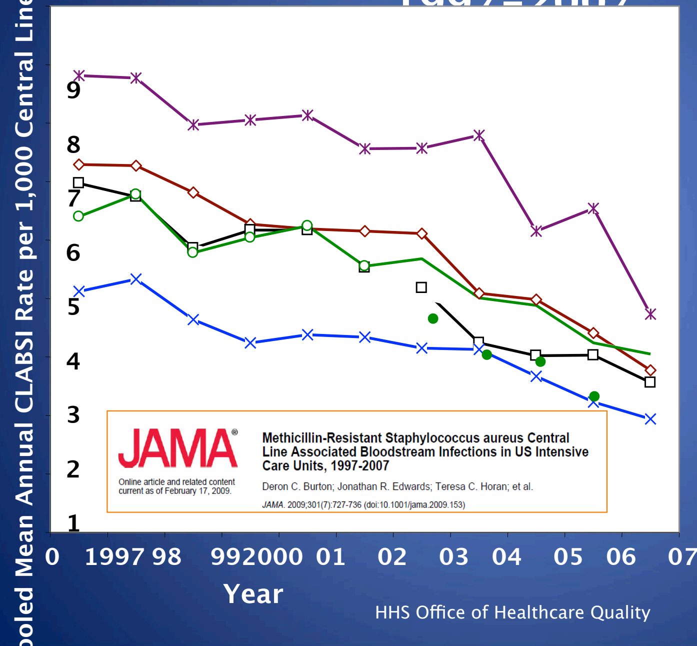
103 ICUs at 67 Michigan hospitals, over an 18 month period



Pronovost P. New Engl J Med 2006;355:2725-32

In both settings infections were reduced by 2/3 or more and in some intensive care units, infections have fallen to 0 and been sustained for five years.

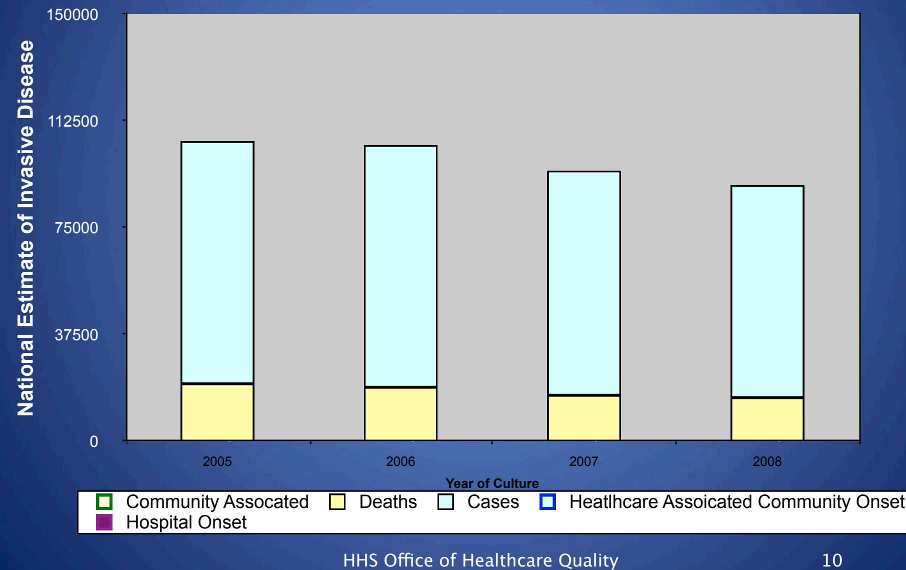
Trends in Bloodstream Infections by ICU Type National Healthcare Safety Network Hospitals, 1997–2007



Estimated:

- 7,000 BSIs prevented
- 1,800 lives saved
- $50–180M in costs averted/yr

But, we can estimate from the National Healthcare Safety Network, that the infections prevented, lives saved and cost averted are substantial. This data shows what we have seen in hospitals in the system, for just BSIs caused by methicillin resistant S. aureus.



Background:

January 2010 marked the beginning of a six-month project in Maine that requires all acute-care hospitals to screen high-risk patients on admission for the presence of a potentially devastating bacteria called Methicillin-resistant Staphylococcus aureus, or MRSA. Infection prevalence data will be compiled and reported to the state midsummer.

Hospitals are required to offer MRSA tests to patients in five categories: People with overnight hospital or nursing home stays in the past six months, people admitted into intensive care units, dialysis patients, and people transferred from another hospital or jail. Patients may opt out of the test.

Hospitals must report testing results for six months, and continue testing for another five months until those results are tabulated by the state.

If more than 7 percent of patients from a particular category at any one hospital are found to be carrying or infected with MRSA, the hospital will be required to continue to test patients in that group.

FIRST STATE-SPECIFIC HEALTHCARE-ASSOCIATED INFECTIONS SUMMARY DATA REPORT

CDC's National Healthcare Safety Network (NHSN)

January – June, 2009

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion

- First report released May 27
- First time we have state-specific data
- Central-line associated bloodstream infections
- Standardized Infection Ratio (SRI) for nation and states, baseline 2006-2008
- Overall 18% decrease
- Baseline SIR for states
- Next report in the fall
- Available online: http://www.cdc.gov/

State Activities

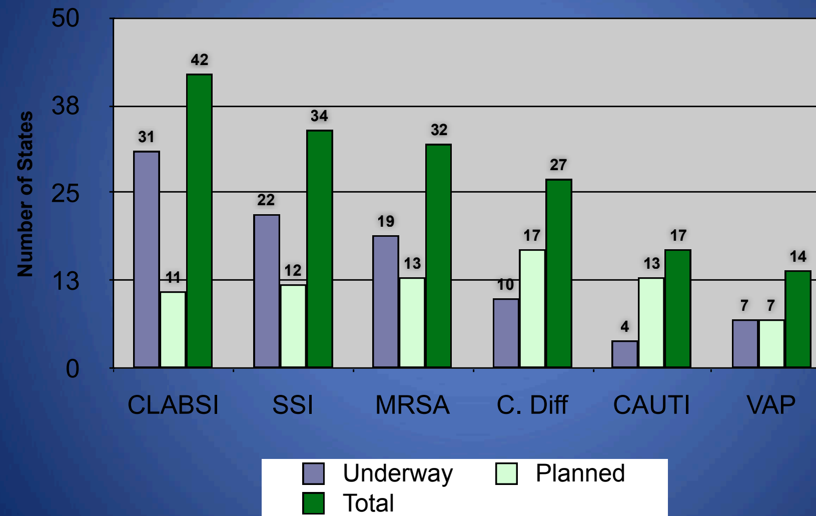
- Congressionally mandated State HAI Plans FY09
  - States incentivized to have a formal HAI prevention plan
  - Linked to CDC Prevention Block Grant
  - All States submitted plans to HHS in January 2010
  - Report to Congress June 2010

- Recovery Act
  - $40M to CDC to fund State HAI activities
    - ✓All grantees will be developing and executing State HAI Plans based on the HHS Action Plan – 49 states, DC, and Puerto Rico funded
    - ✓Enhancing HAI surveillance
    - ✓Establishing HAI prevention initiatives
  - $10M to CMS to improve surveys in ambulatory surgical clinics
    - ✓CDC assisting by developing tools for enhanced surveys, training surveyors, and assisting with onsite

In contrast to the past, where HAIs were primarily a clinical issue with little or no state health department involvement, States do have a big role moving forward. first with the requirement to have state HAI prevention plans and now that we have funding for the first time to provide to states to accelerate HAI prevention.

The Recovery Act provided $50M for state programs aimed at preventing HAIs; 40M to states from CDC to fund state HAI initiatives; 49 states, DC, PR were funded at the first of September; all the grantees will be developing HAI programs in their states to enhance their HAI surveillance infrastructure and to establish prevention initiatives. NOTE: decided not to specify numbers – I edited the slide and the notes!

State health departments will need to work closely with other state organizations such as hospital associations who are receiving funds from the Agency for Healthcare Research and Quality, for quality improvement projects related to bloodstream infections and with projects in State Quality Improvement Organizations funded by CMS. But this offers a tremendous opportunity at the state and local level.



- Each state identified at least 2 priority prevention measures for surveillance in support of the HHS HAI Action Plan

- Variability in level of activity between States, some had resources to support more than 2 prevention measures

Maine's State Plan

- Late 2009: Maine CDC convened a work group of members of the Maine Infection Prevention Collaborative to develop the Maine State HAI Prevention Plan. The work group included representatives from the Maine Quality Forum, Maine Hospital Association, Pine Tree Chapter of APIC, Northeast Health Care Quality Foundation, acute care hospitals, and Maine CDC.
- Key prevention targets will allow the state to focus surveillance and prevention activities on specific healthcare associated infections.
- Maine will standardize the monitoring of the following targets during 2010 – 2011:
  - Central Line-associated Blood Stream Infections (CLABSI)
  - Methicillin-resistant Staphylococcus aureus (MRSA) Infections
  - Surgical Site Infections (SSI)

On August 31, 2009, the Federal Centers for Disease Control and Prevention announced the award of funding to support the development of state public health programs for the prevention of healthcare associated infections. Maine Department of Health and Human Services, Maine Center for Disease Control and Prevention (Maine CDC) established the Healthcare Associated Infections (HAI) Program in the Division of Infectious Disease in October 2009. Three initial objectives were undertaken:

Establish a multidisciplinary advisory group to guide and support program prevention and surveillance activities;

Recruit and train HAI program staff; and

Develop a State HAI Prevention Plan.

Prevention initiatives will be undertaken using the Federal DHHS Healthcare Infection Control Practices Advisory Committee (HICPAC) evidence-based HAI prevention guidelines and Centers for Medicare and Medicaid Services (CMS) Surgical Care Improvement Project guidelines.

Maine CDC will provide leadership to coordinate and implement all HAI prevention and surveillance activities, as described in the State Plan. Program activities will be conducted in collaboration with a multi-disciplinary advisory committee, the Maine Infection Prevention Collaborative.

Affordable Care Act (ACA) of 2010

- Title I: Quality, Affordable Health Care for all Americans
- Title II: Role of Public Programs
- **Title III: Improving the Quality & Efficiency of Health Care**
- Title IV: Prevention of Chronic Disease & Improving Public Health
- Title V: Health Care Work Force
- Title VI: Transparency and Public Reporting
- Title VII: Improving Access to Innovative Medical Therapies
- Title VIII: Community Living Assistance Services & Support (CLASS) Act
- Title IX: Revenue Provisions

Snapshot of Reform in Maine

- 135,000 residents who do not currently have insurance and 69,000 residents who have nongroup insurance could get affordable coverage through the health insurance exchange.
- 99,000 residents could qualify for premium tax credits to help them purchase health coverage.
- 252,000 seniors would receive free preventive services.
- 44,800 seniors would have their brand-name drug costs in the Medicare Part D “doughnut hole” halved.
- 22,600 small businesses could be helped by a small business tax credit to make premiums more affordable.

Healthcare Reform Law & HAIs

- Section 3001- Hospital Value Based Purchasing Program.
- “The Secretary [of HHS] shall establish a hospital value-based purchasing program . . . Under which value-based incentive payments are made in a fiscal year to hospitals that meet the performance standards . . .”
- For fiscal year 2013, the Secretary shall select measures that cover at least the following 5 conditions, including healthcare associated infections as measured by the HHS Action Plan to Prevent HAIs

Quality & Reform

- **Reduces preventable readmissions.**
  - Nearly 20 percent of Medicare patients who are discharged from the hospital end up being readmitted within 30 days. For Maine, that’s 13,800 readmissions each year which could potentially be prevented with improved care coordination.
- Lessens Paperwork by simplifying and standardizing paperwork and computerizing medical records
  - Physicians spend on average about 140 hours and $68,000 a year just dealing with health insurance bureaucracy. For the 4,898 physicians in Maine, this adds up to 686,000 hours and $333 million in costs.
- Incentivizes primary care.
  - Roughly 2,100 doctors in Maine practice primary care and would qualify for a new 5 to 10 percent payment bonus under health insurance reform.
- Invests in the health primary care.
  - Approximately 78,000 people, or 6 percent of Maine’s population, cannot access a primary care provider due to shortages in their communities. Health insurance reform will expand and improve programs to increase the number of health care providers, including doctors, nurses, and dentists, especially in rural and other underserved areas.

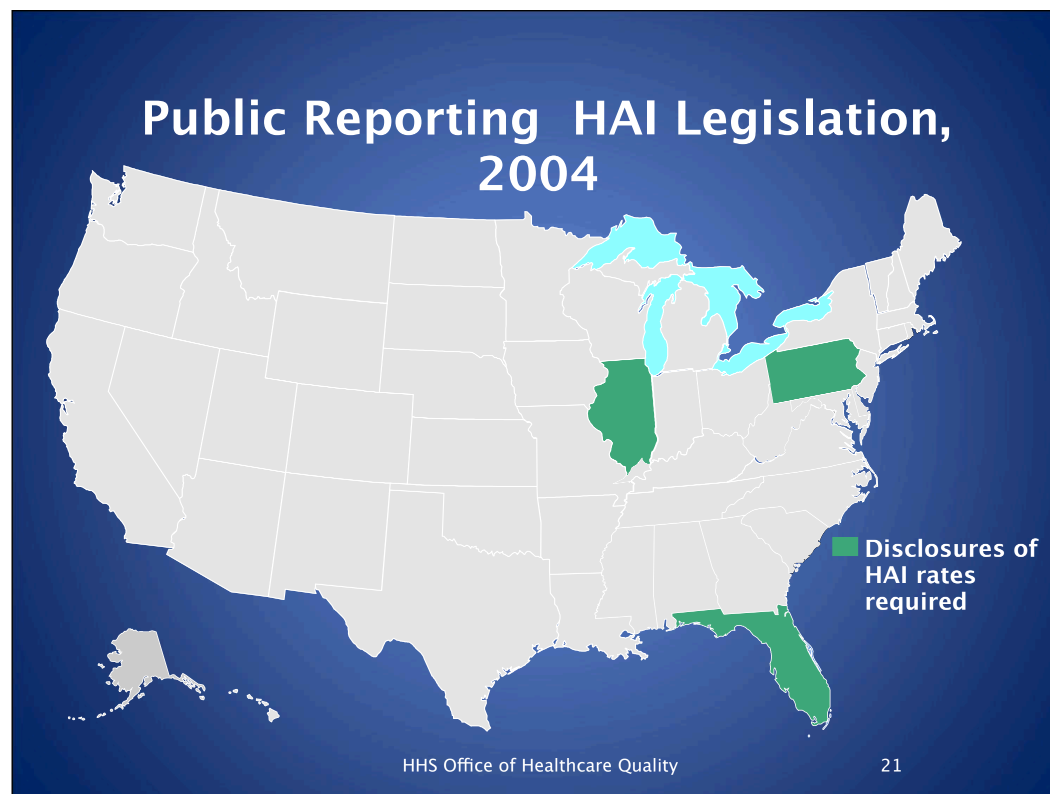
1. Health insurance reform will invest in innovations in primary care and will provide financial incentives to hospitals to better coordinate care at discharge to avoid preventable readmissions.
2.

Health Care Workforce

- Funds shortages in primary care areas
- Invests in National Health Service Corps scholarship and loan repayment programs
- Incentives for primary care providers to practice in rural and physician shortage areas
- Education grants and subsidies
- Focus on workforce diversity promotion
- Educational best practices and centers of excellence
- GME funding provisions

Transparency & Public Reporting

- Broad Plan for Public Reporting
  - Make performance information widely available
- Hospitals and Ambulatory Surgery Centers
  - Expands Hospital Compare
  - Information on the Value Based Purchasing (VBP) program
  - Mandates reporting on health care acquired infections, hospital readmissions, and hospital charge data
- Physicians
  - Physician Compare website by January 2011.
  - Physician ownership or investments in hospitals, ASCs, other provider sites and manufacturers (by September 2013)



On approach to improving data for action, especially publicly available data has been mandated public reporting, which has been primarily led by consumer movements in states.

In 2004, only 3 states required public reporting of HAIs, one state had pending legislation.

Public Reporting HAI Legislation, 2009

Disclosures of HAI rates required

On approach to improving data for action, especially publicly available data has been mandated public reporting, which has been primarily led by consumer movements in states.

In 2004, only 3 states required public reporting of HAIs, one state had pending legislation. Now, there are 28 states with public reporting laws.

More Information

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http://www.hhs.gov/ophs/initiatives/hai/index.html

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