



WELCOME

NHSN 2017 Training

Long Term Care Session

March 20, 2017

Global Communications Safety Brief

To ensure the health and safety of all individuals attending this ceremony, a few safety regulations must be reviewed. In the event of an emergency resulting in an evacuation, the procedures are as follows:

- Rise from your seats and proceed to the nearest exit. Please do not run.
- Upon exiting the building, assemble on Michael Street (directly behind Building 19).
- Locate the green building marker sign labeled “Conference and Meeting Space—GCC” and group together to ensure all attendees are accounted for.
- Once the premises have been secured and an all clear has been issued, you may re-enter the building and resume your scheduled meeting.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

GENERAL HOUSEKEEPING

- Continuing Education Credits (CE)
 - Information available in binders/folders
 - Remote attendees receive information by email
- Attendance
 - Be sure to scan in and out daily with Avaris
- Interactive Polling
 - Polling devices
 - Some tables may need to share
 - Return the device at end of session

GENERAL HOUSEKEEPING

- Food and snacks
 - Welcome to bring into conference room
 - Lunch options
 - Vending machines
- No photography
- Place phones on silent mode

FINALLY.....

- Hold all of your questions until the end of the presentations
- Unable to answer questions in person about specific case
 - Please send all such questions to NHSN@cdc.gov

DISCLOSURE

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Presentations will not include any discussion of the unlabeled use of a product or a product under investigational use.

CDC did not accept commercial support for this continuing education activity.

CONTENT

All case studies and data tables presented during this training are intended for teaching purposes. These cases are designed so as to protect patient confidentiality. All data tables represent fictitious data.

Case studies and descriptions do not follow real cases.

CDC is unable to respond to questions about actual cases during this training meeting. Please send all such questions to NHSN@cdc.gov



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Infection Surveillance and Prevention in Long-Term Care: A National Perspective

Jeneita Bell, MD MPH

LTC Team Lead

March 20, 2017

Public Health Surveillance

A person with reddish-brown hair, seen from behind, is looking at a wall of multiple surveillance camera monitors. The monitors display various black and white security footage, including street scenes and industrial areas. The person is wearing a dark blue jacket.

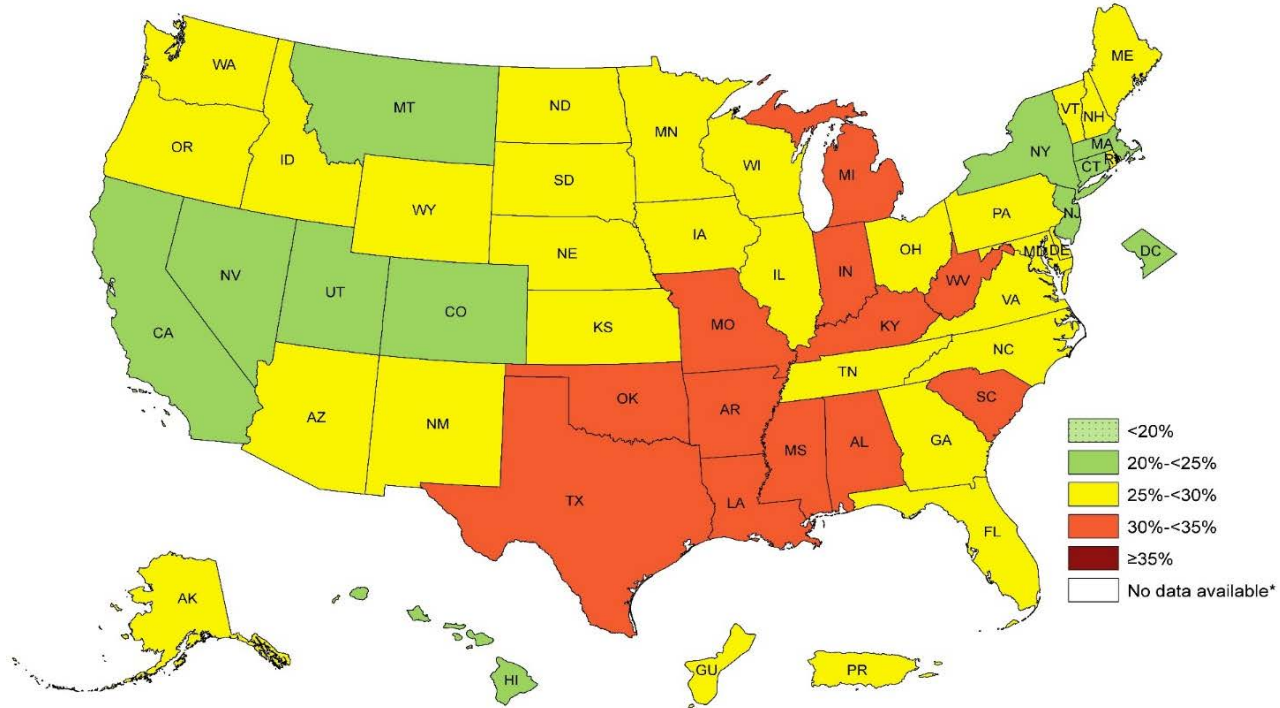
ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event to reduce morbidity and mortality and to improve health

Characteristics of Public Health Surveillance

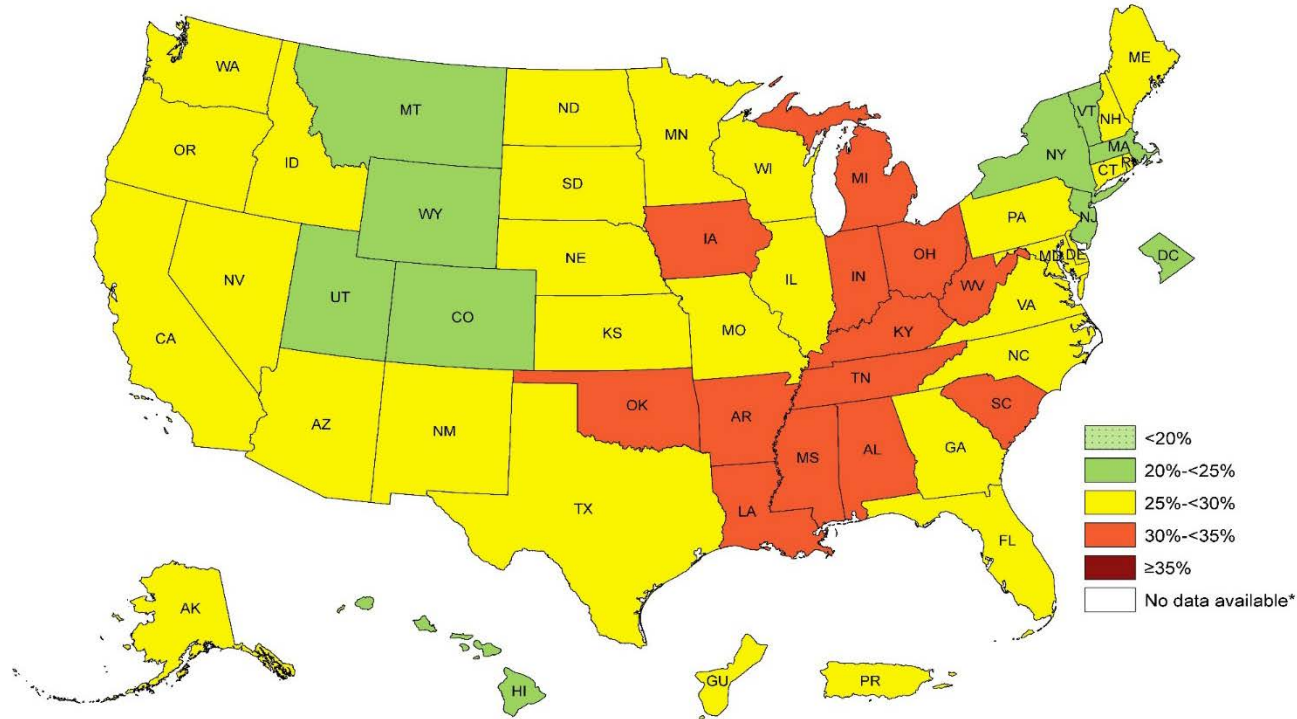
- Provides data to facilitate prevention and control of health condition
- Objectives determine how data are collected and analyzed
- Surveillance system attributes include:
 - Acceptability
 - Sensitivity
 - Positive Predictive Value
 - Timeliness
 - Stability
 - Representativeness

Public Health Examples

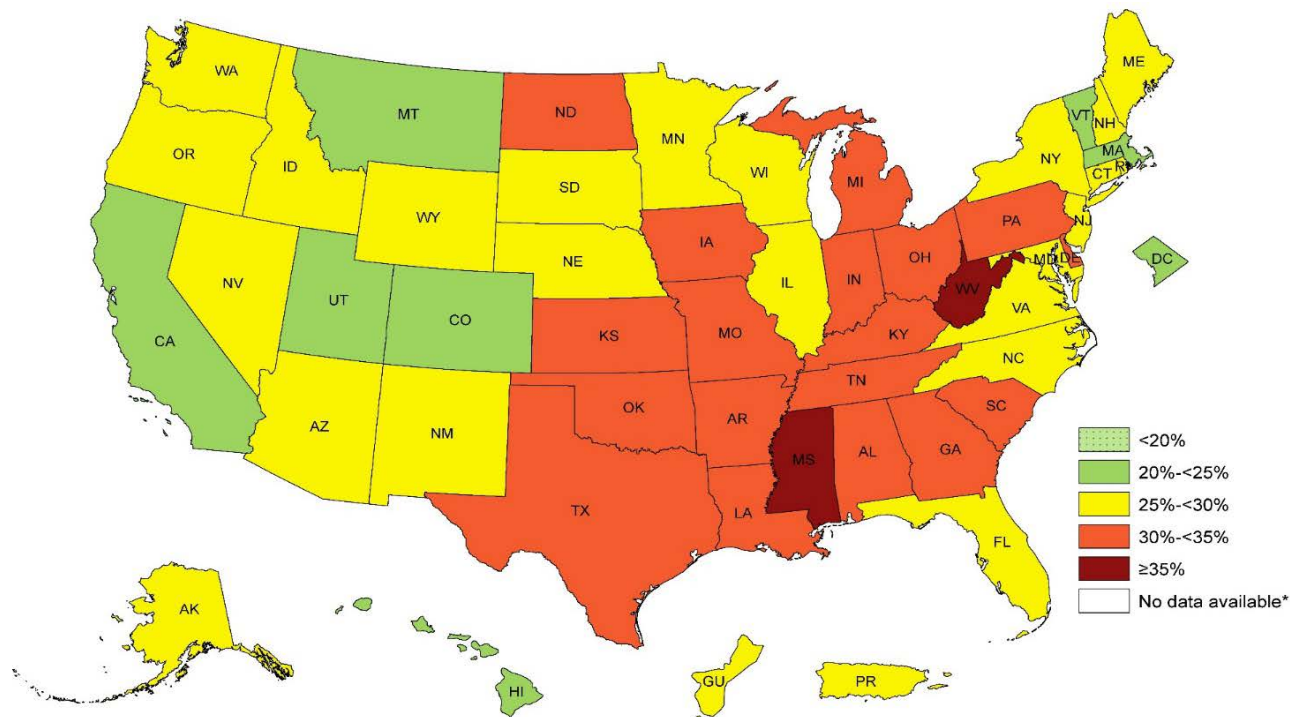
Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2011



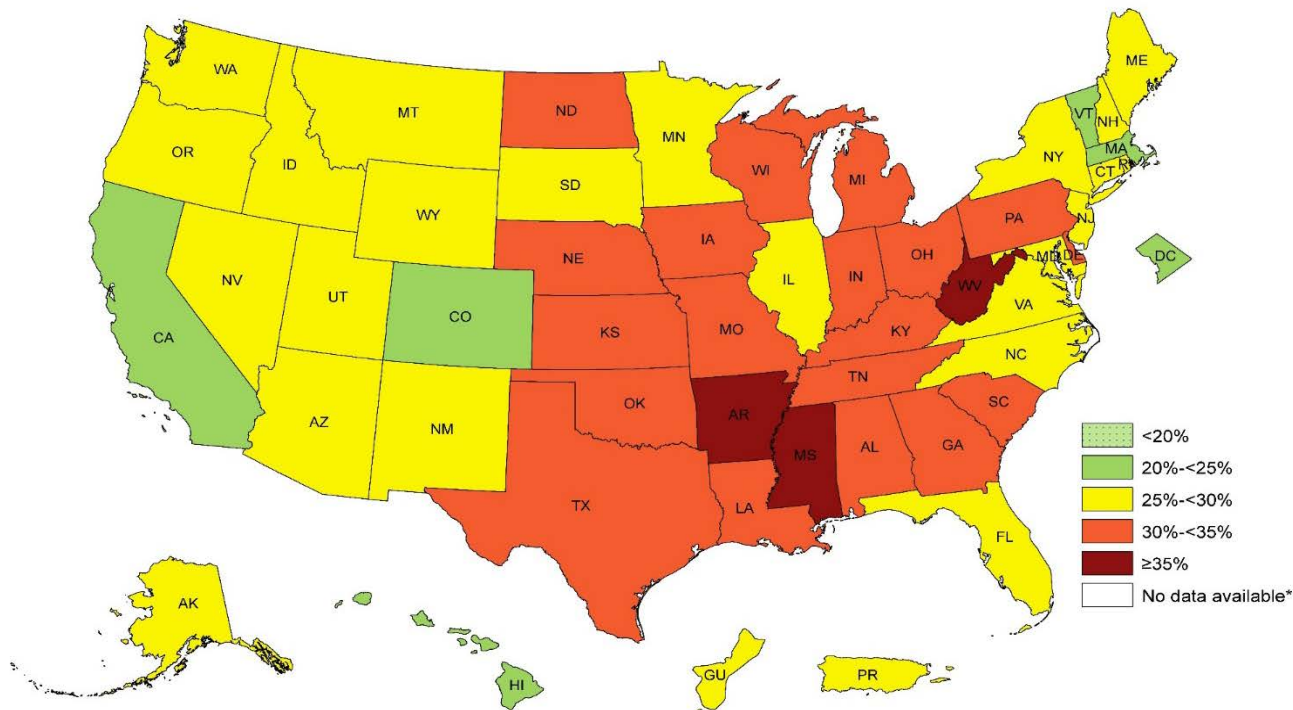
Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2012



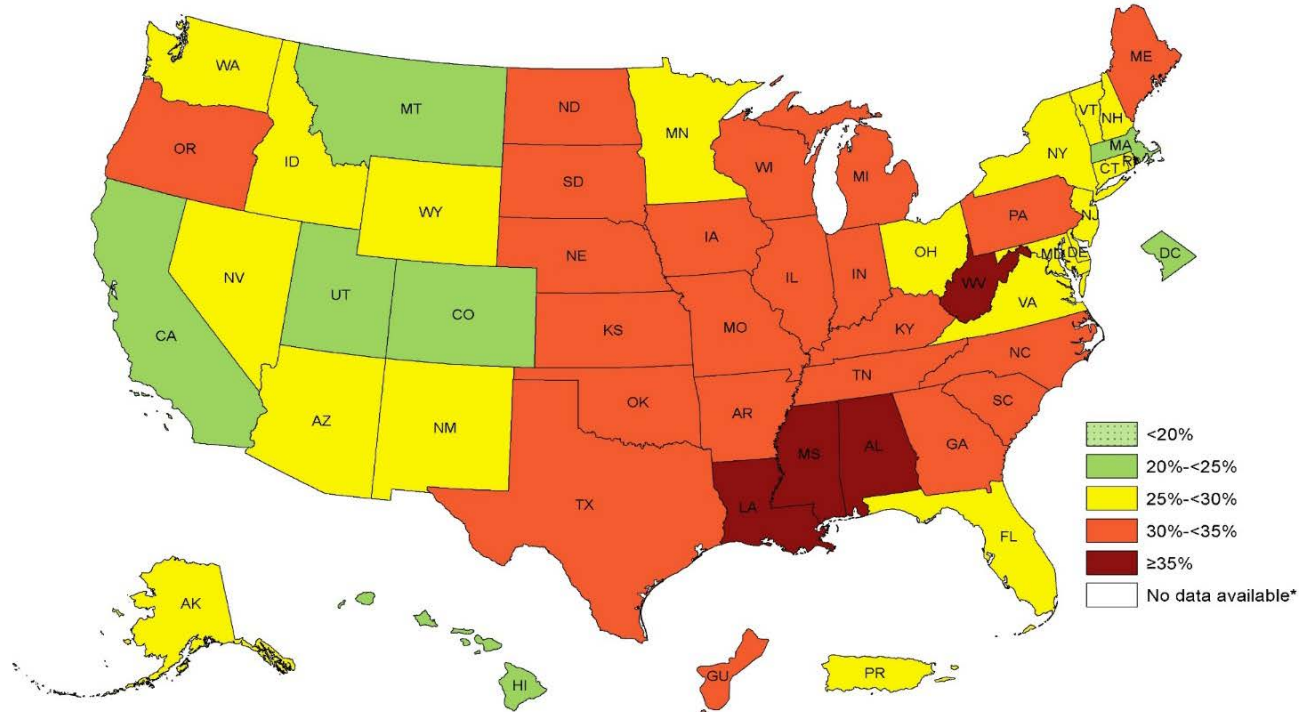
Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2013



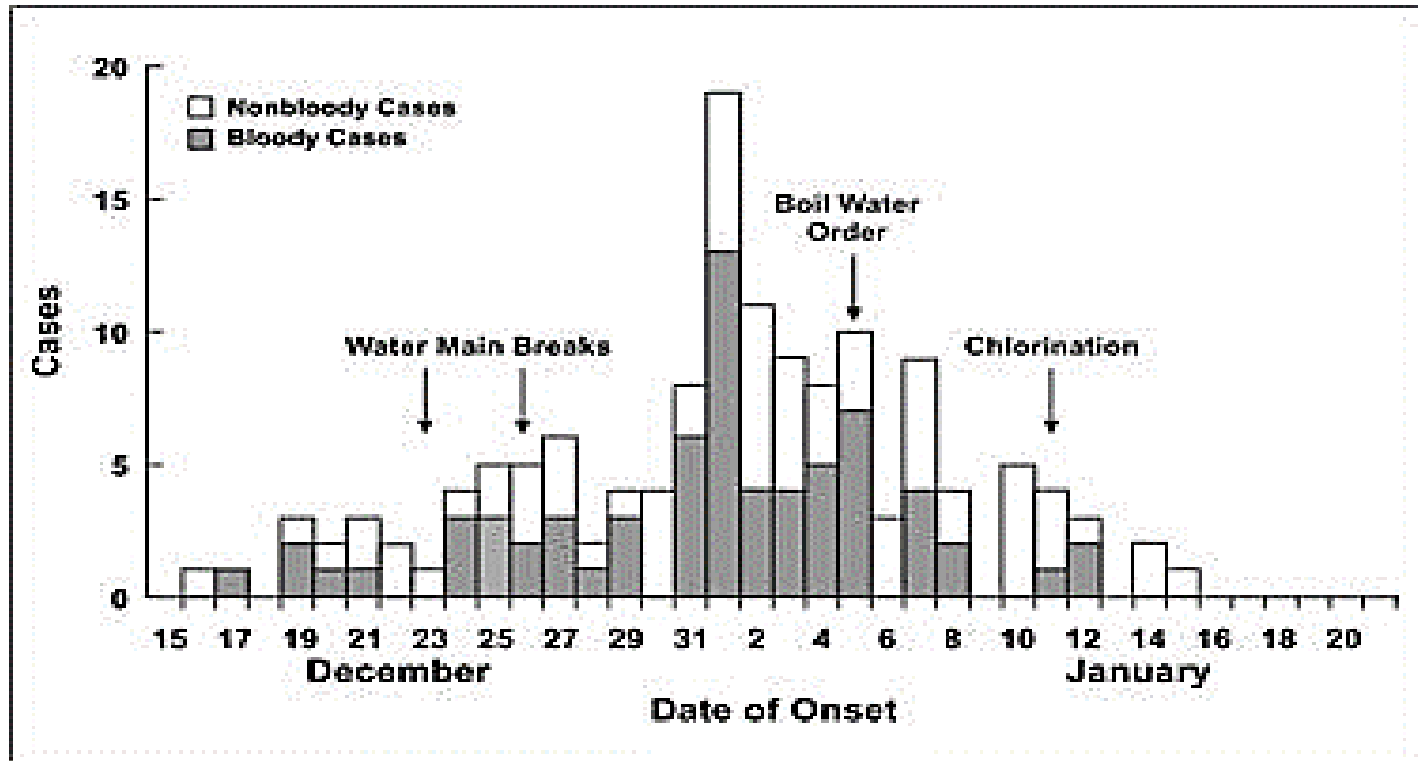
Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2014



Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2015



Diarrheal Illness in City Residents by Date of Onset and Character of Stool, December 1989–January 1990



Source: Centers for Disease Control and Prevention. Unpublished data; 1990

Do we need it for Long Term Care?

Epidemiology of HAI in LTCFs

- Over 4 million people are admitted to or reside in nursing homes (NHs) and skilled nursing facilities (SNFs) each year
- Infections are most frequent causes of transfers and hospital readmissions
- Infections result in estimated 380,000 deaths every year
- ~2.8 million infections occurring NHs/SNFs every year
- Most frequent healthcare-associated infections (HAIs)
 - Urinary tract infections (UTIs)
 - Lower respiratory tract infections (LRTIs)
 - Skin and soft tissue infections (SSIs)
 - Gastroenteritis (GE)

Office of Inspector General Report, 2014

Adverse events in SNFs among Medicare beneficiaries

Events Related to Infections	26%
Aspiration pneumonia and other respiratory infections	10%
Surgical site infection (SSI) associated with wound care	5%
Urinary tract infection associated with catheter (CAUTI)	3%
Clostridium difficile infection (CDI)	3%
Other infection events	5%

Source: OIG analysis of SNF stays for 653 Medicare beneficiaries discharged in August 2011.

CDC Antibiotic Resistance Threat Report, 2013

- At least 250, 000 Clostridium Difficile Infections (CDI) per year
- 50% CDI occur in people younger than 65
- > 90% of deaths occur in people 65 and older
- 50% first show symptoms as nursing home patients or in people recently cared for in doctors' offices and clinics

Nursing Home-Onset CDI

- Surveillance sampling of 10 geographic areas
- Derived 2012 national estimate
 - 112,000 CDI cases were nursing home onset
- Full medical review on sampled cases
 - Median age 82 years
 - 76% received antibiotics

Open Forum Infectious Diseases

MAJOR ARTICLE



Burden of Nursing Home-Onset *Clostridium difficile* Infection in the United States: Estimates of Incidence and Patient Outcomes

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Limitations and Knowledge Gaps

- Data derived from hospital surveillance
- National estimates extrapolated from few geographic locations
- Incidence estimates not based on nursing home population
- Underestimates true national burden

How Can Surveillance Help?

- Ongoing, systematic collection, analysis, interpretation.....of data
 - Characterize the national burden of HAI
 - Establish national baseline for HAI incidence
 - Identify associated risk and protective factors
 - Evaluate intervention effectiveness
 - Monitor incidence trends and identify outbreaks

National Healthcare Safety Network

Long Term Care Component

NHSN Long-term Care Facility Component



- NHSN infection reporting tailored for LTCF providers, released in September 2012
 - Standardized event criteria and data analysis across facilities
- Reporting modules:
 - UTIs; including antibiotic-use
 - Multidrug-resistant organisms and CDI
 - Adherence to hand hygiene and gown/glove use

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

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SEARCH

CDC A-Z INDEX

National Healthcare Safety Network (NHSN)

CDC > NHSN > Materials for Enrolled Facilities

Tracking Infections in Long-term Care Facilities

Eliminating infections, many of which are preventable, is a significant way to improve care and decrease costs. CDC's National Healthcare Safety Network provides long-term care facilities with a customized system to track infections in a streamlined and systematic way. When facilities track infections, they can identify problems and track progress toward stopping infections. On the national level, data entered into NHSN will gauge progress toward national healthcare-associated infection goals.

NHSN's long-term care component is ideal for use by: nursing homes, skilled nursing facilities, chronic care facilities, and assisted living and residential care facilities

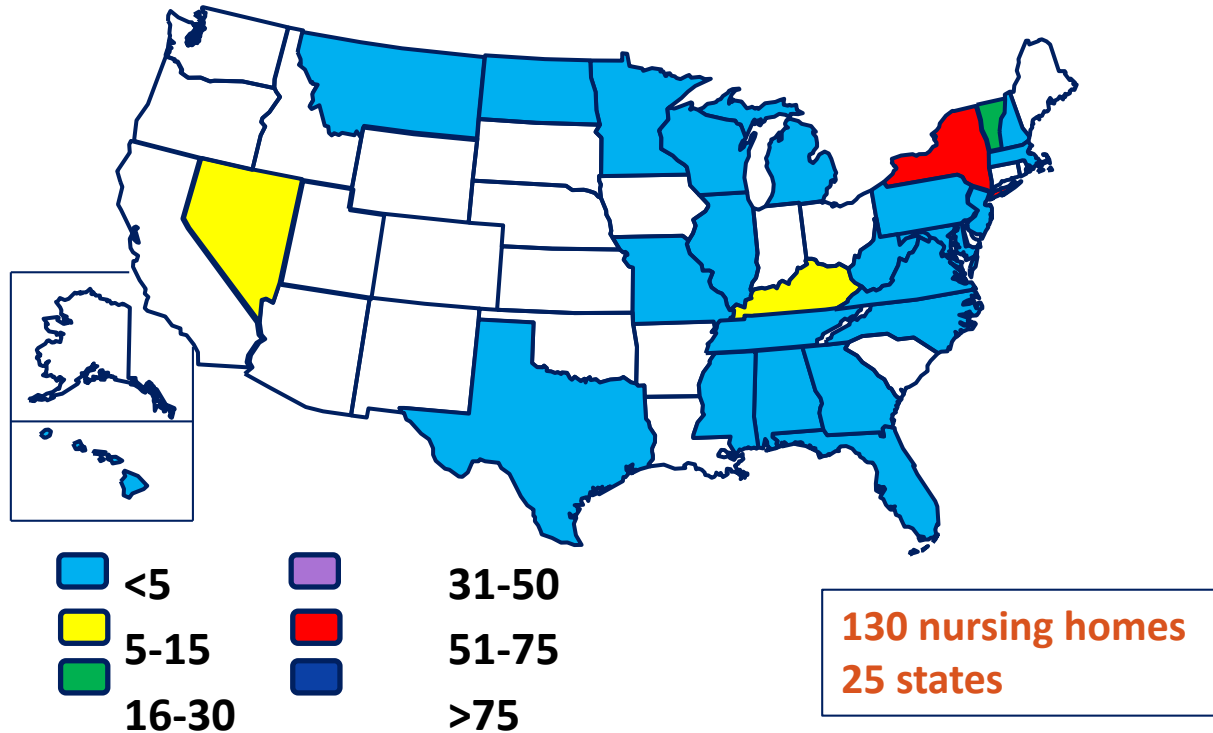
MDRO/CDiff - Surveillance for C. difficile, MRSA, and other Drug-resistant Infections

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

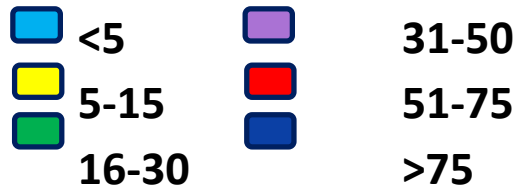
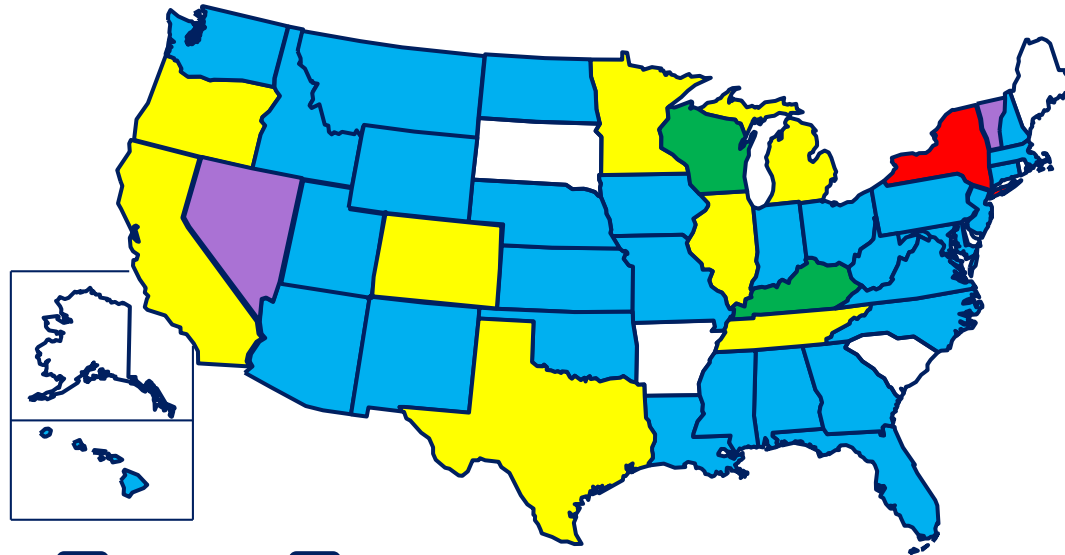
Report Prevention Process Measures - Hand Hygiene, Gloves and Gown Adherence

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

NHSN Enrolled Nursing Homes by State, August 2013

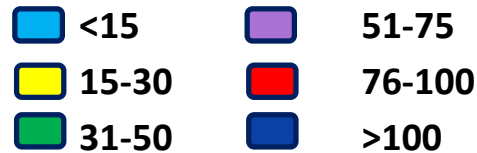
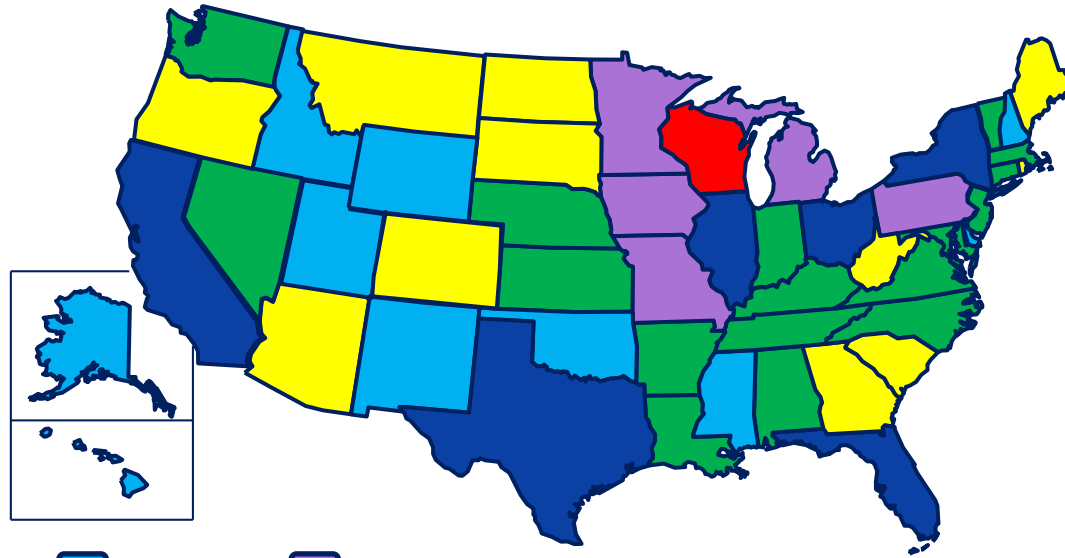


NHSN Enrolled Nursing Homes by State, June 2016



307 nursing homes
= ~2% of all US NHs
44 states + DC

NHSN Enrolled Nursing Homes by State, March 2017



***Scale has changed**

**2,302 nursing homes =
14.8% of all US NHs
50 states + DC and PR**

Benefits of NHSN for LTCFs

Benefit of Use

- Not only for filling national data gaps
- Meet other LTCF needs and requirements
 - Quality Assurance and Performance Improvement (QAPI)
 - Infection Prevention and Control Program (IPCP)
 - Antibiotic Stewardship Program
 - Local interventions

Benefits

- **Quality Assurance and Performance Improvement (QAPI)**
- Infection Prevention and Control Program (IPCP)
- Antibiotic Stewardship Program

Quality Assurance and Performance Improvement

- **Quality Assurance** is a process of meeting quality standards and assuring care is acceptable
- **Performance Improvement** is a proactive and continuous study of processes with the intent to prevent or decrease the likelihood of problems.....

5 ELEMENTS OF QAPI

1. Design and Scope
2. Governance and Leadership
3. Feedback, Data Systems and Monitoring
4. Performance Improvement Projects (PIPS)
5. Systematic Analysis and Systemic Action

aspect of each of the 5 elements:
the quality of the care provided and the safety of the patient



Benefits

- Quality Assurance and Performance Improvement (QAPI)
- **Infection Prevention and Control Program (IPCP)**
- Antibiotic Stewardship Program

CMS Reform Requirements for Long-Term Care Facilities Final Rule § 483.80

- Develop an IPCP
- Include, *at a minimum*, a **system** for preventing, identifying, reporting, investigating, and controlling infections and communicable diseases
- Requires facilities to have written standards, policies, procedures for a **system of surveillance** designed to identify possible communicable disease or infections
- **Reporting requirements** for possible incidents of communicable disease or infections

Benefits

- Quality Assurance and Performance Improvement (QAPI)
- Infection Prevention and Control Program (IPCP)
- **Antibiotic Stewardship Program**

CMS Reform Requirements for Long-Term Care Facilities Final Rule § 483.80

- Requires facilities to develop an IPCP that includes an **Antibiotic Stewardship Program** and designate at least one Infection Preventionist
- Includes antibiotic use protocols and **a system to monitor** antibiotic use

NHSN Resources for Antibiotic Stewardship

- CDC's Core Elements of Antibiotic Stewardship
 - NHSN Surveys
- UTI Module – Antibiotic-use
- LabID Module
 - Multidrug-resistant organisms
 - CDI

NHSN Challenges

Challenges and Solutions

Challenges	Short-term Solutions	Long-term Improvements
Separate/disconnected SAMS/NHSN enrollment processes	Adding CDC resources to support NH users	New system to monitor users across enrollment experience
Technical glitches with website and NHSN application	CDC LTC team accessible and responsive	System defects identified and resolved; ongoing monitoring in place
Complexity of NHSN surveillance terminology for inexperienced NH surveillance staff	Continuous development and modification to guidance documents and training materials; identify/promote innovative resources from partners	Investments in QIN-QIO and state health departments to provide additional supports to nursing home providers
Limited staff resources due to staff turn-over and competing priorities	Continued alignment of project goals with the needs of the nursing home industry (e.g., infection prevention and stewardship requirements)	

NHSN 8.6 Defects

- Widespread technical difficulties
- Affected *all* components
- Affected *all* stages of user participation
 - Enrollment
 - Reporting
 - Analysis
- Defects with internal data systems

There is still hope.....



Other CDC Nursing Home Projects

CDC Project: Assessment of infections & use of antibiotics

- Beginning Spring 2017, ~200 NH/SNFs will participate
- Collect data from resident charts and other records
 - Healthcare associated infections – McGeer definitions
 - Antibiotics administered
 - Assess how antibiotics are used
- Information will be used to
 - Develop interventions
 - Inform future infection tracking efforts (e.g., NHSN LTCF Component)
 - Identify how best to support antibiotic stewardship

Project Locations

State Areas included

CA	Alameda, Contra Costa, San Francisco City & County
CO	Adams, Arapahoe, Denver, Douglas, Jefferson
CT	Hartford, New Haven
GA	Clayton, Cobb, Fulton, Paulding, Cherokee, Dekalb
MD	Whole state
MN	Hennepin, McLeod, Olmsted, Ramsey, Rice
NM	Whole state
NY	Monroe, Orleans, Genesee, Wayne, Ontario, Livingston, Yates
OR	Benton, Clackamas, Douglas, Lane, Linn, Marion Multnomah, Polk, Washington, Yamhill
TN	Anderson, Blount, Cheatam, Cumberland, Davidson, Dickson, Fayette, Grainger, Jefferson, Knox, Loudon, Roane, Robertson, Rutherford, Shelby, Sevier, Sumner, Tipton, Union, Williamson, Wilson

All CMS certified NH & SNF in these areas are eligible to participate

Thank you!

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

