
Bold Bugs, Broken Drugs, and Risky Sticks

Keeping Residents Safe when Care Presents Perils

Oregon Public Health Division
Healthcare-Associated Infections HAI Program

Oregon
Health
Authority

(Enter) DEPARTMENT (ALL CAPS)

(Enter) Division or Office (Mixed Case)

Objectives

- Public health roles
 - Oregon Health Authority (“the state”)
 - Local health departments (“the county”)
 - Individual facilities (you!)
- Our shared work
 - Surveillance
 - Required reporting: Infections & outbreaks
 - What’s around the bend for long-term care facilities?
 - Data for action at your facility
 - Prevention
 - Injection safety
 - Antimicrobial stewardship
 - Interfacility transfer communication
 - *Clostridium difficile* collaborative
- Future opportunities for collaboration



What do you think the public health program does?

1. Helps my facility
2. Hinders my facility
3. Some of both
4. Something else



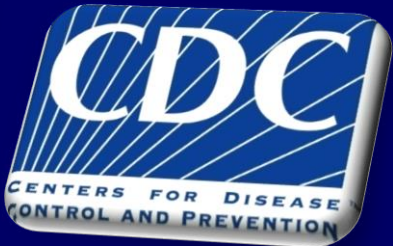
What does public health do?

“We’re the government,
but not *that* part of the government.”

– Bill Keene

epidemiologist extraordinaire

Our Partners



We protect Oregonians' health

- Surveillance
 - Births, deaths, diseases, demographics, emerging infections
 - Carbapenem-resistant *Enterobacteriaceae* (CRE)
- Reporting
 - Communicable disease reporting
 - National Health Safety Network (NHSN) for healthcare-associated infections (HAIs)
- Support regulations to prevent disease
 - Tobacco, Environmental Health Code
- Prevention and response
 - Vaccines, collaborations, outbreaks, coordination, expertise

What is the role of Local Health Departments?



Oregon Coalition of Local Health Officials

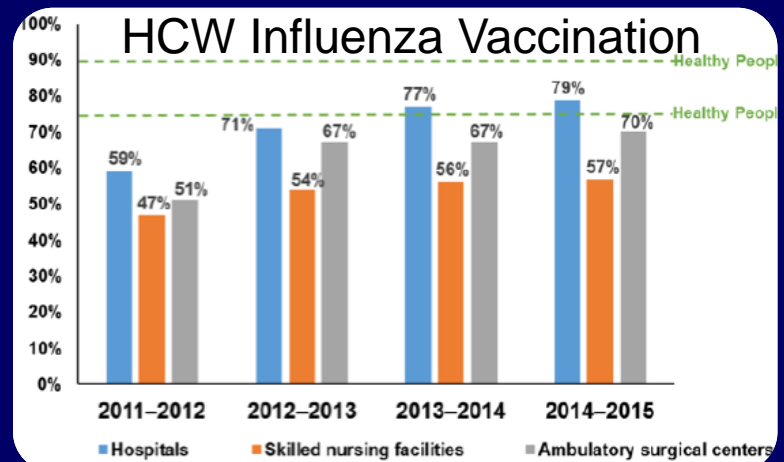
- Know their community
- Interview cases
- Investigate outbreaks
- Perform public health roles for the community
 - Vaccines, Women Infants & Children
 - Prevent chronic disease
 - Environmental health

What is the role of healthcare facilities and providers?

- Prevent
 - Be aware of best practices and current recommendations
 - Practice infection prevention
 - Practice antimicrobial stewardship
- Be alert
 - Eyes and ears of public health
 - Clusters of illness? Similar exposures?
 - Novel disease or presentation?
- Test
 - Cultures important to link cases
- Report
 - Reportable diseases
 - Outbreaks



SURVEILLANCE



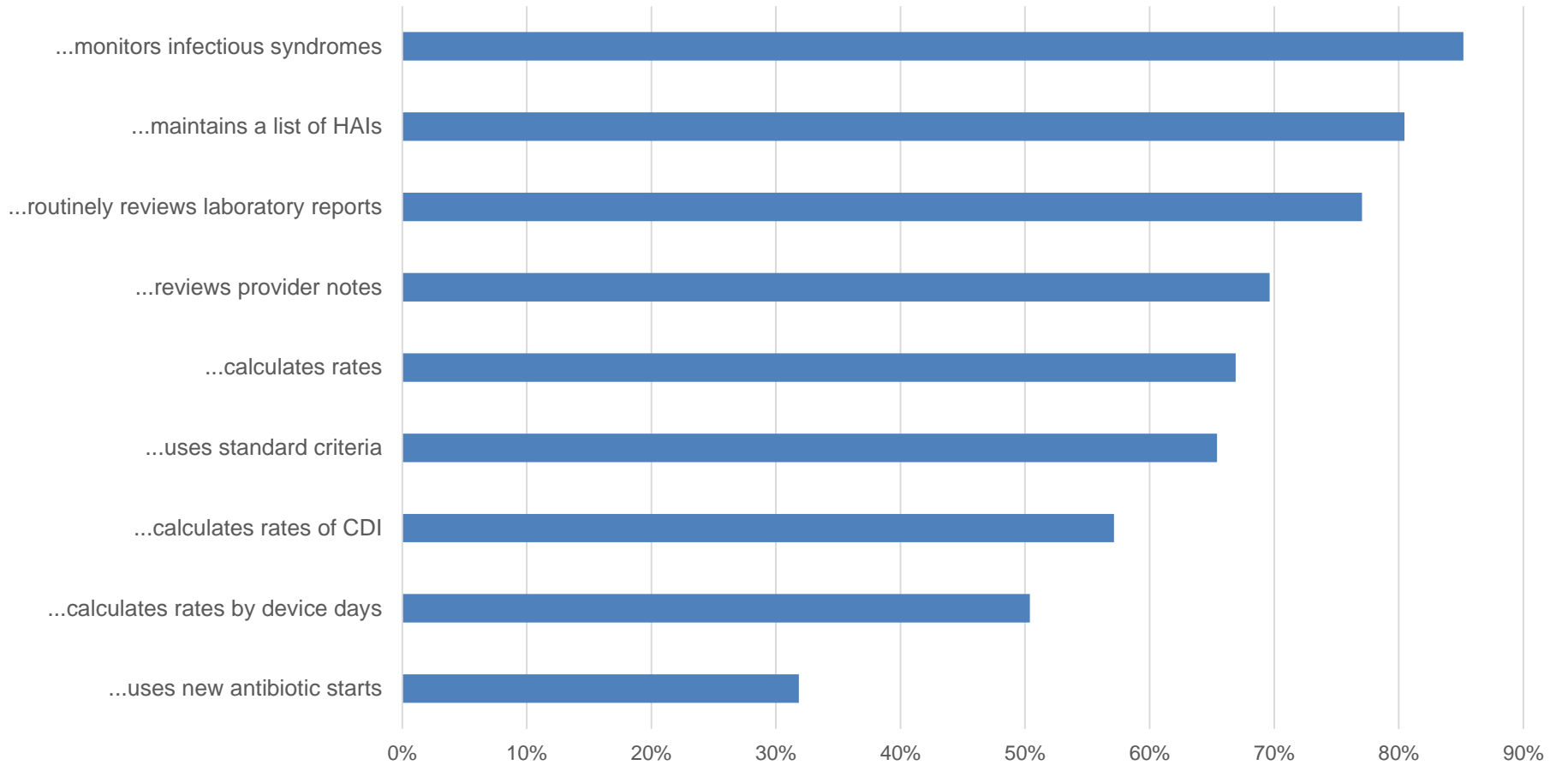
What types of surveillance does your facility currently do?

Surveillance = to keep close watch over something or someone

- ✓ Gastrointestinal illness
- ✓ Respiratory illness
- ✓ Catheter-associated urinary tract infections
- ✓ Catheter use
- ✓ Falls
- ✓ Medical errors
- ✓ Antibiotic use
- ✓ Staff illness
- ✓ *C. difficile* infections
- ✓ Residents with multi-drug resistant organisms (MDROs)

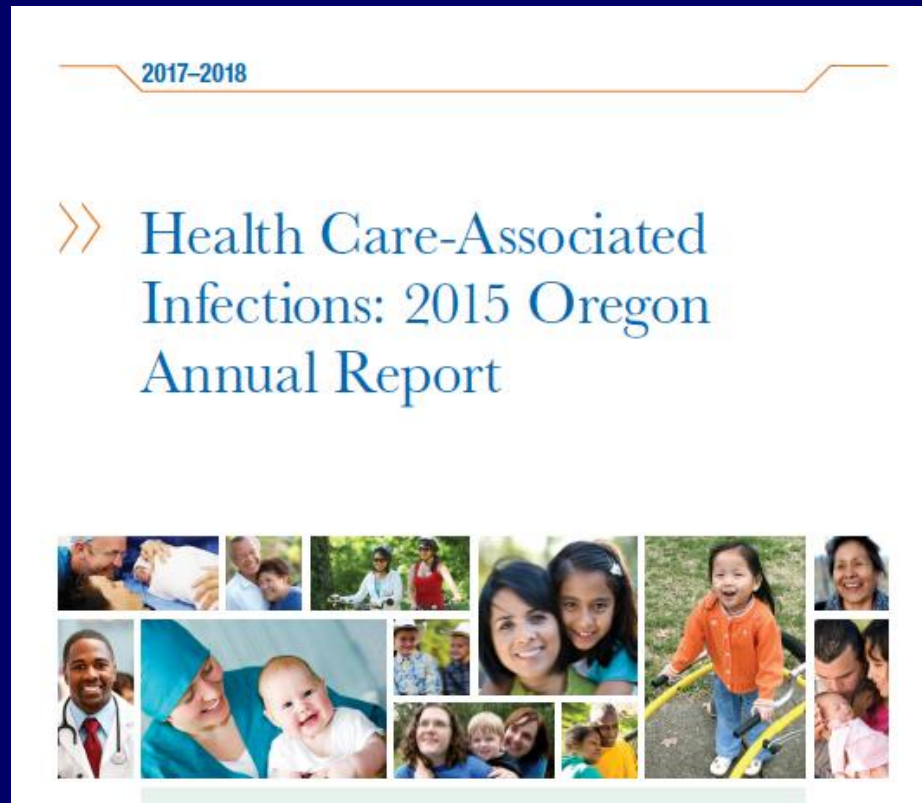
Fun fact #1

How does your facility perform HAI surveillance? (N = 135)



Surveillance saves lives

It matters what we count; what we count matters



Examples of surveillance in action

- Invasive candidemia (yeast in blood)
 - Added injection drug use to data collection following an outbreak
- Carbapenem-resistant *Enterobacteriaceae*
 - Reviewed and education more than 400 cases since December 2011
 - Performed in-depth investigation on 18 carbapenemase-producers
 - Performed surveys to assess for transmission
- Non-tuberculous mycobacteria
 - Identified clusters of surgical site infections associated with poor aseptic technique
 - Identified clusters associated with tattoo artists using water cooler water
- Carbapenem-resistant *Acinetobacter baumannii*
 - Identification led to trace-back to super-spreader patient and establishment of interfacility transfer communication process

What can I do to improve surveillance?

- Add to your daily **huddles**: New illnesses? Antibiotic starts/stops?
 - Map healthcare-associated infections by room to catch trends
- Get to know who does your **pharmacy** reviews
 - Do they review antibiotic starts, stops, doses, and indications?
- Get to know your **providers**
 - Do they use criteria for symptomatic urinary tract infection?
 - Are they ruling out asymptomatic bacteriuria?
 - Are they sending cultures prior to antibiotics?
 - Are they narrowing antibiotics based on susceptibilities?

REPORTING



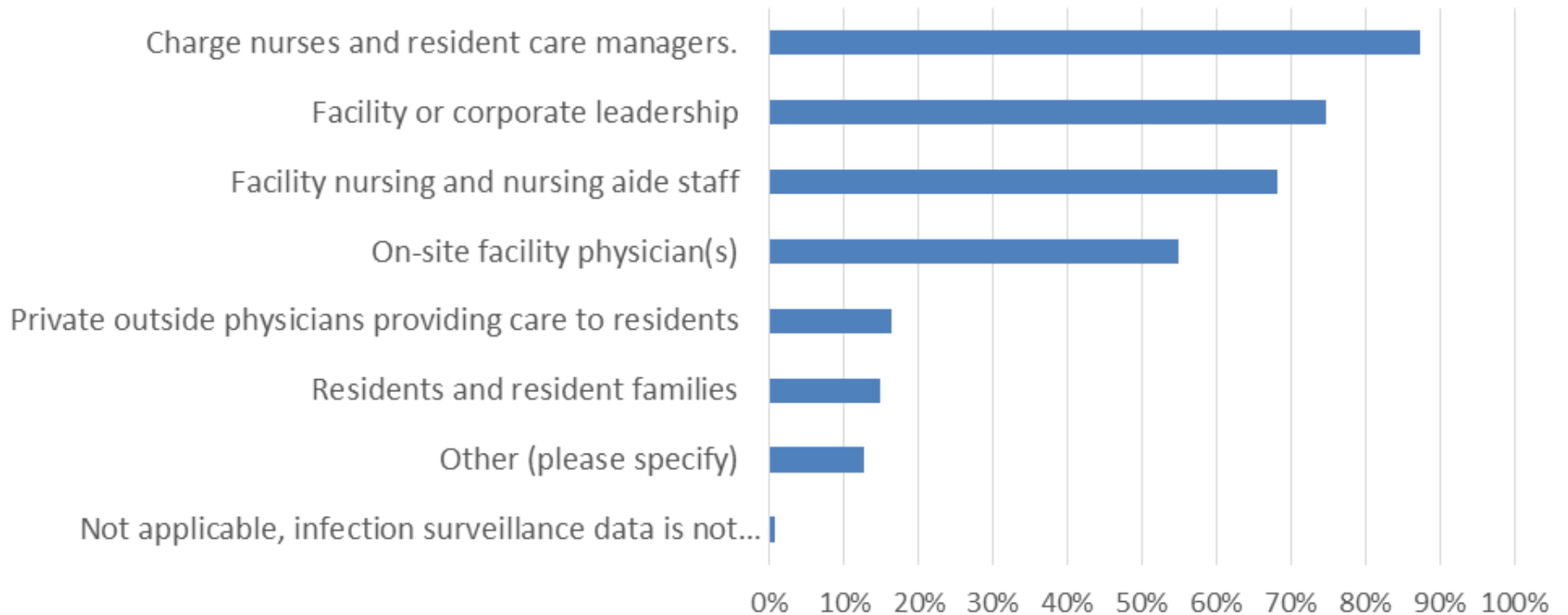
Do you think reporting events positively change practice?

For example, does having to report the number of falls per month, lead to practice changes which decrease falls in your facility?

1. Yes, reporting has led to positive changes in our facility's practice
2. No, reporting does not lead to positive change our facility's practice
3. Maybe
4. Other

Fun Fact #2

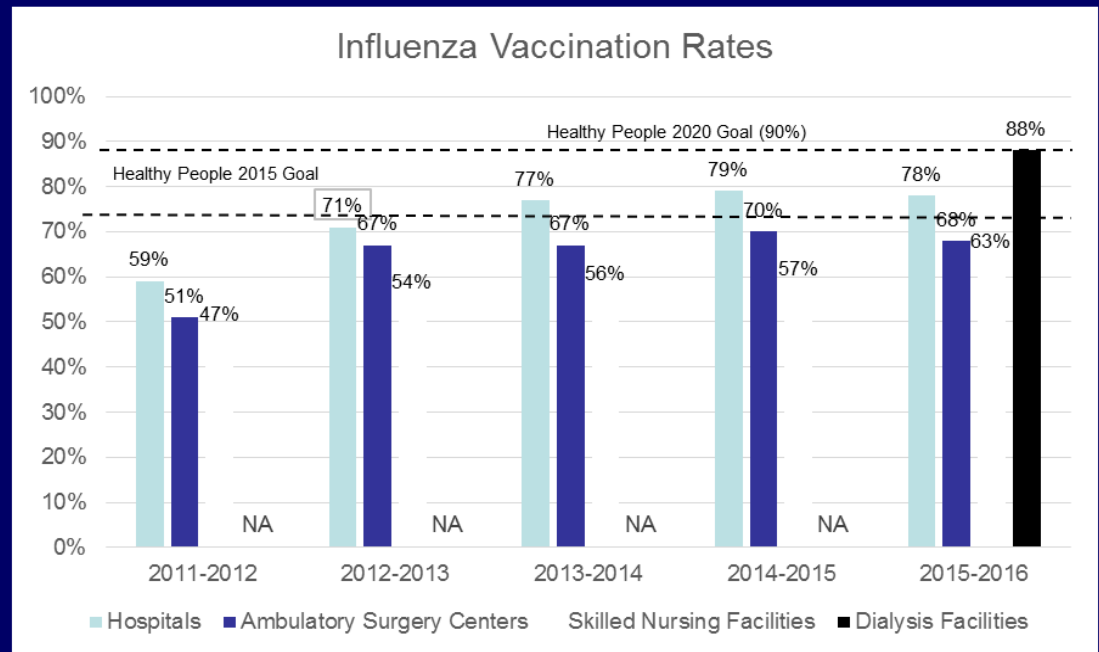
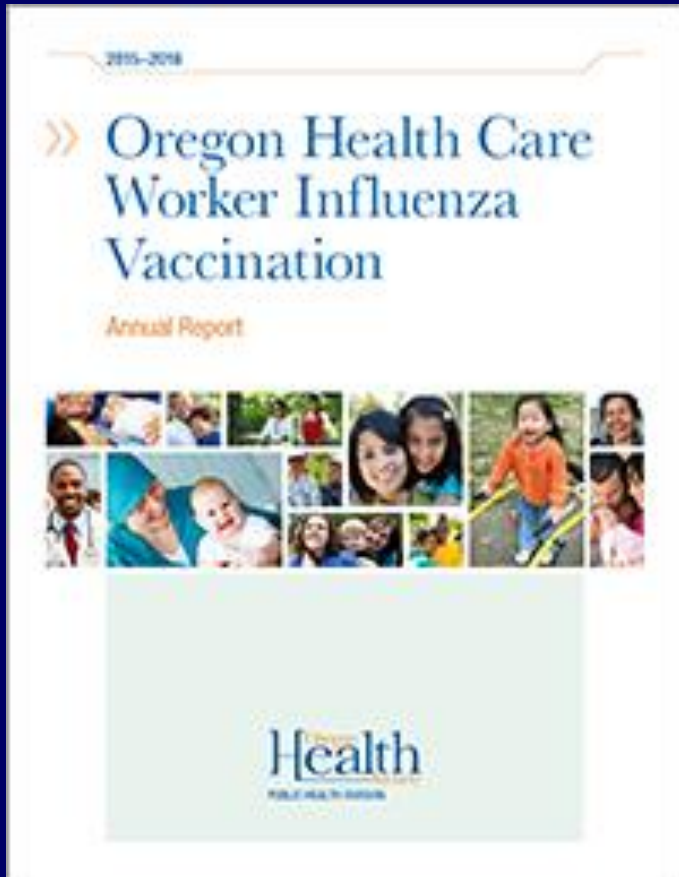
Infection surveillance data is shared with... (N = 135)



HAI reporting requirements for LTCFs

HAI MEASUREMENT TYPE	LONG-TERM CARE FACILITIES	
	CMS REQUIREMENTS ²	OREGON REQUIREMENTS ³
ANNUAL SURVEY	N/A	<i>Evidenced-based elements of patient safety performance annual survey (2015)</i>
HEALTHCARE WORKER INFLUENZA VACCINATION	N/A	<i>Healthcare Worker Influenza Vaccination Survey (2010)</i>
DIALYSIS EVENT	N/A	N/A
OTHER	<i>All minimum data set (MDS) elements required by the Skilled Nursing Facility Prospective Payment System</i>	<i>All minimum data set (MDS) elements including urinary tract infection in the last 30 days (2012)</i>

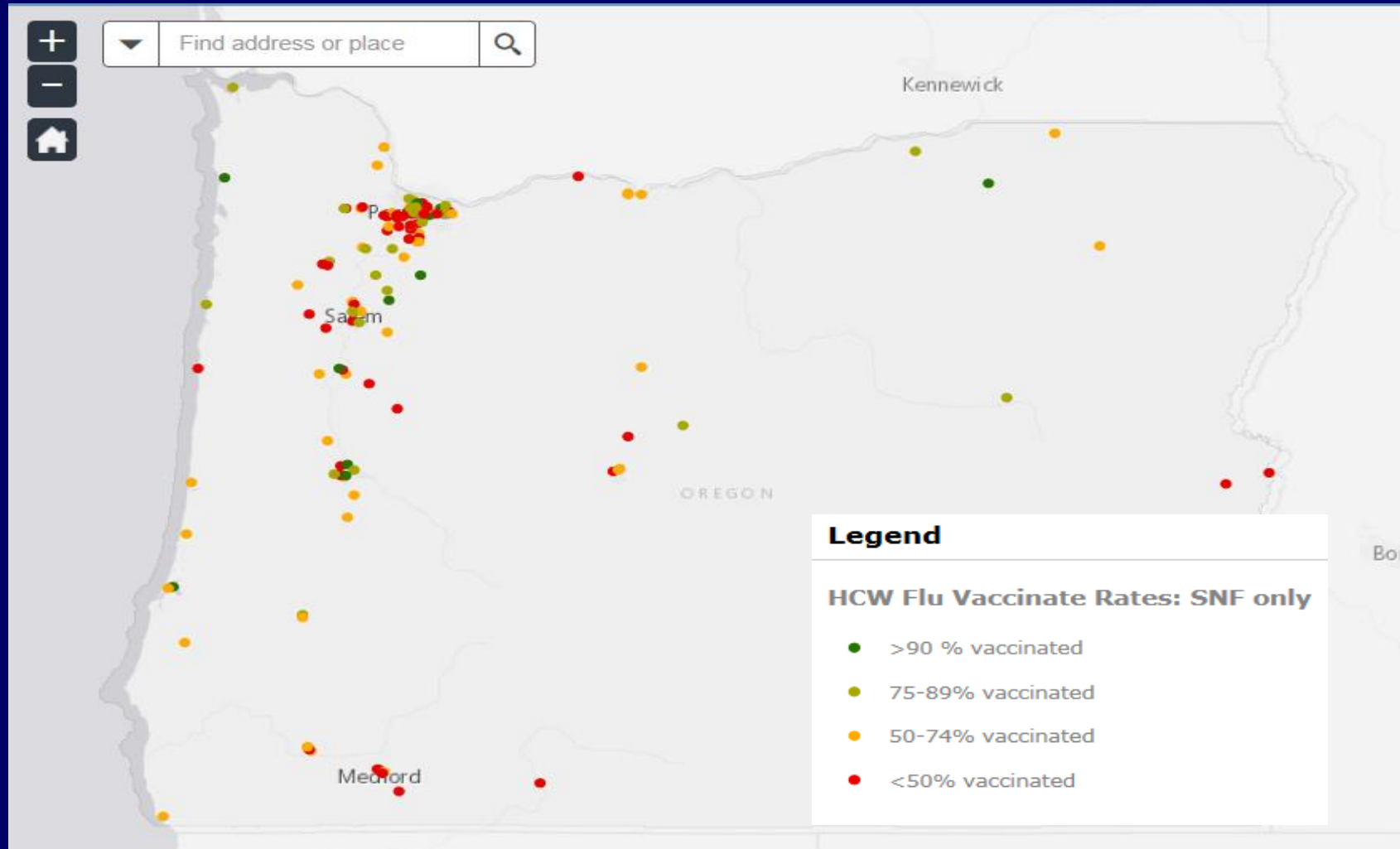
What we count matters



HCW Vaccination Rates



Updated interactive maps: 2014-15



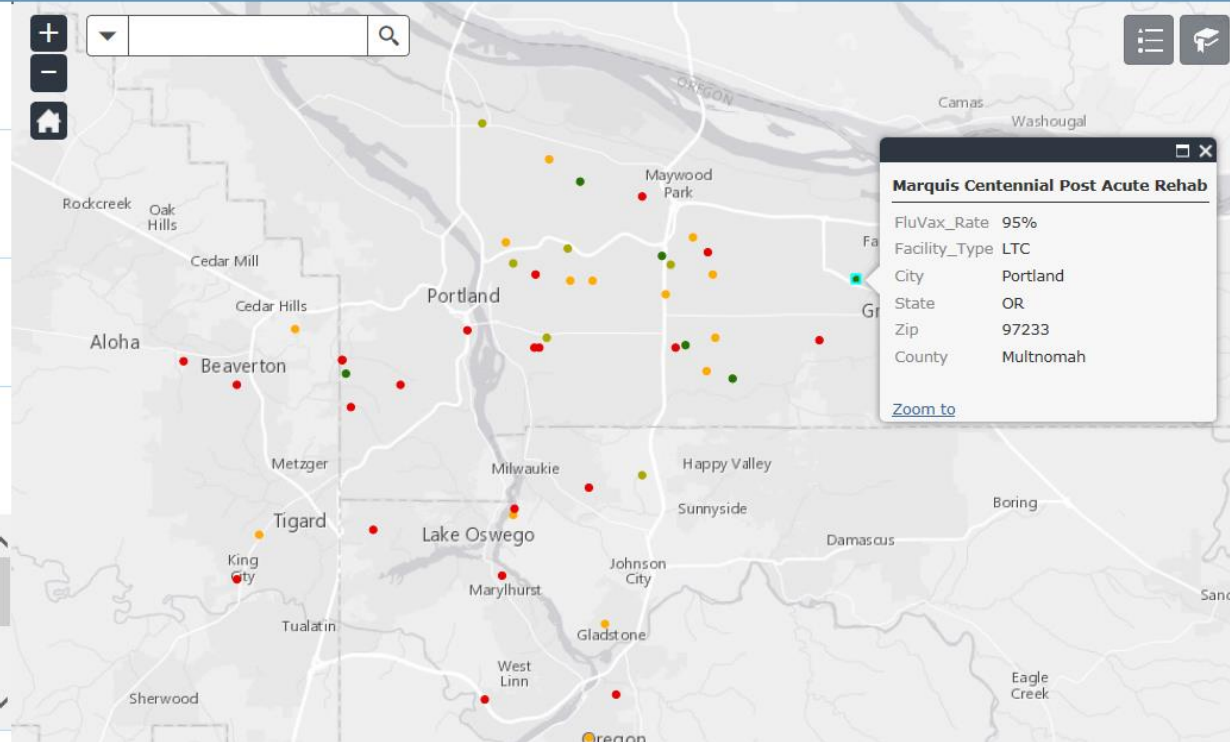
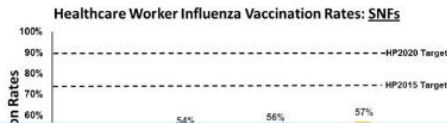
Healthcare worker influenza vaccination by facility

Healthcare Worker Influenza Vaccination Rate

A story map    

- 1 2014-2015 Healthcare Worker Influenza Vaccination Rates: All Facility Types
- 2 2014-2015 Healthcare Worker Influenza Vaccination Rates: Hospitals Only
- 3 2014-2015 Healthcare Worker Influenza Vaccination Rates: Ambulatory Surgery Centers Only
- 4 2014-2015 Healthcare Worker Influenza Vaccination Rates: Skilled Nursing Facilities

Collectively, skilled nursing facilities did not meet the HP2015 goal of 75% vaccination. Although rates have steadily increased since reporting began in 2011, progress has been minimal.



Examples of reporting in action

- Hepatitis associated with medical care
 - Reviewed outpatient practice, and notified >1,200 Oregonians
 - Reviewed dialysis center practice
- Group A streptococcal disease
 - Report of resident cases in facility led to survey that found carriage in 30% residents and 20% of staff
- Influenza/respiratory disease
 - Local health department helps identify contacts for prophylaxis, decreasing morbidity and death
 - Local health departments assisted 59 facilities during 2015
- Norovirus/gastrointestinal disease
 - Assisted 81 facilities during 2015

National Health Safety Network (NHSN)

- CDC's NHSN is largest HAI reporting system in the US
- For healthcare facilities
 - Share data with HCWs, leadership, other partners
 - Meet Centers for Medicaid and Medicare Services (CMS) reporting requirements
 - Benchmark against national standards
- For patients
 - Public access to quality metrics via CMS Compare:
<https://www.medicare.gov/nursinghomecompare/search.html>
- For state and national agencies
 - Identify emerging areas of concern
 - Measure progress towards goals



NHSN for long-term care facilities

The screenshot shows the NHSN website for long-term care facilities. The main heading is "Tracking Infections in Long-term Care Facilities". Below this, there is a navigation menu on the left with categories like "NHSN", "About NHSN", "Enroll Here", "Materials for Enrolled Facilities", "Ambulatory Surgery Centers", "Acute Care Hospitals/Facilities", "Long-term Acute Care Hospitals/Facilities", "Long-term Care Facilities", "Outpatient Dialysis Facilities", "Inpatient Rehabilitation Facilities", "Inpatient Psychiatric Facilities", "MDRO & CDI LabID Event Calculator", "VAE Calculator", "FAQs about HCP Influenza Vaccination Summary Reporting in NHSN", "FAQs About the Hemovigilance Module", "Group Users", "Analysis Resources", "Annual Reports", and "CMS Requirements".

The main content area features a large image of a healthcare worker assisting an elderly patient. Below the image, there are several modules for tracking and reporting infections:

- 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
- Surveillance for Healthcare Personnel Exposure**
 - Training
 - Protocols
 - Forms
 - Support Materials
 - Analysis Resources
 - FAQs
- Surveillance for Healthcare Personnel Vaccination**
 - Training
 - Protocols
 - Forms
 - Support Materials
 - Analysis Resources
 - FAQs
- UTI - Report Urinary Tract Infections**
 - Training
 - Protocols
 - Forms
 - Support Materials
 - Analysis Resources
 - FAQs

- Modules for
 - UTI
 - MDRO/*C. difficile*
 - HCW vaccination
 - Process measures
 - Hand hygiene
 - Contact precautions
 - HCW bloodborne pathogen exposure
- CMS requirements ahead?

NHSN: Training & analysis options

National Healthcare Safety Network (NHSN) Training



Our mission is to offer learning opportunities in a variety of formats that enhance the knowledge and skills of NHSN facility- and group-level participants and their partners in order that they may effectively use the data obtained from the surveillance system to improve patient and healthcare personnel safety.

Objectives

- Convey NHSN data collection methods, submission requirements, and analysis options to participants so that they may acquire, submit, and disseminate high quality, actionable data.
- Prepare participants to use the NHSN reporting application accurately and efficiently.
- Enhance participants' and their partners' understanding of data quality and the value of adverse event monitoring.
- Encourage collaboration among participants and partners to improve the patient and healthcare personnel safety across the spectrum of care.



National Healthcare Safety Network (NHSN)

Long-term Care Facility (LTCF) Component

Laboratory-identified (LabID) Event Module:
Clostridium difficile Infection (CDI) Event Reporting
Multidrug-Resistant Organism (MDRO) Event Reporting



COURSE CATALOG

Course descriptions for NHSN components, modules and events.



PATIENT SAFETY COMPONENT TRAINING

Self-paced training for specific module and events.



Examples of NHSN data in action

- Targeted Assessment for Prevention (TAP) strategy
 - Estimate absolute number of infections need to prevent
- Healthcare worker influenza vaccination rates
 - Used by facilities to benchmark progress
- Data validation highlights areas to improve surveillance methods
 - CLABSI, 2012
 - *C.difficile* LabID events, 2013
- Case identification for surgical site infection cluster linked to vendor

Executive summary: Health care-associated infections in Oregon hospitals — 2014

Health care-associated infections (HAIs) can have devastating consequences for patients. The summary below shows how 2014 data from 61 Oregon hospitals compares to: 1) recent HAI data for the U.S. as a whole; and 2) national HAI reduction targets set for 2013 by the U.S. Department of Health and Human Services (HHS).*

CLABSIs†

CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS 35 INFECTIONS

A CLABSI occurs when germs enter the blood along a tube (central line) placed in a large vein.

Oregon } ✓ Performed statistically better than the U.S.
hospitals } ✓ Exceeded national reduction target set by HHS

MRSA BLOODSTREAM INFECTIONS (MRSA BSIs)

HOSPITAL-ONSET MRSA BSI 61 LABORATORY-IDENTIFIED EVENTS

An MRSA BSI is a difficult to treat infection caused by germs that enter the body through wounds or medical devices.

Oregon } ✓ Performed statistically better than the U.S.
hospitals } ✓ Exceeded national reduction target set by HHS

C. Difficile infections

HOSPITAL-ONSET C. DIFFICILE 732 LABORATORY-IDENTIFIED EVENTS

C. difficile spreads to patients from unclean hands and surfaces in hospitals, leading to colon infection and diarrhea.

Oregon } ✓ Performed statistically better than the U.S.
hospitals } ✗ Did not meet national reduction target set by HHS

CAUTIs

CATHETER-ASSOCIATED URINARY TRACT INFECTIONS 182 INFECTIONS

CAUTIs occur when germs travel up a urinary catheter that was not put in correctly, not kept clean, or left in too long.

Oregon } = Performed statistically equal to the U.S.
hospitals } ✗ Did not meet national reduction target set by HHS

SSIs

SURGICAL SITE INFECTIONS

An SSI occurs when germs enter a surgical wound during or after surgery. The data below are for deep incisional and organ space SSIs only.

Coronary artery bypass graft (heart surgery) 10 SSI

Oregon } = Performed statistically equal to the U.S.
hospitals } ✓ Exceeded national reduction target set by HHS

Laminectomy (back surgery) 30 SSI

Oregon } ⚪ No recent national comparison available
hospitals } ✓ Exceeded national reduction target set by HHS

Colon surgery 101 SSI

Oregon } = Performed statistically equal to the U.S.
hospitals } ✗ Did not meet national reduction target set by HHS

Abdominal hysterectomy surgery 25 SSI

Oregon } = Performed statistically equal to the U.S.
hospitals } ✗ Did not meet national reduction target set by HHS

Hip replacement surgery 56 SSI

Oregon } = Performed statistically equal to the U.S.
hospitals } ✗ Did not meet national reduction target set by HHS

Knee replacement surgery 41 SSI

Oregon } = Performed statistically equal to the U.S.
hospitals } ✓ Exceeded national reduction target set by HHS

THE TAKE AWAY

In 2014, Oregon hospitals exceeded national targets for reducing bloodstream infections and infections following heart, back and knee surgeries. More work is needed to prevent *C. difficile* infections, catheter-associated urinary tract infections and infections following colon, hysterectomy and hip surgeries.

What can I do to improve reporting?

- **Post** the reportable disease posters
- **Educate** staff that outbreaks of disease in facilities are reportable to your local public health department
- **Implement** National Health Safety Network reporting
 - Health Insight and HAI program working to enroll skilled nursing facilities
 - *C. diff* LabID event
 - CAUTI
 - Hand hygiene
 - Personal protective equipment use
 - <http://www.cdc.gov/nhsn/ltc/>

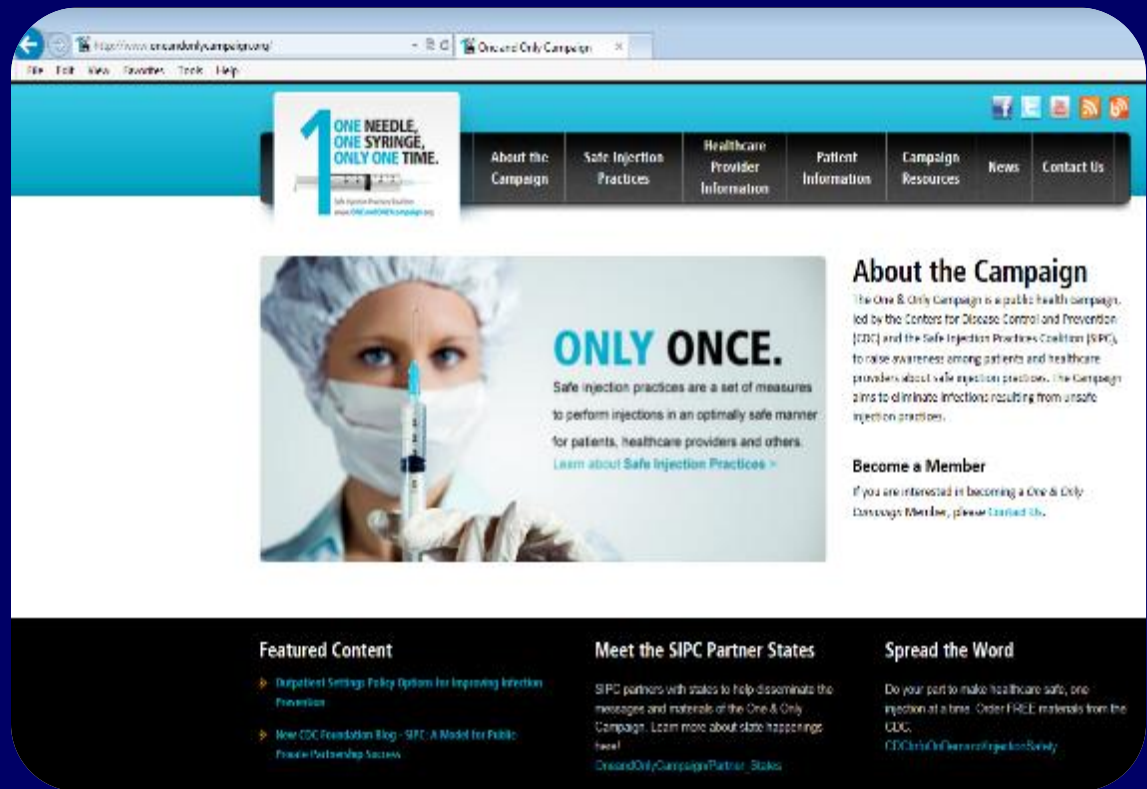
Health Insight contact: Leah Brandis, LBrandis@healthinsight.org

SUPPORT PREVENTION



Safe injection practices

- Over 50 US outbreaks (1998-2014) due to unsafe injections
- >700 patients infected
- >150,000 patients notified of potential exposure
- Inappropriate use and maintenance of fingerstick devices and glucometers one of several causes



<http://www.oneandonlycampaign.org/>

Insulin pen reuse incidents

Reuse of insulin pens for multiple patients, reportedly after changing needles



- 2008: 185 patients notified, NY hospital
- 2009: 2,114 patients notified, TX hospital
- 2011: 2,401 patients notified, WI outpatient and hospital
- 2013: multiple incidents, NY and NC, including 2 VA Medical Centers and a private hospital

Fingerstick or lancing devices

- Used to prick skin and obtain blood drop
- Reusable Devices: devices resemble a pen and have the means to remove and replace lancet after each use
 - Never use on more than one person
 - If used, should be by individuals who self-monitor
- Single-use auto-disabling fingerstick devices
 - Devices that are disposable and prevent reuse through an auto-disabling feature
 - Should be used in settings where assisted monitoring of blood glucose is performed



A simple rule for safe care:
Fingerstick devices should never be used for more than one person.

Blood glucose monitors

- Blood glucose meters measure glucose levels
- Whenever possible, blood glucose meters should be assigned to an individual person and not be shared
- If meters must be shared, the device should be cleaned and disinfected after every use, per manufacturer's instructions
- If the manufacturer does not specify how the device should be cleaned and disinfected then it should not be shared.



A simple rule for safe care:
If shared, blood glucose meters should be cleaned
and disinfected after every use.

Insulin administration



- Insulin Pens: Intended for use by a single person
 - Pens have an insulin reservoir, or an insulin cartridge for an individual to self-administer several doses
 - Needle must be changed before each injection
- Insulin Vials: Multidose vials of insulin should be dedicated to a single person whenever possible.
 - If the vial must be used for more than one person it should be stored and prepared in a dedicated medication preparation area outside of the patient care environment
 - Always enter vial with new needle and syringe and dispose immediately after use in approved sharps container.

A simple rule for safe care:

Injection equipment (e.g., insulin pens, needles and syringes) should never be used for more than one person

60 second check

- 1 insulin pen = 1 resident
- Label, check name
- Not damaged
- Expiration
- Recheck name
- Storage



COLORADO
Department of Public
Health & Environment



A simple **60 second safety check** can prevent unintended errors which place residents at risk of acquiring bloodborne pathogen infections such as hepatitis B, hepatitis C, and HIV.

Please take time to check your steps.

For additional information please visit:

www.oneandonlycampaign.org/partner/Colorado

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Injection Safety Coordinator
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April.Budorf@state.co.us

**BE AWARE
DON'T SHARE**



**ONE INSULIN PEN,
ONLY ONE PERSON**



2015 Assisted Living Resources

Insulin Pen Safety 60 Second Check

Check the following 6 steps:

- 1 • The pen is used for only one resident, even if the needle is changed between use. *Insulin pens should never be used for more than one person.*
- 2 • Resident's full name is on the barrel of the insulin pen, not just the cap.
- 3 • Pens with missing, detached, excessively soiled or damaged labels are immediately destroyed or returned to the pharmacy for disposal.
- 4 • Medication is not expired.
- 5 • Verify that you are delivering the right pen, to the right resident, at the right time.
- 6 • Medications should not be stored with disinfectants, insecticides, bleaches, household cleaning solutions, poisons, body fluids or food.
• Medications should be stored in separate compartmentalized packages, containers or shelves to prevent intermingling of medications.



Process-specific resources

BE AWARE
DON'T SHARE



Insulin pens that contain more than one dose of insulin are only meant for one person.

Insulin pens should never be used for more than one person.

They are only approved for use on individual patients, even when the needle is changed or when there is leftover medicine. **No exceptions.**

**ONE INSULIN PEN,
ONLY ONE PERSON**

The *One & Only Campaign* is a public health effort to eliminate unsafe medical injections. To learn more about safe injection practices, please visit OneandOnlyCampaign.org.



For the latest news and updates, follow us on



Twitter @injectionsafety and Facebook/OneandOnlyCampaign.

This material was developed by CDC. The *One & Only Campaign* is made possible by a partnership between the CDC Foundation and Lilly USA, LLC.

DON'T DO IT

Sharing Insulin Pens and Other Injection Equipment Harms Patients

In 2009, in response to reports of improper use of insulin pens in hospitals, the Food and Drug Administration issued an alert reminding healthcare providers that insulin pens are meant for use on a single person only and are not to be shared. Unfortunately, there have been continuing reports of patients placed at risk of bloodborne and bacterial pathogen transmission through sharing of insulin pens.



A SIMPLE RULE

Injection equipment (e.g., insulin pens, needles and syringes) should **never** be used for more than one person.



About the Safe Injection Practices Coalition

The Safe Injection Practices Coalition (SIPC) is a partnership of healthcare-related organizations led by the Centers for Disease Control and Prevention. The SIPC developed the *One & Only Campaign*—a public health effort to eliminate unsafe medical injections by raising awareness of safe injection practices.

For a list of SIPC partners, for more information about the campaign, and to view additional resources including videos and other materials, please visit:

OneandOnlyCampaign.org



For the latest news and updates, follow us on Twitter @injectionsafety and Facebook/OneandOnlyCampaign.

This material was developed by CDC. The *One & Only Campaign* is made possible by a partnership between the CDC Foundation and Lilly USA.

BE AWARE DON'T SHARE



ONE INSULIN PEN, ONLY ONE PERSON



What Every
Healthcare Provider
Needs To Know

Materials available for order free of charge



One & Only Campaign Materials For Order Via CDC-INFO



Safe Injection Practices DVD
Item 22-0087



Rx for Safe Injections Poster
Item 22-0696



It's Elementary Poster
Item 22-0697



Provider Brochure
Item 22-0702



Patient Brochure
Item 22-0701



Injection Safety Infographic
Item 22-1504



Single-Dose & Multi-Dose Vial Infographic
Item 22-1599



Injection Safety Pocket Card
Item 22-0713



Logo Poster for General Public
Item 22-0699

You Can Order 3 Ways



SCAN
Scan with your smartphone to access the ordering page



CALL
1-800-CDC-INFO



CLICK
www.cdc.gov/pubs/CDCInfoOnDemand.aspx

Select Injection Safety–One & Only Campaign to order materials

The One & Only Campaign is made possible by a CDC Foundation partnership with Eli Lilly and Company



Be Aware Don't Share Insulin Poster
Item 22-1503



Be Aware Don't Share Insulin Brochure
Item 22-1501



Injection Safety Dangerous Misperceptions Flyer
Item 22-1178



Injection Safety Healthcare Provider Checklist
Item 22-1176



Injection Safety Fact Sheet
Item 22-1502



Injection Safety Healthcare Provider Toolkit
Item 22-1177

Drug diversion: Not just a hospital problem

DRUG DIVERSION* SPREADS INFECTION FROM HEALTHCARE PROVIDERS TO PATIENTS



HEALTHCARE PROVIDER
with Hepatitis C or other
bloodborne infection
tamper with injectable drug



**CONTAMINATED
INJECTION EQUIPMENT
AND SUPPLIES**
present in the
patient care environment



EXPOSURE OF PATIENT
results from use of contaminated
drug or equipment for patient
injection or infusion

*Drug diversion occurs when prescription medicines are obtained or used illegally by healthcare providers.

FOR MORE INFORMATION, VISIT CDC.GOV/INJECTIONSAFETY/DRUGDIVERSION



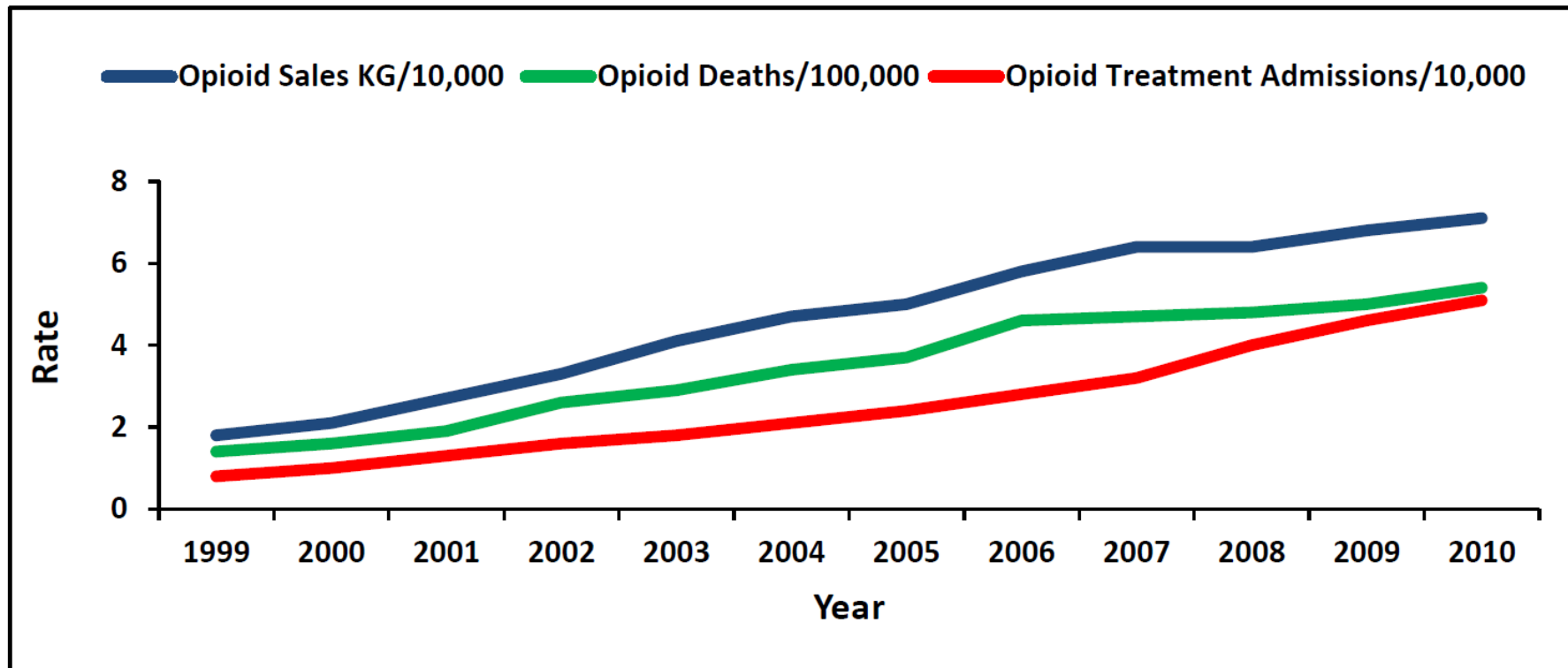
FOR MORE INFORMATION, VISIT CDC.GOV/INJECTIONSAFETY/DRUGDIVERSION

*Drug diversion occurs when prescription medicines are obtained or used illegally by healthcare providers.



Why? Increasing opioid use

Figure 2. Rates of opioid overdose deaths, opioid sales, and opioid substance abuse treatment admissions, United States, 1999-2010



Context: Substance abuse in HCW tracks with population at large

- 10-12% of physicians will develop substance use disorder during careers^{1,2}
- 5 year British Medical Journal (BMJ) study found that physicians with substance use disorders are
 - 87% male
 - **36% abused opioids**
 - 50% abused alcohol
 - **14% history of IDU**
- Less data on non-physician HCW substance abuse, but diversion documented in these HCWs

Mechanisms of diversion

- False documentation (e.g., medication not administered to the patient or “wasted” and instead used by the HCW)
- Scavenging of wasted medication (e.g., removal of residual medication from trash or used syringes)
- Theft by tampering (e.g., removal of medication from a container or syringe and replaced with similarly appearing solution that may be administered to patients)

Risks to patients



- Patient safety is compromised whenever drug diversion by HCWs occur
- Harms can include
 - Failure to receive prescribed medication (including pain management)
 - Exposure to substandard care from an impaired HCW
 - Exposure to potentially life-threatening infections

Resource: CDC injection safety website

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

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Injection Safety

Injection Safety

- CDC's Role
- CDC Statement
- Information for Providers
- Information for Patients
- Preventing Unsafe Injection Practices
- Drug Diversion**
 - U.S. Outbreaks Associated with Drug Diversion by Healthcare Providers, 1983-2013
 - Infection Prevention during Blood Glucose Monitoring and Insulin Administration
- Recent Publications
- Recent Meetings
- The One & Only Campaign
- Patient Notification Toolkit


[Injection Safety](#)

[Recommend](#) [Tweet](#) [Share](#)

Risks of Healthcare-associated Infections from Drug Diversion

When prescription medicines are obtained or used illegally, it is called drug diversion. Addiction to [prescription narcotics](#) called opioids has reached epidemic proportions and is a major driver of drug diversion. This webpage focuses on diversion involving healthcare providers who steal controlled substances such as opioids for their own use. This can result in several types of patient harm including:

- Substandard care delivered by an impaired healthcare provider,
- Denial of essential pain medication or therapy, or
- Risks of infection (e.g., with hepatitis C virus or bacterial pathogens) if a provider tampers with injectable drugs.



Outbreaks

CDC and state and local health departments have assisted in the investigation of infection outbreaks stemming from drug diversion activities that involved healthcare providers who tampered with injectable drugs. A summary of recent outbreaks is illustrated in the following timeline.

U.S. Outbreaks Associated with Drug Diversion by Healthcare Providers, 1983-2013

[Bacterial outbreak](#)

[Email page link](#)
[Print page](#)
[Subscribe to RSS](#)

[Get email updates](#)
To receive email updates about this page, enter your email address:

[What's this?](#)

Contact Us:

- [Centers for Disease Control and Prevention](#)
1600 Clifton Rd
Atlanta, GA 30333
- [800-CDC-INFO](#)
(800-232-4636)
TTY: (888) 232-6348
- [Contact CDC-INFO](#)

Safe Healthcare BLOG

Join the conversation

Related Links

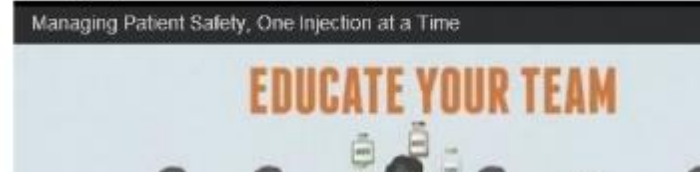
- [CDC's HAI site](#)
- [2007 Guideline for Isolation Precautions](#)
- [HHS Action Plan to Prevent HAIs](#)
- [HICPAC](#)

Training video resources

Check Your Steps! Make Every Injection Safe



Managing Patient Safety, One Injection at a Time



Safe Injection Practices Video – How to Do It Right



<http://www.oneandonlycampaign.org/content/audio-video>

Safe Injection Practices: A Video for Healthcare Providers



3. Inside the OR

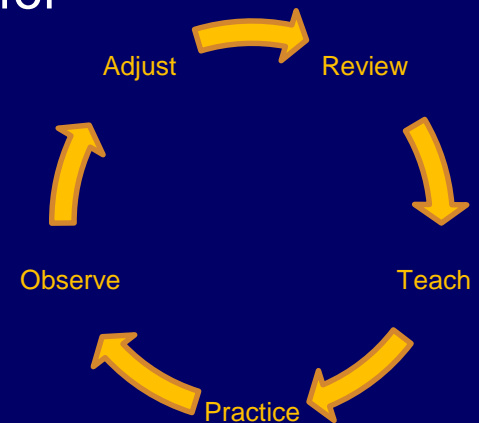


4. Dispelling Injection Safety Myths



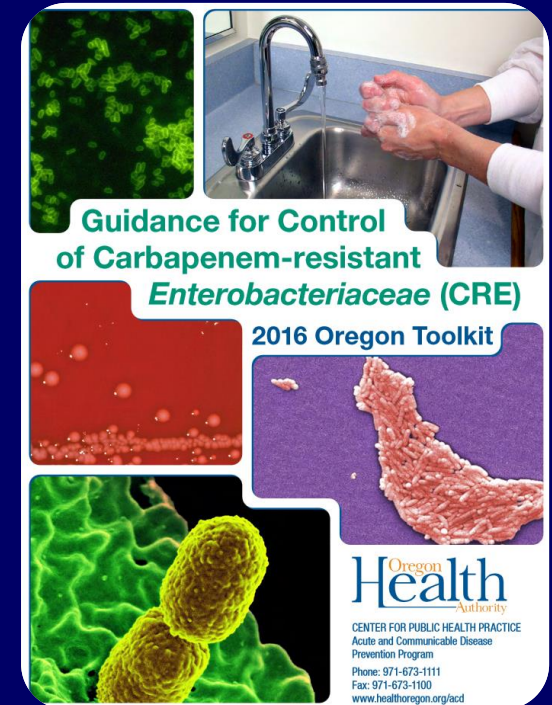
What steps can I take today to improve injection safety?

1. Write or review protocols based on best practice for
 - a. Blood glucose monitoring
 - b. Insulin pen use
 - c. Narcotics administration
2. Teach protocols; practice technical steps
3. Observe, provide feedback; adjust practice; repeat
4. Review for new hires; periodic refreshers
 - a. “Train the trainer” concept perpetuates bad practice
 - b. Competency big focus of regulators



DROP-CRE Network

- Drug-Resistant Organism Prevention and Coordinated Regional Epidemiology Network
- Multi-drug resistant Gram-negative bacteria
- Detection = Lab reporting
- Protection = Specialized testing at Oregon State Public Health Lab
 - Carbapenemase testing in-house
- Prevention
 - Education of patients and providers
 - Interfacility transfer communication
 - Toolkit



Antimicrobial stewardship

The Core Elements of
Antibiotic Stewardship
for Nursing Homes

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



Leadership commitment

Demonstrate support and commitment to safe and appropriate antibiotic use in your facility



Accountability

Identify physician, nursing and pharmacy leads responsible for promoting and overseeing antibiotic stewardship activities in your facility



Drug expertise

Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for your facility



Action

Implement **at least one** policy or practice to improve antibiotic use



Tracking

Monitor **at least one process** measure of antibiotic use and **at least one outcome** from antibiotic use in your facility



Reporting

Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff



Education

Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving antibiotic use

CDI collaborative



- Detection = surveillance = testing
- Protection = contact precautions
- Environment = sporocidal
- Antibiotic stewardship
 - Indication, drug, dose, duration
 - Colonization vs. infection
 - Prevention: UTI prevention, catheter care
- Interfacility transfer communication
 - Communicate, communicate, communicate

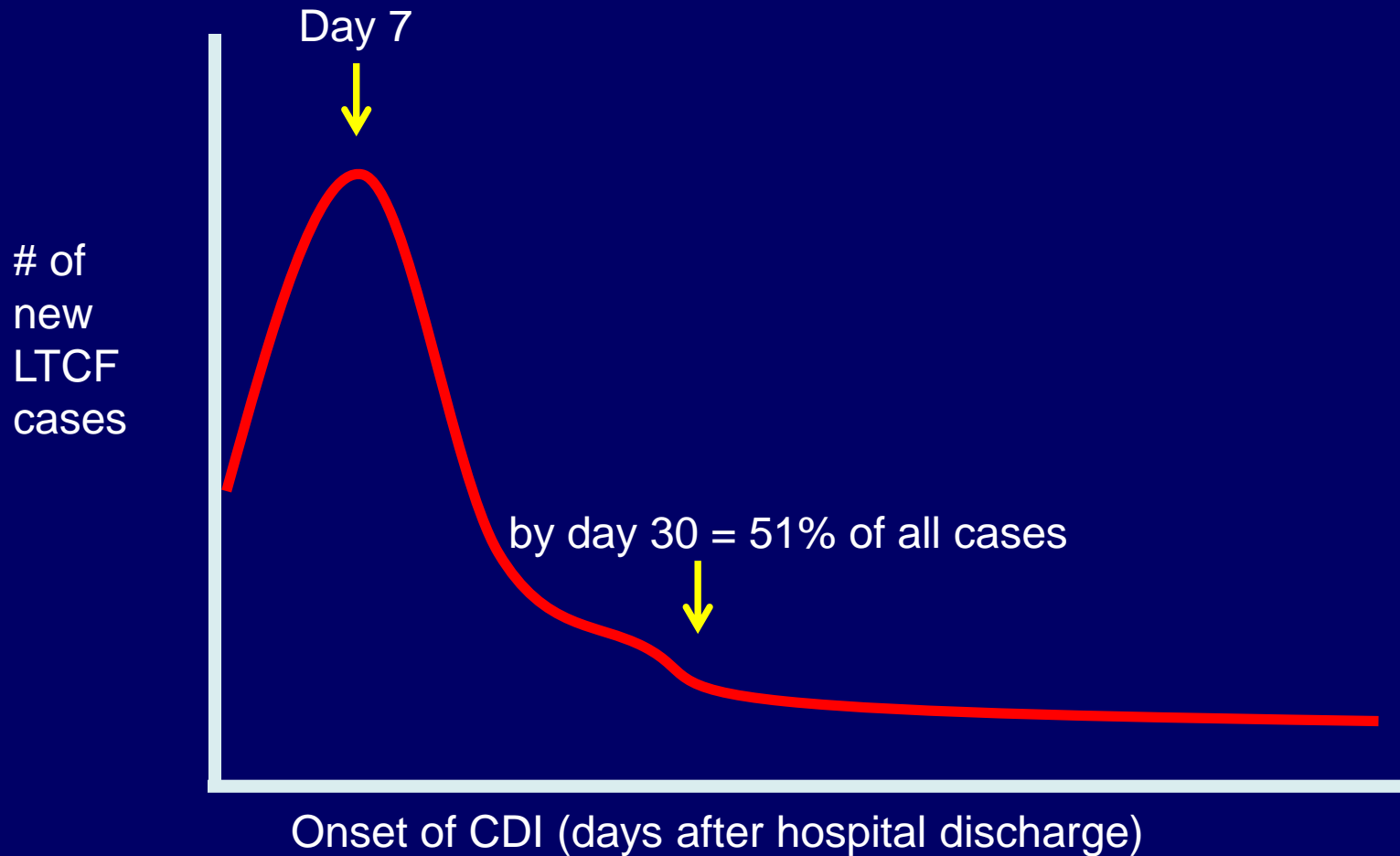


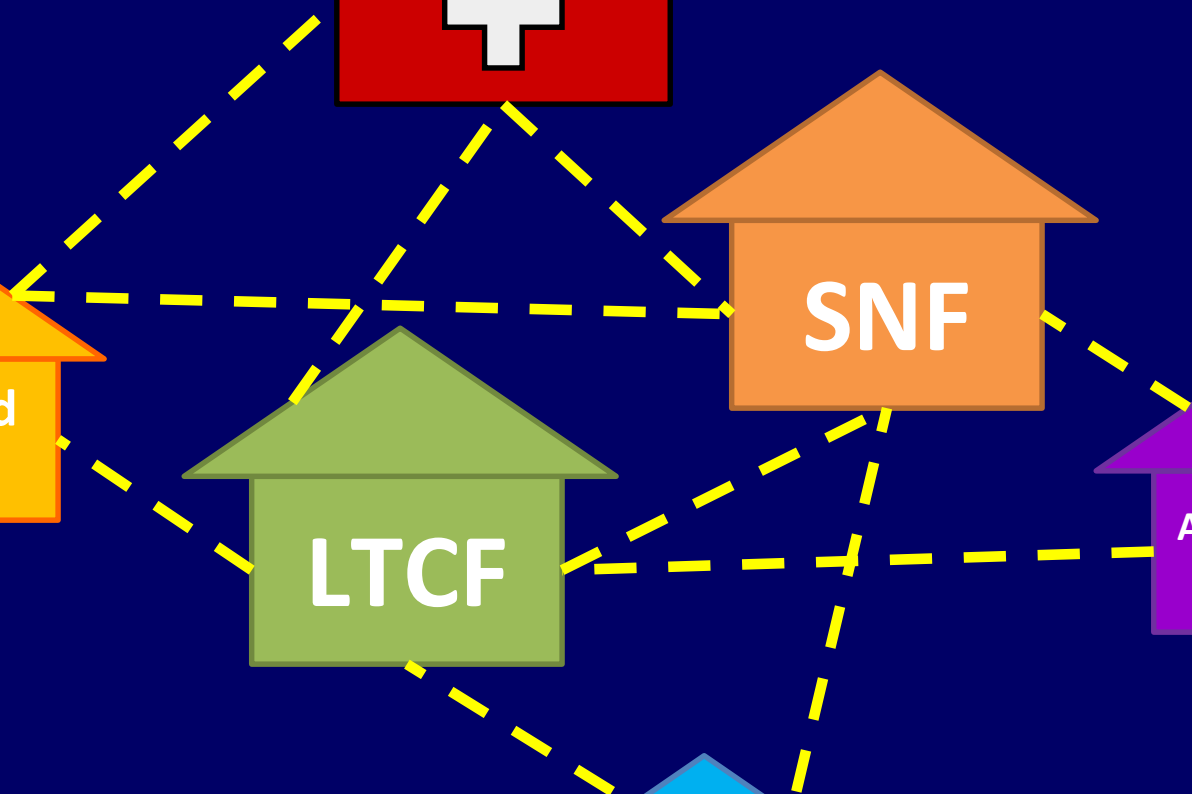
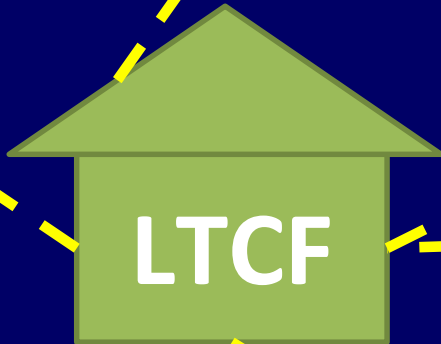
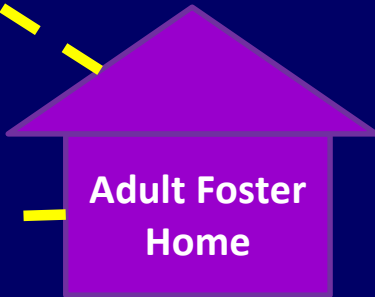
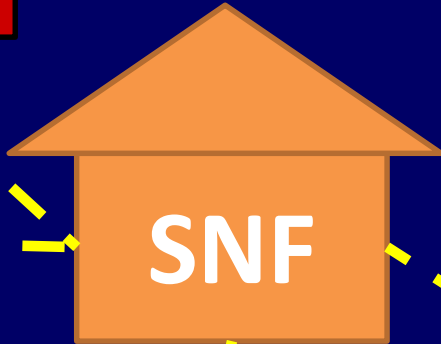
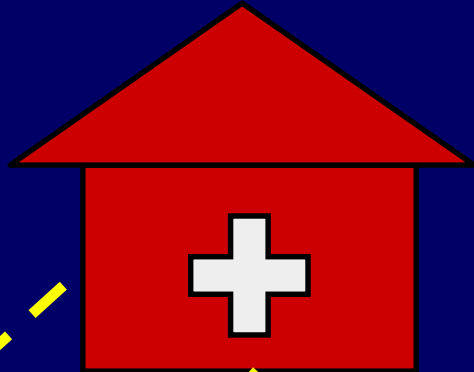
Inter-facility Infection Control Transfer Form

SENDING FACILITY TO COMPLETE FORM and COMMUNICATE TO ACCEPTING FACILITY

Please attach copies of latest culture reports with susceptibilities, if available

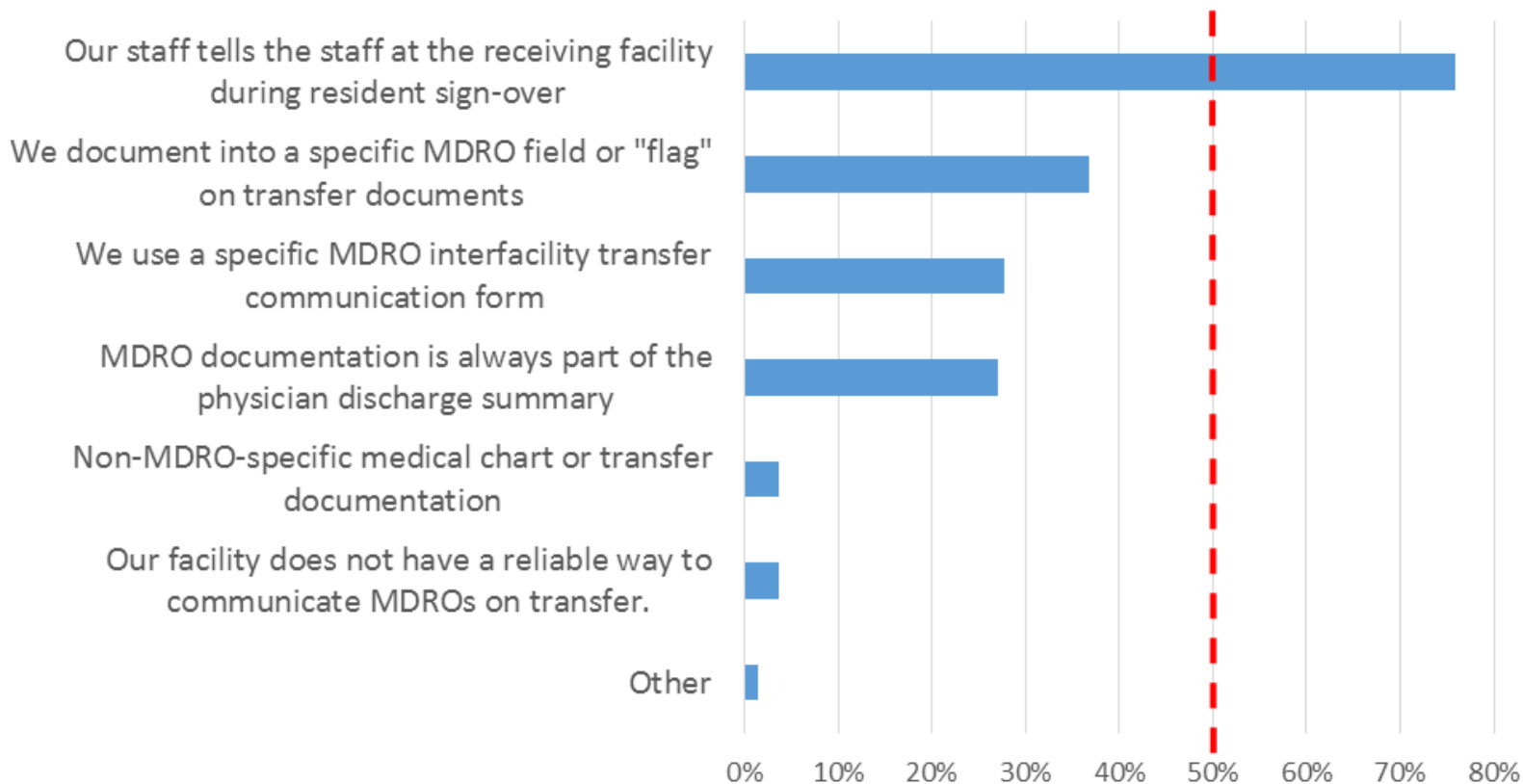
Onset of CDI after hospital discharge to LTCF





Fun fact #3

How does your facility communicate MDRO or CDI at transfer?
(N = 133)



Interfacility transfer communication

- Rule since January 1, 2014
- Healthcare facilities, including
 - Hospitals
 - Birthing centers
 - Dialysis
 - Ambulatory surgery centers
 - Nursing homes, CBC
- Report the receiving facility
 - Readily available, any disease using infection control, MDRO
- Receiving facility reports back
 - If present on admission

The screenshot shows the Oregon Health Authority website. The main heading is "Interfacility Transfer Communication". Below this, there is a sub-heading "Communication During Patient Transfer of Multidrug-Resistant Organisms (MDRO)". The text explains that as part of best practice during patient transfers, information about a patient's medical status, including colonization or infection with a multidrug-resistant organism, should travel with a patient and be readily available to medical providers. There is a list of "On this page:" items: "What does Oregon law require?", "Why are we doing this?", "What should health care facilities do?", "Sample interfacility transfer forms", and "Resources". A section titled "What does Oregon law require?" contains a paragraph about the new rule "Communication During Patient Transfer of Multidrug-Resistant Organisms" OAR 333-019-0052 (pdf) sets patient safety expectations about timely communication between health care facilities about multidrug-resistant organisms or pathogens that warrant Transmission-based Precautions. Transmission-based Precautions are disease- or syndrome-specific precautions taken in addition to Standard Precautions, based on the disease or syndrome transmission route and exposure risk (e.g., influenza requires droplet; tuberculosis requires airborne; diarrhea requires contact). There is also a "Related Resources" section with links to "Diseases A-Z", "Emerging Infections", "CDC's HAI website", "National Healthcare Safety Network (NHSN)", and "HAI Definitions (pdf)". A "Contact Us" section includes "HAI Staff Directory" and "Acute & Communicable Disease Prevention Section".

Facility Logo

Inter-facility Infection Control Transfer Form

SENDING FACILITY TO COMPLETE FORM and COMMUNICATE TO ACCEPTING FACILITY

Please attach copies of latest culture reports with susceptibilities, if available

Patient/Resident Last Name	First Name	Date of Birth
<i>Print or place Patient Label</i>		

Sending Facility Name	Sending Facility Unit	Sending Facility Phone #

Is the patient/resident currently on antibiotics? NO YES DX: _____

Does the patient/resident have pending cultures? NO YES

Is the patient/resident currently on precautions? NO YES

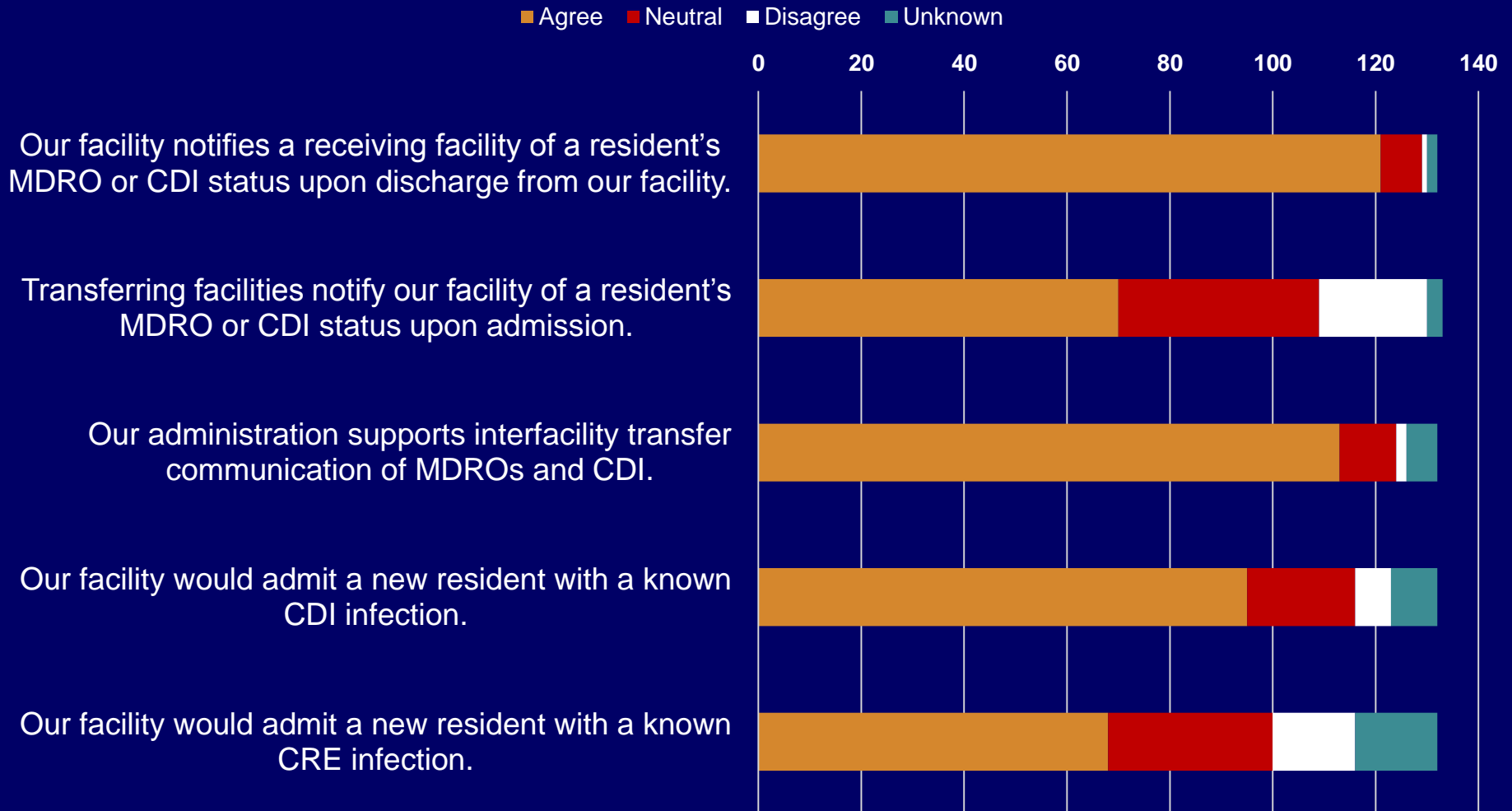
Type of Precautions (check all that apply) Contact Droplet Airborne Other: _____

Does patient currently have an infection, colonization OR a history of a multidrug-resistant organism (MDRO)?	Colonization or history <i>Check if YES</i>	Active infection on treatment <i>Check if YES</i>
MRSA (methicillin-resistant <i>Staphylococcus aureus</i>)	<input type="checkbox"/>	<input type="checkbox"/>
VRE (Vancomycin-resistant <i>Enterococcus</i>)	<input type="checkbox"/>	<input type="checkbox"/>
<i>C. diff</i> (<i>Clostridium difficile</i> , CDI)	<input type="checkbox"/>	<input type="checkbox"/>
<i>Acinetobacter</i> spp., multidrug-resistant	<input type="checkbox"/>	<input type="checkbox"/>
Gram-negative organism resistant to multiple antibiotics* (e.g., <i>E. coli</i> , <i>Klebsiella</i> , <i>Proteus</i> spp.)	<input type="checkbox"/>	<input type="checkbox"/>
CRE (carbapenem-resistant <i>Enterobacteriaceae</i>)	<input type="checkbox"/>	<input type="checkbox"/>
Other**:	<input type="checkbox"/>	<input type="checkbox"/>

*Culture report with multiple antibiotics marked resistant (R); send copy of report with susceptibilities.

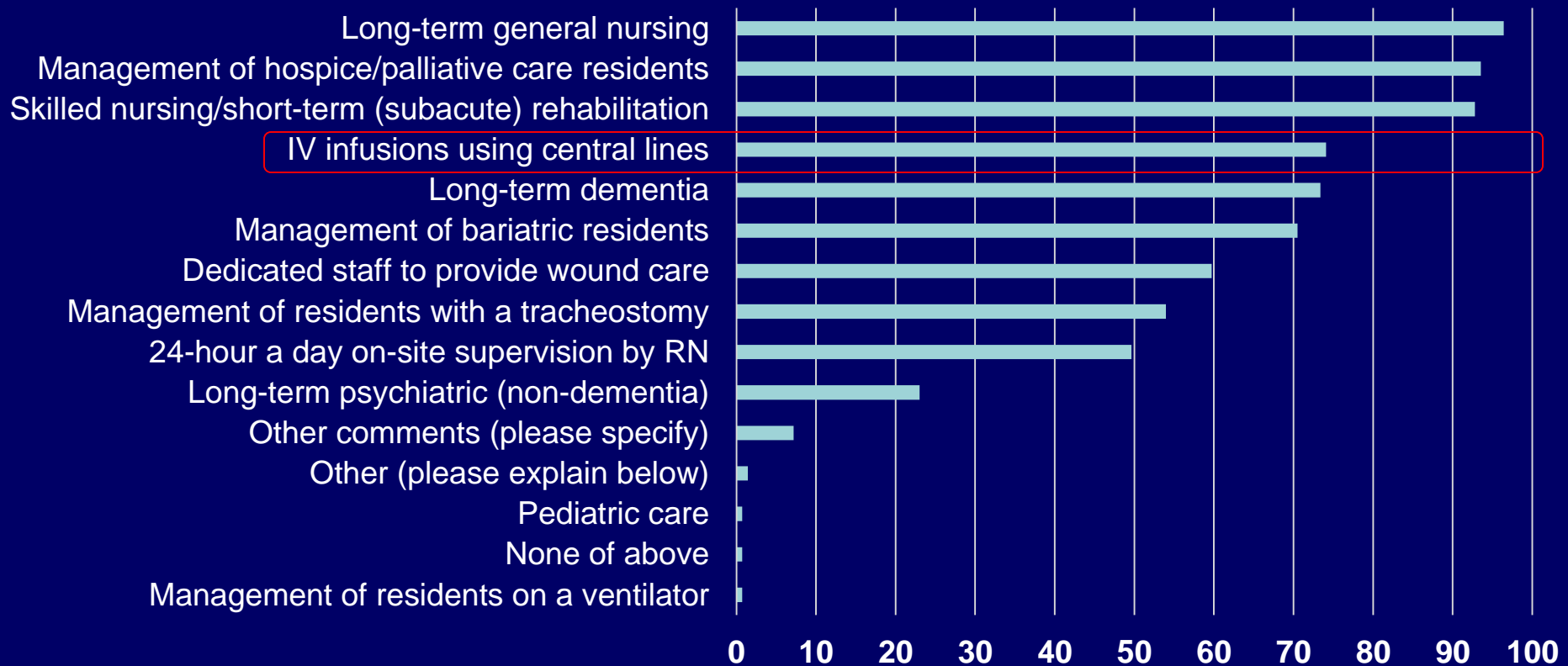
**Other: lice, scabies, shingles, norovirus, influenza, tuberculosis, etc.

Interfacility transfer communication performance, as reported by SNFs — Oregon, 2015 (N = 133)



Fun fact #4: Increasing acuity of care

Type of Resident Services Delivered, % (N = 139)

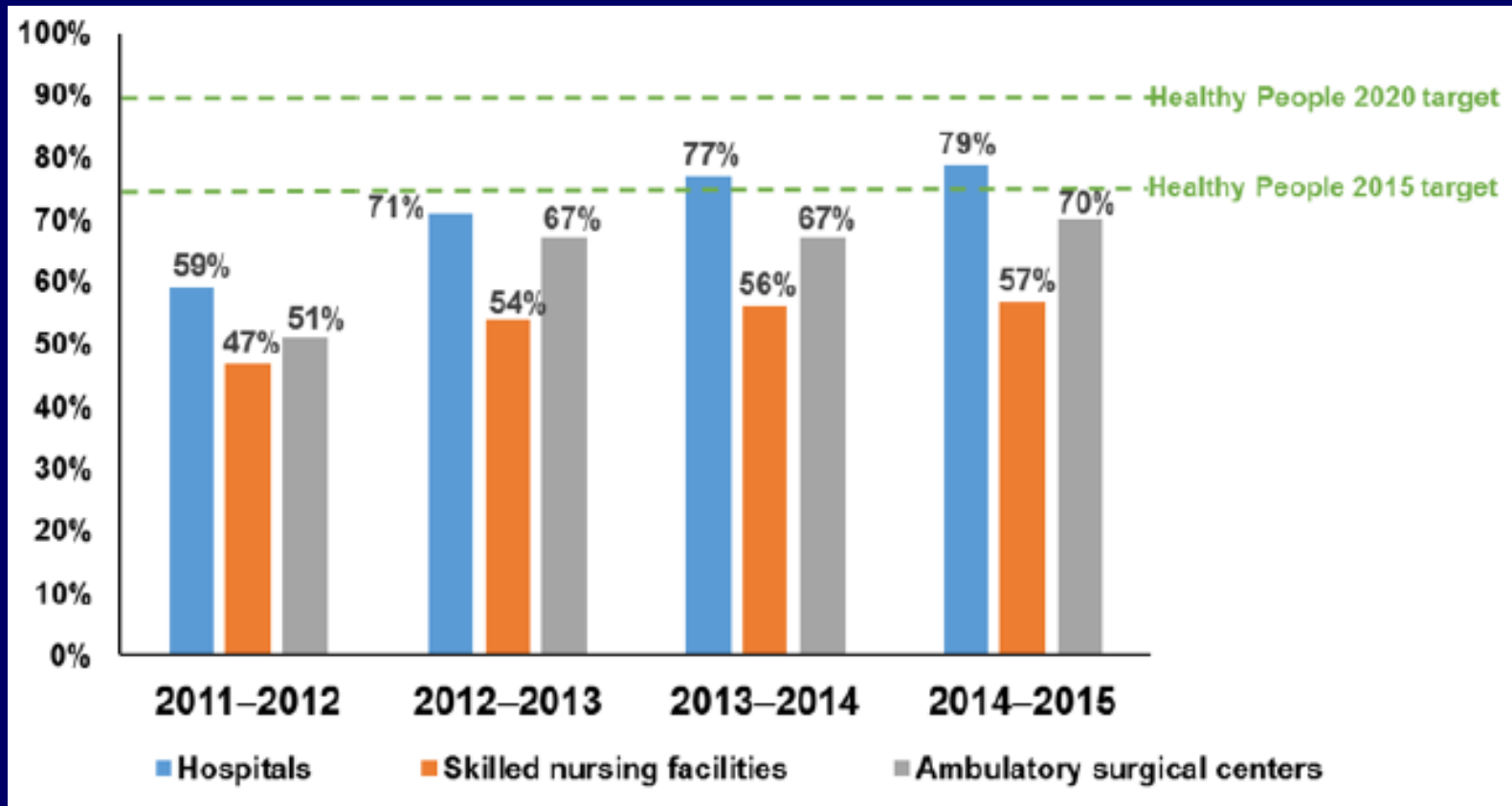


What types of infection risks are present in your facility?



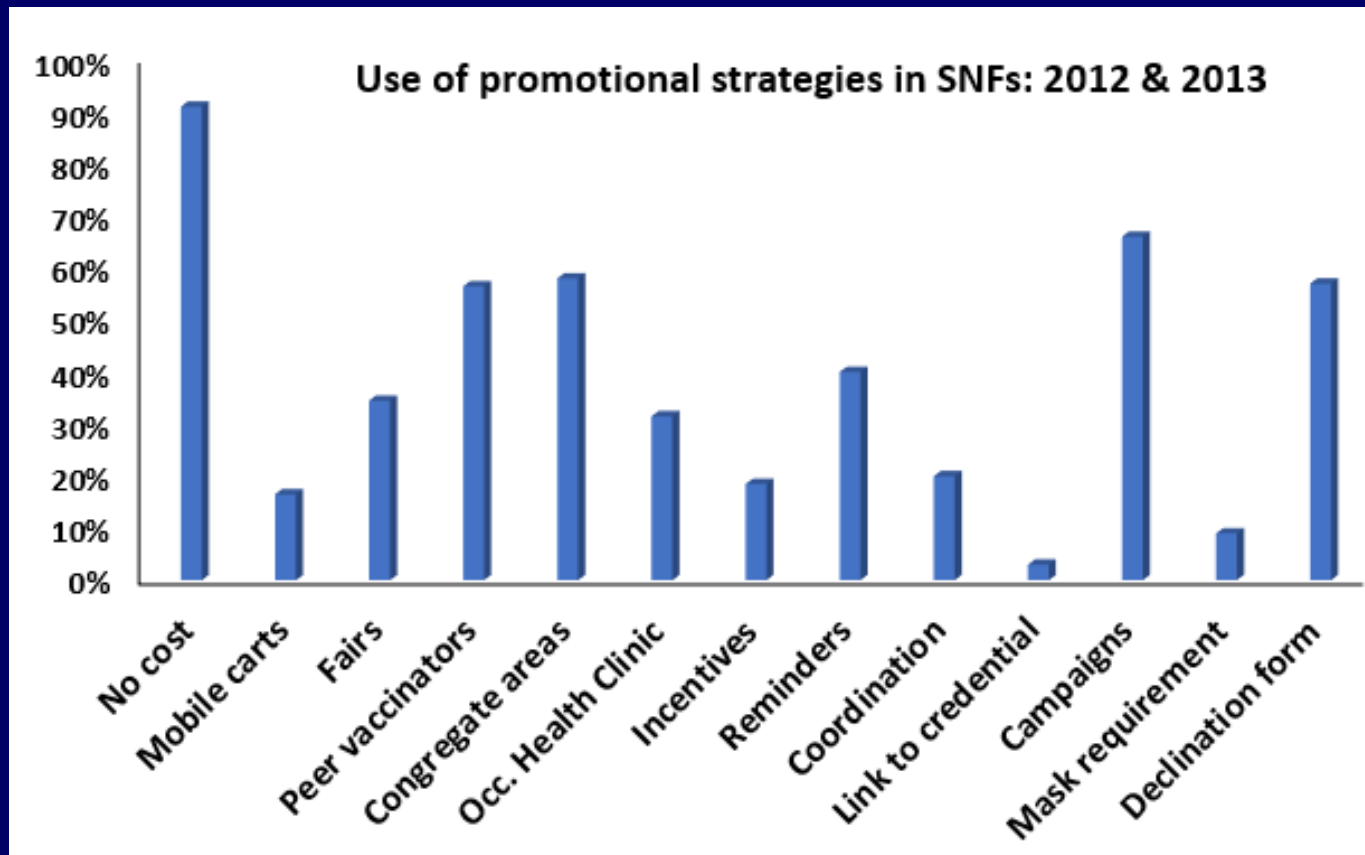
Fun fact #5

HCW Influenza Vaccination Rates, Oregon SNFs, 2011–2014



Strategies to promote vaccination

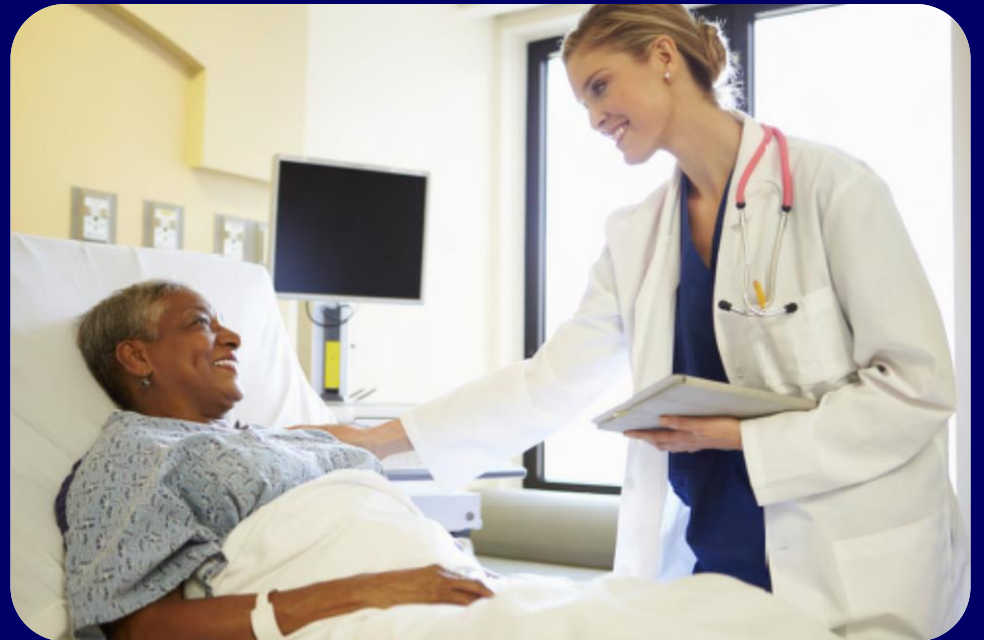
Healthcare worker influenza vaccination



What can I do to improve prevention?

1. Perform an infection control risk assessment
 - a. Minimum Expectations, Tools
 - a. <http://www.cdc.gov/hai/prevent/infection-control-assessment-tools.html>
 - b. Pick a policy (e.g., blood glucose monitoring, urine catheter use)
2. Review policies
 - a. Do they support infection prevention best practice?
 - b. Interfacility transfer, safe injection, antibiotic stewardship
3. Review education
 - a. Are new hires and current hires getting taught best practice?
4. Review practice
 - a. Observe and give feedback

RESPONSE



How do I know I have a problem?

- EDUCATE: Encourage staff to communicate what they are seeing
- ASK: Daily huddles with care staff
 - Residents with diarrhea without other cause?
 - Residents with vomiting?
 - Residents with influenza-like illness? (sore throat, fever, cough)
 - Other spontaneous infections? (e.g., cluster of cellulitis)
- LOOK: Nursing evaluation when change in status
 - Assess patient
 - Confirm meets infection criteria
 - Collect appropriate pre-treatment testing, if indicated

What if I notice a cluster?

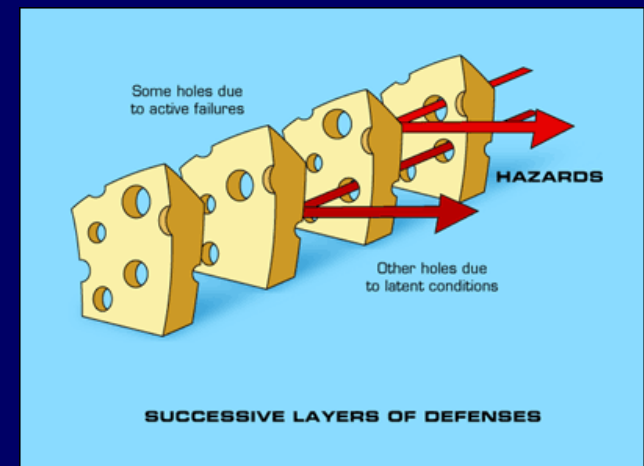
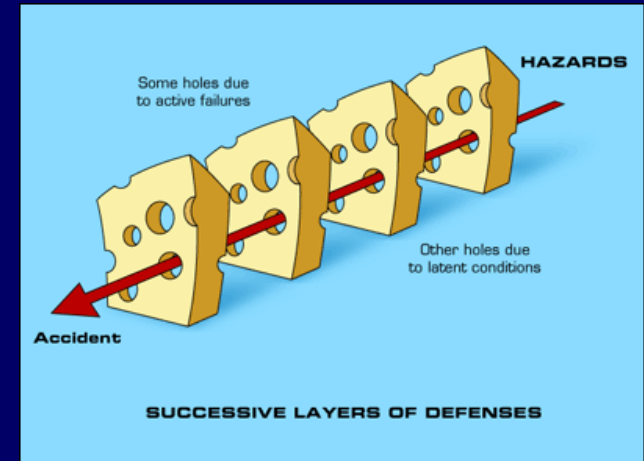
- Reach out to your local health department
 - www.healthoregon.org/diseasereporting
- Gather information: Line List
 - Name, DOB, room (all ill, whether or not lab confirmed)
 - Dates of onset of illness
 - Key symptoms (fever, vomiting, diarrhea, rash, pneumonia, cellulitis)
 - Outcomes
 - Vaccination status
- Tools available here:
 - <https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/Outbreaks/Pages/index.aspx>

What happens if I report a cluster?

- Local public health coordinates with Director of Nursing to:
 - Gather info (line list)
 - Identify pathogen (samples tested at public health laboratory)
 - Form a plan to halt outbreak (isolation, cleaning, prophylaxis, etc.)
 - Determine source
- Local public health may contact other facilities
 - E.g., hospital which performed surgeries, outpatient dialysis center
- Residents are usually not contacted
 - Some diseases need a resident's specific risk factors
- Local public health may ask to review resident's charts
 - Depends on the pathogen
- Follow-up to ensure plan completed, outstanding issues, prevention

What's the benefit of reporting a cluster?

- Prevent other residents from becoming ill
- Prevent staff from becoming ill
- Identify the issue and improve the system
 - Blame-free
 - Root cause analysis
 - Swiss cheese framework
- Compliance with legislative mandate



Oregon Patient Safety Commission onsite consultations 2016–2017

The screenshot shows the CDC website page for "Infection Control Assessment Tools". The page is titled "Healthcare-associated Infections (HAIs)" and "Infection Control Assessment Tools". It includes a navigation menu on the left, a search bar at the top, and a main content area with a list of assessment tools and a contact section.

Healthcare-associated Infections (HAIs)

Infection Control Assessment Tools

The basic elements of an infection prevention program are designed to prevent the spread of infection in healthcare settings. When these elements are present and practiced consistently, the risk of infection among patients and healthcare personnel is reduced.

The Infection Control Assessment Tools were developed by CDC for awardees under the [Epidemiology and Laboratory Capacity \(ELC\) Infection Control Assessment and Response \(ICAR\) Program](#) to assist health departments in assessing infection prevention practices and guide quality improvement activities (e.g., by addressing identified gaps). These tools may also be used by healthcare facilities to conduct internal quality improvement audits.

Assessment tools were developed for the following healthcare settings: acute care (including hospitals and long-term acute care hospitals), outpatient, long-term care, and hemodialysis. Select the assessment tool below that is specific to your setting.

- [Infection Control Assessment Tool for Acute Care Hospitals](#) [PDF - 433 KB]
- [Infection Control Assessment Tool for Long-term Care Facilities](#) [PDF - 253 KB]
- [Infection Control Assessment Tool for Outpatient Settings](#) [PDF - 337 KB]
- [Infection Control Assessment Tool for Hemodialysis Facilities](#) [PDF - 278 KB]

NOTE: For Outpatient settings, the previously released *Guide to Infection Prevention for Outpatient Settings* and its companion *Checklist* (available at: <http://www.cdc.gov/HAI/settings/outpatient/outpatient-care-guidelines.html>) have been revised and made consistent with the *Outpatient Settings Infection Control Assessment Tool*. While the same infection prevention elements are included in both the checklist and assessment tool, the facility demographics sections differ slightly. The assessment tool is intended for health department use to complete ELC activities whereas the *checklist* is intended primarily for healthcare facility use.

Infection control self-assessment tools

VIII. Injection Safety and Point of Care Testing		
Elements to be assessed	Assessment	Notes/Areas for Improvement
A. The facility has a policy on injection safety which includes protocols for performing finger sticks and point of care testing (e.g., assisted blood glucose monitoring, or AMBG).	<input type="radio"/> Yes <input type="radio"/> No	
B. Personnel who perform point of care testing (e.g., AMBG) receive training and competency validation on injection safety procedures at time of employment. <i>Note: If point of care tests are performed by contract personnel, facility should verify that training is provided by contracting company</i>	<input type="radio"/> Yes <input type="radio"/> No	
C. Personnel who perform point of care testing (e.g., AMBG) receive training and competency validation on injection safety procedures within the past 12 months. <i>Note: If point of care tests are performed by contract personnel, facility should verify that training is provided by contracting company</i>	<input type="radio"/> Yes <input type="radio"/> No	

What can I do to improve response?

- Get to know the infection preventionists at your referring hospitals
 - They want to know you!
 - Great resources and pulse of what's going on in region
 - Interfacility communication of infectious diseases
- Get to know your public health partners
 - www.healthoregon.org/diseasereporting
- Get to know your policies and procedures for dealing with infectious diseases

EDUCATION



Educational opportunities

The screenshot shows the website's navigation bar with the following menu items: About the Campaign, Safe Injection Practices, Healthcare Provider Information, Patient Information, Campaign Resources, News, and Contact Us. The 'Campaign Resources' dropdown menu is open, listing: Print Materials, Audio & Video, Toolkits, Social Media, and Buttons & Images. A red circle highlights this dropdown menu.

1 ONE NEEDLE, ONE SYRINGE, ONLY ONE TIME.
Safe Injection Practices Coalition
www.ONEandONLYcampaign.org

Bloodborne Pathogens Training

1 ONE NEEDLE, ONE SYRINGE, ONLY ONE TIME.
Safe Injection Practices Coalition
www.ONEandONLYcampaign.org

Safe Injection Practices: Protecting Yourself and Your Patients

A Bloodborne Pathogens Training Activity

[View Training](#) | [View Text Transcript](#)

Download the latest version of Flash to view this training.
(Thank you for your patience as this training downloads)

View training as a video on YouTube

DO YOUR PART TO MAKE HEALTHCARE SAFE, ONE INJECTION AT A TIME.
Order FREE Materials!

1 ONE NEEDLE, ONE SYRINGE, ONLY ONE TIME.
Safe Injection Practices Coalition
www.ONEandONLYcampaign.org

to remind
measures they
bloodborne
pathogens and other injection exposures, as
required by the Occupational Safety and Health
Administration (OSHA). Also protect patients
from healthcare associated infections. Injection
safety and other basic infection prevention and
control practices are central to patient and
healthcare provider safety.

*This training activity is supplemental to the
required annual bloodborne pathogens training
for healthcare personnel.*

Thank you for your collaboration to improve care
for Oregonians!

Acute & Communicable Disease Prevention Team
HAI Program
(971) 673-1111 (24/7)
Ohd.acdp@state.or.us



Questions? Follow up?

Healthcare Associated Infections (HAI) Program
Roza Tammer, MPH, CIC, HAI Reporting Epidemiologist

roza.p.tammer@dhsoha.state.or.us

Oregon
Health
Authority