Healthcare-Associated Infections Advisory Committee (HAIAC) Meeting

March 28, 2018
1:00 - 3:00 pm

PSOB – Room 1B
800 NE Oregon St.
Portland, OR 97232

Agenda, materials, minutes, recordings, and transcriptions for meetings are available at: http://www.oregon.gov/oha/PH/DiseasesConditions/CommunicableDisease/HAI/Prevention/Pages/Meetings.aspx.

NOMINATED MEMBERS PRESENT:

- Genevieve Buser, MD, Pediatric Infectious Disease Physician, Providence St. Vincent Medical Center
- Deborah Cateora, BSN, RN, Healthcare EDU/Training Coordinator and RN Consultant, Safety, Oversight and Quality Unit (SOQ Unit), Oregon Department of Human Services (phone)
- Kelli Coelho, RN, CASC, MBA, Executive Director, RiverBend Ambulatory Surgery Center (phone)
- Wendy L. Edwards, RN, BSN, Patient Safety Surveyor, Health Facility Licensing and Certification, Oregon Health Authority
- Jon Furuno, PhD, Associate Professor, Department of Pharmacy Practice, Oregon State University/College of Pharmacy, Oregon Health and Science University
- Vicki Nordby, RN, BSN, Nurse Consultant, Marquis Companies, Inc (phone)
- Laurie Polneau, RN, MHA, CPHRM, Director, Quality/Risk Management/Infection Control, Vibra Specialty Hospital Portland

- Tom Stuebner, MSPH, Executive Director, Oregon Patient Safety Commission
- Dee Dee Vallier, Consumer Advocate (phone)

NOMINATED MEMBERS EXCUSED:

- Paul Cieslak, MD, Medical Director, Acute and Communicable Disease Prevention, Oregon Health Authority
- Jordan Ferris, BSN, RN, CMSRN, Nursing Practice, Consultant, Oregon Nurses Association
- Rebecca Pawlak, MPH, Director of Public Policy, Oregon Association of Hospital and Health Systems
- Pat Preston, MS, Executive Director, Center for Geriatric Infection Control
- Kristen Schutte, MD, Infectious Disease and Medical Director of Infection Prevention and Control, Asante
- Mary Shanks, RN, MSN, CIC, Infection Preventionist, Kaiser Westside Medical Center

OTHER PARTICIPANTS PRESENT:

- Mesa Greenfield, BSN, RN, CWOCN, Infection Prevention/Employee Health Nurse, Lake District Hospital
- Kim He
- Julie Koch, RN, MSN, BSN, Manager Infection Prevention, Salem Health Hospitals and Clinics
- Andrea Kraus
- Kate Medred, MA, Logistics Coordinator, Infection Prevention, Oregon Patient Safety Commission
- Chad Nix, M.Sc, Program Specialist, Oregon Health Science University
- Mary Post, RN, MS, CNS, CIC, Director, Infection Prevention, Oregon Patient Safety Commission/Oregon Health Authority

- Kristine Rabii, M.Sc, Infection Preventionist, Tuality Healthcare
- Rebecca Rottman, MPA, Lead Logistics Coordinator, Infection Prevention, Oregon Patient Safety Commission

OHA STAFF PRESENT:

- Zintars Beldavs, MS, ACDP Section Manager
- Tara Buehring, MPH, HAI Office Specialist
- Alyssa McClean, AWARE Program Coordinator
- Rebecca Pierce, PhD, HAI & EIP Program Manager
- Monika Samper, RN, HAI Reporting Coordinator
- Diane Roy, HAI Data and Logistics Coordinator
- Roza Tammer, MPH, CIC, HAI Reporting Epidemiologist
- Lisa Takeuchi, MPH, Emerging Disease Epidemiologist
- Dat Tran, MD, Public Health Physician
- Nicole West, MPH, OHA Epidemiologist
- Alexia Zhang, MPH, HAI Epidemiologist

ISSUES HEARD:

- Call to order and roll call
- Introductions and logistic updates
- Approve December 2017 minutes
- Outbreaks update 2017
- Influenza update
- Hospital Prevalence Study
- 2016 data and exemptions
- Discussion: themes and topics for future 2018 meetings
- Public comment
- Adjourn

These minutes are in compliance with Legislative Rules. Only text enclosed in italicized quotation marks reports a speaker's exact words. For complete contents, please refer to the recordings.

Item	Discussion	Action Item
Call to Order and Roll Call Genevieve Buser, Providence Portland (Chair)	Fifty-three percent of members present	No action items
Introductions and Membership Updates Tara Buehring, Oregon Health Authority	• HAIAC nominations ○ Nomination emails were sent out on February 1st, 2018. These emails requested members to reply with an updated CV/resume and a short description of qualifications ○ Most members have replied with the necessary materials, and those who haven't have until April 9 to submit documents to Tara Buehring ○ Vacant positions to be filled: RN with infection control experience, a consumer representative, health care purchasing representative, and a health insurer representative • ADA guidelines ○ We can now provide alternative formats of meeting materials (including braille, large print, etc.), and interpreter services upon request ○ Requests must be made at least 7 days prior to the event	Any person interested in being on the HAIAC will submit materials to Tara Buehring

Item	Discussion	Action Item
	○ For future presenters at HAIAC meetings: the presenter will receive a template for slides and materials that are ADA guideline-compliant ○ Primary contact for ADA related items is Diane Roy	
Approve December 2017 Minutes All Committee Members (Pages 1-11 of meeting materials)	December 2017 meeting minutes were approved.	No action items
Outbreaks update 2017 Dat Tran, Oregon Health Authority	• 227 outbreaks were reported from 12/01/2017-03/22/2018: ○ 55 *norovirus*, 4 *sapovirus*, 1 *astrovirus*, 1 *Campylobacter*, 5 *Salmonella*, 1 *Escherichia coli*, 12 gastroenteritis with etiology unknown ○ 112 influenza, 6 respiratory syncytial virus (RSV), 3 pertussis, 1 adenovirus, 1 coronavirus, 2 Group A *Streptococcus*, and 15 respiratory with etiology unknown ○ 5 other • Of the 227 outbreaks, 185 (81%) occurred in a healthcare facility ○ Outbreaks occurred most often in assisted living facilities (96%)	No action items

Item	Discussion	Action Item
	○ Most common etiology in healthcare facilities was influenza • 1 outbreak of interest was multidrug-resistant (MDR) *Acinetobacter baumannii*: ○ ALRN surveillance of carbapenem- resistant *A. baumannii* (CRAB) ○ 5 MDR *A. baumannii* isolates (wound cultures) ○ Admitted to same floor/wing of hospital ○ Environmental testing was completed and we are waiting to see whether these are the same isolates.	
Influenza update Nicole West, OHA	• There are plenty of opportunities to receive lab specimens at the state lab throughout the flu season: outbreaks, hospitalizations, and sentinel surveillance • We also have 9 hospital labs reporting data on flu and other respiratory viruses to The National Respiratory and Enteric Virus Surveillance System (NREVSS) • Lab surveillance through NREVSS can tell us a lot about flu activity: ○ The percent of positive influenza tests ○ What are the predominate types and subtypes? • Lab testing through OSPHL also helps us understand the circulating strains: ○ Is antiviral resistance among viruses and emerging problem? Among which viruses? ○ Are the circulating strains well-matched to the current season's vaccine?	No action items

Item	Discussion	Action Item

	• In Oregon, we monitor influenza associated hospitalized cases in the Portland tri-county area, which covers 44% of the state population (1.76 million/4 million)
	• In Clackamas, Multnomah, and Washington counties, 34 influenza-associated hospitalizations were reported during week 11 of 2018, for a total of 1,460 cases reported during this season; 993 (68.0%) cases were influenza A, 466 (31.9%) were influenza B, 1 was co-infected with influenza A and B
	• Of 258 subtyped influenza A cases, 123 (47.7%) were A/2009 H1N1 and 135 (52.3%) were A/H3N2. Of 72 subtyped influenza B cases, 71 (98.6%) were B/Yamagata and 1 (1.4%) was B/Victoria
	• Influenza vaccine composition in the United States, 2017-2018
	  ○ Trivalent vaccines
	  -A/Michigan/45/2015 (H1N1) pdm09–like virus
	  -A/Hong Kong/4801/2014 (H3N2)–like virus
	  -B/Brisbane/60/2008–like virus (Victoria lineage)
	  ○ Quadrivalent vaccines
	  -B/Phuket/3073/2013–like virus (Yamagata lineage)
	• ILINet is our outpatient ILI surveillance system
	• ILI = Fever (≥100° F [37.8° C]) AND cough or sore throat (in the absence of a KNOWN cause other than influenza)
	• Measure proportion of patient visits for ILI at ~16 sentinel providers and the ESSENCE reporters	

Item	Discussion	Action Item

	• OCHIN clinic data will be included next year, adding 100 clinics to our outpatient ILI surveillance system
	• Oregon's outpatient influenza-like illness (ILI) network comprises 84 reporting facilities across Oregon. Facilities include 20 outpatient providers, 54 emergency departments and 10 urgent care clinics reporting to ESSENCE. Data are reported to CDC weekly.
	• Influenza-associated pediatric deaths
	  ○ Reportable nation-wide
	  ○ High attack rates of influenza among pediatric population
	  ○ 3 flu-related pediatric deaths in Oregon so far, this influenza season, average 0–1 per year since pandemic
	• ILI outbreaks in Oregon (n=105)
	  ○ 105 ILI outbreaks this season, 84% in assisted living facilities and 10% in schools
	  ○ This is looking pretty similar to the number of ILI outbreaks we had last season. But previously the most outbreaks reported in a season was 81 (2014-2015)
	  ○ Vulnerable populations, high risk groups like those in assisted living facilities = potentially high morbidity and mortality during influenza outbreaks
	• RSV outbreak at Providence's Center for Medically Fragile Children
	  ○ 7 RSV+/40 residents (AR=18%)
	  -4 females, 3 males	

Item	Discussion	Action Item
	-Ages ranged 5–24 years (median 15) -Onsets ranged 12/6/17 and 1/14/18 ○ 0/89 staff ill ○ Symptoms: runny nose, fever, cough ○ One case hospitalized ○ Children go to school and facility encourages family-centered care • Summary of infection prevention practices as reported by facilities in September 2017: ○ "Mandatory" (Adventist, Kaiser, and Legacy) used for systems that link vaccination/declination record to payroll or HR ○ No formal enforcement of visitor restrictions; many rely on signage; often falls to volunteer greeters and/or nursing staff • Influenza resources: ○ Flu.Oregon@state.or.us ○ CDC Flu View Report: http://www.cdc.gov/flu/weekly/ ○ Flu Bites Report: http://bit.ly/flubites	
Hospital Prevalence Study (HAIPS) Alexia Zhang, OHA	• Emerging Infections Program (EIP) ○ 10 sites across the U.S. ○ Emerging pathogen disease surveillance • Multi-phase HAI and antimicrobial use prevalence survey began in 2008 (pilot, one site) • First full scale survey in 2011 (183 acute care hospitals in 10 sites)	No action items

Item	Discussion	Action Item

	• Second full scale survey in 2015 (250 acute care hospitals in 10 sites)
	• Objectives of HAIPS
	  ○ Estimate HAI prevalence in U.S acute care hospitals
	  ○ Determine distribution of HAI by pathogen and major infection site
	  ○ Estimate prevalence and describe rationale for antimicrobial use
	  ○ Assess changes in HAI and antimicrobial use epidemiology
	• HAIPS protocol
	  ○ 10 county catchment area surrounding Portland, Salem, and Eugene metro areas
	  ○ Each hospital selected random sample of inpatient occupying beds on the survey date
	  ○ Additional medical record reviews done for patients on antimicrobials or scheduled to received antimicrobials on the survey day or the day before
	  -Antimicrobial use
	  -Antimicrobial quality assessment:
	  ▪ General patient assessment
	  ▪ Patient clinical characteristics
	  ▪ Vancomycin
	  ▪ Fluoroquinolones
	  ▪ Community-acquired pneumonia
	  ▪ Urinary tract infections
	  -Healthcare-associated infections	

Item	Discussion	Action Item
	▪ 2011 and 2015 definitions • HAIPS next steps ○ Deeper dive into data ○ Plan for next survey -2019 vs 2020 ○ Which HAI definition to use -Current definition has changed since 2015 survey -Use 2011 definitions so we can compare -Collect both “current” and 2011 definitions ○ Addition of LTACH	
2016 data and exemptions Rebecca Pierce, OHA	• Proposed elimination of exemption policy. ○ Oregon hospitals are required to report six surgical site infection (SSI) types, central line-associated bloodstream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), and Lab ID events (MRSA and CDI). ○ Currently the HAI program offers two exemptions from reporting either central line associated bloodstream infections or surgical site infections if the following criteria are met: ▪ For SSIs: an exemption could be given if a facility performs fewer than 20 procedures of a given type annually ▪ For CLABSIs: an exemption could be given if a facility observed fewer than 50 CLABSIs in a previous year • Reasoning for elimination:	Vote passes, and exemptions will be revised for 2019 data

Item	Discussion	Action Item
	○ Protect patient safety and prevent healthcare-associated infections ▪ A small denominator, can impact the degree to which our HAI metrics are interpreted, we recognize that one healthcare-associated infection can be life changing for a patient or their loved ones ▪ This furthers the collaboration between our facilities and the HAI program to improve our ability to track trends and then to identify targets for HAI prevention and quality improvement initiatives at the state or regional level ○ Improve our data generalizability ▪ Because of the current exemption criteria, our HAI data may be a bit more reflective of the experience of our large healthcare facilities here in Oregon and not inclusive of our smaller facilities ○ Continue meeting our legislative mandate • Change will go into effect for 2019 data • Facilities that have not claimed an exemption will see no change to their reporting • Facilities who take part in voluntary reporting will see no change • Facilities that never perform certain surgical procedures or do not have applicable location types will still not be required to report data	

Item	Discussion	Action Item

	• Facilities that don't have a NICU do not need to report NICU data
	• Facilities that have never performed surveillance for these types of measures will potentially need to build some capacity to do so
	• We're going to offer two webinars, one for CLABSI and one for SSI, and then we are always available for one-on-one technical support as needed
	• We do have a preliminary censorship policy that says we will not present any data for any facility with insufficient data to generate stable measures, so if there's lots of variability in the measures and we also will not report facility
	• For CLABSI in the ICU:
	  ○ 4 of our 35 acute care hospitals claimed an exemption
	  ○ 14 of our 25 critical access hospitals
	• CLABSI in general wards
	  ○ 7 out of 25 critical access hospitals claimed an exemption
	  ○ 3 out of 35 acute care hospitals claimed an exemption
	• 53 percent of members vote to pass the proposal	

Discussion: Themes and Topics for Future 2018 Meetings All members	• Annual reports, and what to include in future annual reporting • Practices in stewardship • MDRO Toolkit • Update on infection control assessment and response (ICAR) visits • New CMS requirements	No action items

Item	Discussion	Action Item
Public Comment	No public comment	No action items
Adjourn		

Next meeting will be June 27, 2018 1:00 pm - 3:00 pm, at Portland State Office Building, Room 1B

Submitted by: Tara Buehring
Reviewed by: Roza Tammer
Rebecca Pierce

EXHIBIT SUMMARY

A – Agenda
B – June 28, 2017 meeting minutes
C – Outbreaks
D – HAI website pages
E – Infection Prevention Video Resources
F – 333-018-0130 Proposed Changes

HAIAC

Maureen Cassidy, MPH
Multi-drug-resistant Organism Epidemiologist
Acute and Communicable Disease Prevention Program

Tuesday, June 26th, 2018

Oregon Health Authority

Outbreaks since 3/22/2018

Etiology	Count	Setting
Gastroenteritis	30	
Norovirus	20	**LTCF (14),** Restaurant (3), School (1), Other (1), **Hospital (1)**
Vibrio parahaemolyticus	1	Restaurant(1)
Sapovirus	1	School (1)
E. coli	1	DCC (1)
Unknown	7	**LTCF (1),** School (3), Restaurant (1), DCC (1), Grocery store (1)
Respiratory	26	
Influenza A		**LTCF (3)**
Influenza B		**LTCF (5)**
Pertussis		School (9), Private home (1)
Rhinovirus		**LTCF(2)**
Human metapneumovirus		**LTCF (1)**
RSV		**LTCF (3)**
Unknown		School (2)
Rash	2	DCC (1) School (1)
CP-CRE, CP-CRAB	1	**Hospital (1)**
Invasive (Strep pyogenes, Pseudomonas aeruginosa	2	**LTCF (1), Hospital (1)**
Total	61	

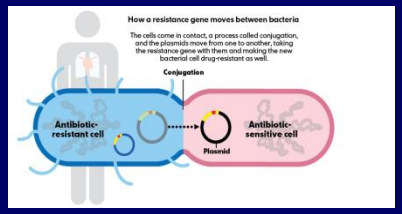
Healthcare associated outbreaks 3/22/2018 - 6/18/2018

- Healthcare associated outbreaks account for 54% (n=33) of all outbreaks from March to June
- Majority of healthcare associated outbreaks occurred in long term care facilities (n=30, 91%)
- Most common etiology was norovirus or noro-like outbreaks

Facility type	Norovirus	Unknown -GI	Influenza	RSV	HMV	Rhinovirus	Strep pyogenes	Total
Assisted Living Facility	7	1	1	1	0	0	1	11
Skilled Nursing Facility	4	0	4	2	1	0	0	11
Residential Care	3	0	3	0	0	2	0	8
Total	14	1	8	3	1	2	1	30

Carbapenem-resistant *Enterobacteriaceae* (CRE) terminology refresher

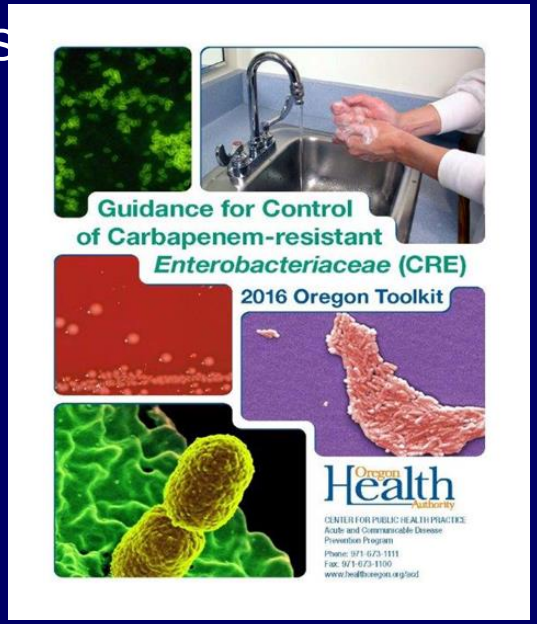
- Carbapenemase producing (CP-CRE)
  - Most concerning!!
  - Responsible for rapid global plasmid mediated spread!!
  - Directly inactivate carbapenems
  - Increased morbidity and mortality



- Non-carbapenemase-producing (CRE)
  - Stable/slight increase incidence over time
  - Multiple mechanisms combined for resistance – AmpC, porin changes

Carbapenemases

- 5 Most Common Carbapenemases - by PCR
  - Klebsiella pneumoniae carbapenemase (KPC)
  - New Delhi metallo-β-lactamase (NDM)
  - Verona integron encoded metallo-β-lactamase (VIM)
  - Imipenemase metallo-β-lactamas
  - Oxacillincase – 48 (OXA-48)

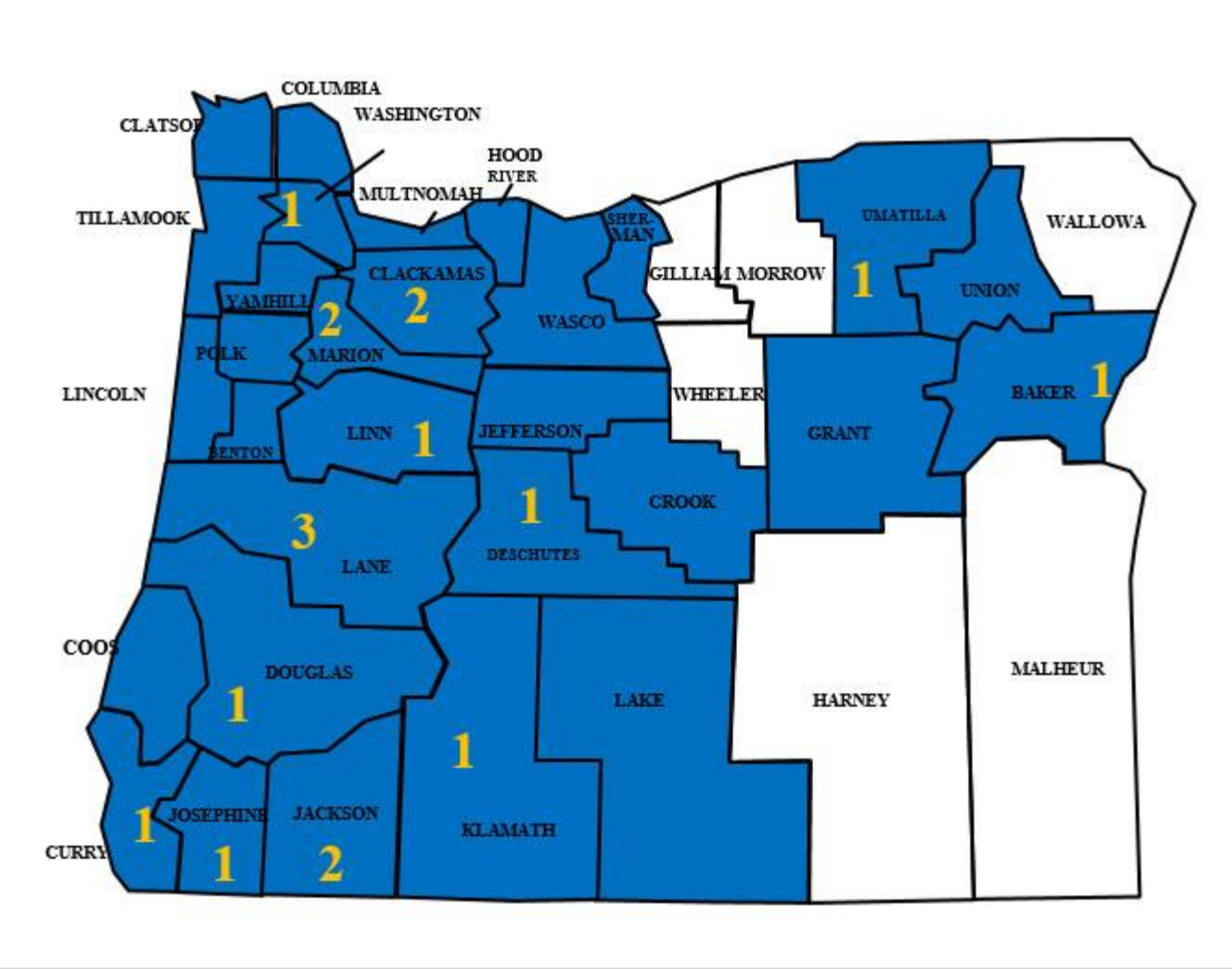


Healthcare outside of Oregon risk factor for CP-CRE

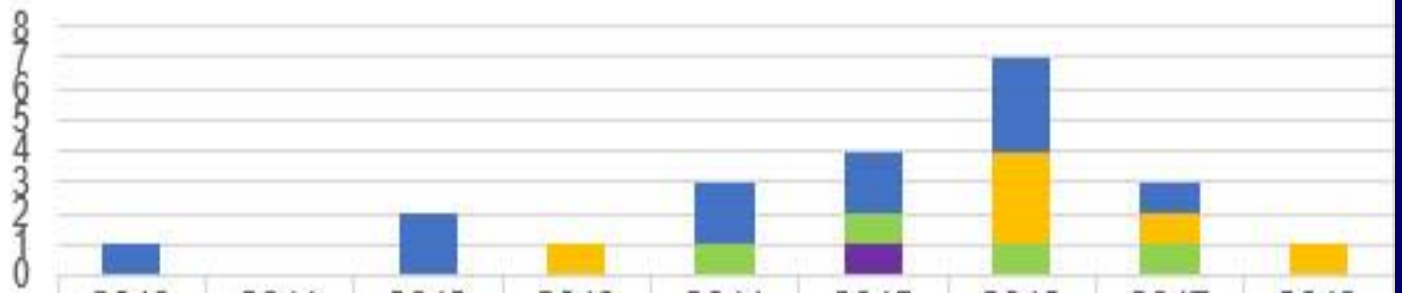
- Oregon is still a low prevalence state and we want to keep it that way = infection control
- 18/567 (3%) of Oregon cases are CP-CRE
- 13/18 (72%) CP-CRE cases had history of healthcare out of state

- Compare to Minnesota - 21% of CRE isolates were KPC, CP-CRE in 2015

CP-CRE in Oregon by county, 2010 – Mar 2018



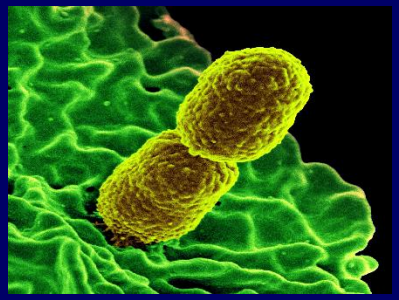
CP-CRE Identified by Oregon labs, by year, n=22



	2010	2011	2012	2013	2014	2015	2016	2017	2018
KPC	1	0	2	0	2	2	3	1	0
NDM	0	0	0	1	0	0	3	1	1
OXA-48	0	0	0	0	1	1	1	1	0
IMP	0	0	0	0	0	0	0	0	0
VIM	0	0	0	0	0	1	0	0	0

Oregon Health Authority

Recent CP-CRE case



- Abdominal surgery in Egypt
- Large draining abdominal wound upon arrival in US, 2 weeks post-op
- Wound grew CP-CRE, a *Klebsiella pneumoniae* (NDM) and
- Carbapenem-resistant *Acinetobacter baumannii* (CRAB) with an NDM

Thank You

http://public.health.oregon.gov

Maureen.p.cassidy@state.or.us

Oregon Health Authority

OREGON
PATIENT SAFETY
COMMISSION

INFECTION CONTROL ASSESSMENT AND RESPONSE (ICAR) REPORT

June 27, 2018

Anne Eades, BSMT, MPH, CIC
Kate Medred, OPSC Project Consultant

Infection Control Assessment and Response (ICAR) Takeaways

ELC Grant Funded | April 2015 -- March 2018 | 104 ICARs

Long-term Care Facility Takeaways: 45 ICARs

- **47%** did not have systems in place to follow-up on clinical information when residents were transferred to or from acute care
- **50%** reported having an identified staff member who coordinates the infection prevention program and who has also received proper training
- **89%** did not provide training on antibiotic use (stewardship) to clinical providers with prescribing privileges
- **96%** did not document/monitor adherence to personal protective equipment (PPE)
- **62%** did not document/monitor quality of cleaning and disinfection procedures, nor did they evaluate or provide competency validation for environmental cleaning personnel on a regular basis

ICAR Takeaways

Hospital Takeaways: 19 ICARs

- **Lack of competency training and testing (auditing/feedback)** provided to staff across all areas: hand hygiene, environmental services, PPE, catheter-associated urinary tract infection (CAUTI), central line-associated bloodstream infection (CLABSI), ventilator-associated event (VAE), safe injection practices, surgical site infection (SSI), *Clostridium difficile* infection (CDI) prevention, etc.
- **67%** did not have a drug diversion prevention program that includes consultation with the infection prevention program when drug tampering (involving alteration or substitution) is suspected or identified

ICAR Takeaways

Outpatient Setting Takeaways: 30 ICARs

- **Just over half** provide competency-based training programs that offer job-specific training on infection prevention policies
- **67%** did not demonstrate proper auditing and feedback protocol for proper hand hygiene, injection safety, point-of-care testing, environmental services, and personal protective equipment practices
- **50%** did not dispose of brushes used in the cleaning or sterilization of lumened instruments or, if reusable, did not clean and high-level disinfect or sterilize (per manufacturer's instructions) after use.

Next Steps

- Continue ICAR work with the Ebola No-Cost-Extension (27 on-site visits, June 2018 – March 2019)
- Build relationships with assessed facilities, conduct follow up visits by our IP Consultants (Independent Contractors)
- Explore how to address some of the gaps identified in the assessments
- Use ICAR findings to help inform future work

Assessment of Healthcare Associated Infections and Antimicrobial Use in Nursing Homes (NHHAIPS)

Alexia Zhang, MPH
HAI Epidemiologist
Acute and Communicable Disease Prevention

Oregon Health Authority

Background

- Emerging Infections Program
  - 10 sites across the U.S.
  - Emerging pathogen disease surveillance
- Multi-phase HAI and antimicrobial use prevalence survey began in 2017
- Objectives of NHHAIPS
  - Estimate HAI prevalence in US nursing home residents
  - Determine distribution of HAI by pathogen and major infection site
  - Estimate the prevalence and describe the rationale for AU in US nursing home residents
  - Describe the quality of antimicrobial drug prescribing in selected clinical circumstances
  - Estimate the burden of HAIs and AU in nursing home residents in the US

** Data presented are preliminary and subject to change. Slides not for distribution**

NHHAIPS protocol

- 10 county catchment area surrounding Portland, Salem, and Eugene metro areas
- List of all facilities that provide skilled nursing or post acute rehabilitation in the catchment area obtained from nursing home compare
- OR EIP team sent letters and called up to 10 times to enroll facilities
- Nursing home team lead filled out a healthcare facility assessment
- OR EIP team completed case report forms
  - Resident demographics form
  - Resident infection form
  - Resident antimicrobial use form

NHHAIPS in Oregon

- 21 total participating nursing homes
- 1267 eligible patients surveyed (range: 5-146 residents)
- 1654 total beds
- 492 single resident rooms
- Average daily census: 63 (range 3-145)

Primary Service Types Provided	Participating Facilities (%)
General Nursing	90%
Dementia	48%
Psychiatric (Non-Dementia)	10%
Skilled Nursing/Subacute Rehab	100%
Ventilator	5%
Bariatric	43%
Hospice/Palliative	81%

** Data presented are preliminary and subject to change. Slides not for distribution**

Resident clinical demographics

- Average age: 77 years (range: 23-107)
- 35% (n=445) were short stay residents
- 39% (n=495) had diabetes
- 51% (n=648) were wheelchair bound or bedridden
- 10% (n=127) had pressure ulcers
- 24% (n=303) were receiving wound care

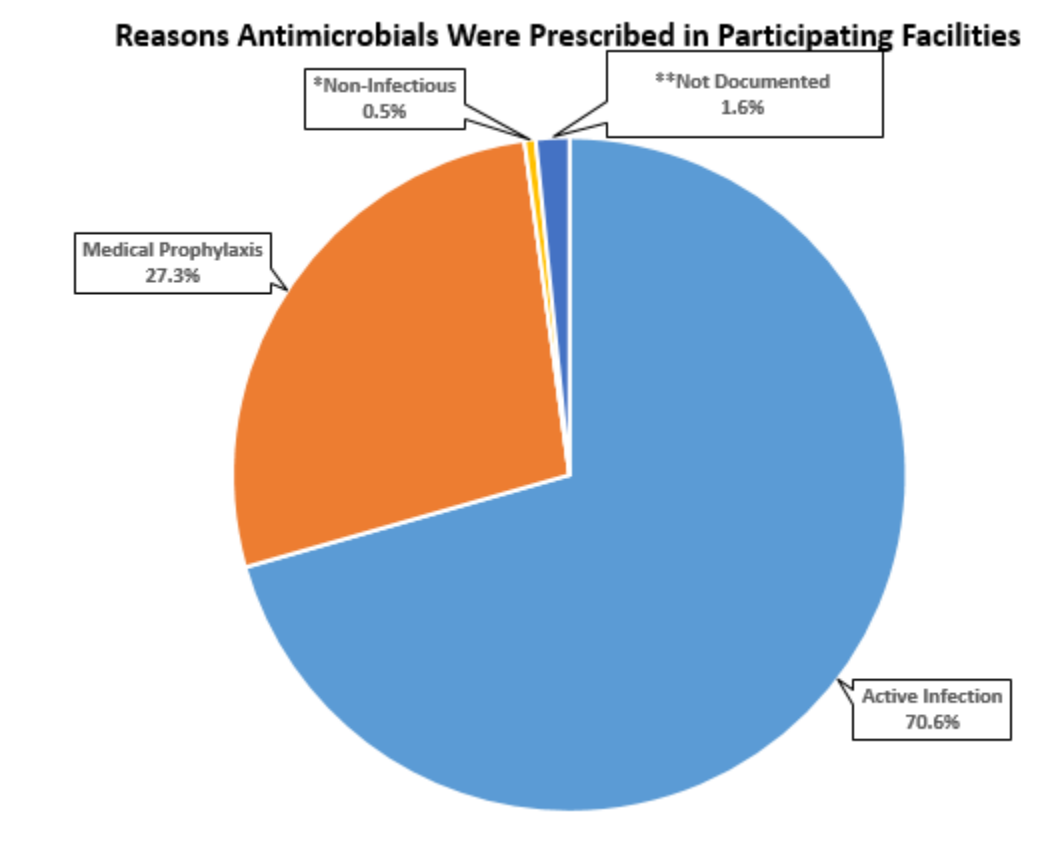
** Data presented are preliminary and subject to change. Slides not for distribution**

Resident Device Related Care

- 2.6% (n=33) had a central line
- 4% (n=51) were on dialysis
- 6.2% (n=79) had an indwelling urinary catheter
- 2.2 (n=28) had other urinary device
- 2.3% (n=29) had a feeding tube
- 0.4% (n=5) had a tracheostomy tube

Antimicrobial use

- 162 (13%) of residents received 1 or more antimicrobial
- Total of 187 antimicrobials administered
- 36 different antibiotics administered



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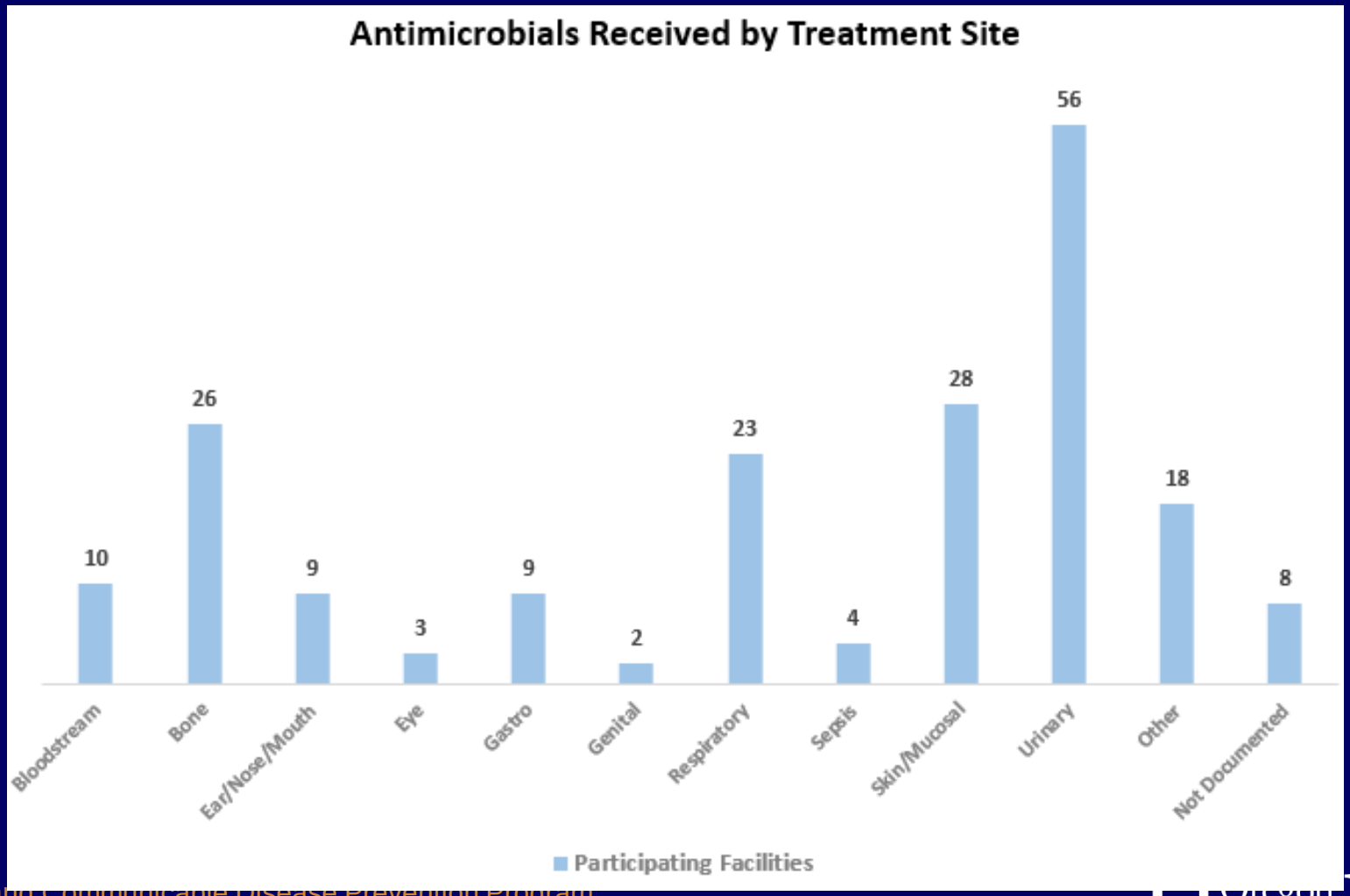
Antimicrobials received by treatment site



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Antimicrobials used—Nursing Homes

	Antimicrobial	Frequency	Percent (%)
1	Cephalexin	25	13.37
2	Trimethoprim/sulfamethoxazole	18	9.63
3	Vancomycin	16	8.56
4	Amoxicillin-Clavulaunate	14	7.49
5	Fluconazole	10	5.35
6	Levofloxacin	10	5.35
7	Nitrofurotoin	9	4.81
8	Acyclovir	8	4.28
9	Ceftriaxone	7	3.74
10	Amoxicillin	6	3.21
11	Cefazolin	6	3.21
12	Ciprofloxacin	6	3.21
13	Doxycycline	6	3.21
14	Metronidazole	6	3.21
15	Nystatin	5	2.67

Antimicrobials: Hospital vs. Nursing Homes

	Antibiotic	Frequency	Percent (%)
1	Cefazolin	161	15.51
2	Vancomycin	132	12.72
3	Ceftriaxone	107	10.31
4	Piperacillin/tazobactam	103	9.92
5	Metronidazole	52	5.01
6	Azithromycin	49	4.72
7	Levofloxacin	45	4.34
8	Ciprofloxacin	39	3.76
9	Cefepime	28	2.7
10	Fluconazole	27	2.6
11	Acyclovir	24	2.31
12	Clindamycin	23	2.22
13	Bactrim	23	2.22
14	Cefotetan	21	2.02
15	Cephalexin	20	1.93

	Antimicrobial	Frequency	Percent (%)
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3	Vancomycin	16	8.56
4	Amoxicillin-Clavulaunate	14	7.49
5	Fluconazole	10	5.35
6	Levofloxacin	10	5.35
7	Nitrofurotoin	9	4.81
8	Acyclovir	8	4.28
9	Ceftriaxone	7	3.74
10	Amoxicillin	6	3.21
11	Cefazolin	6	3.21
12	Ciprofloxacin	6	3.21
13	Doxycycline	6	3.21
14	Metronidazole	6	3.21
15	Nystatin	5	2.67

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McGeer Criteria Infections

- 25 (2%) residents with 1 or more infections meeting revised McGeer Criteria

Infection Type	Number of infections
Skin/Mucosal	13
Respiratory	6
Gastrointestinal	1
Urinary Tract	5
Systemic	0
Total	25

** Data presented are preliminary and subject to change. Slides not for distribution**

Domain	Core Elements Of Antibiotic Stewarship for Nursing Homes Implemented:	Participating Facilities, (%)
Leadership	Our facility has written statements from leadership in support of improving antibiotic use that are shared with staff, residents and families	38%
	Our facility reviews antibiotic use and resistance data in quality assurance/performance improvement committee meetings	81%
Accountability	Our facility has an individual responsible for overseeing activities to improve the use of antibiotics	71%
	Our facility medical director reviews antibiotic use data	48%
Drug Expertise	Our facility has access to a pharmacist with specialized infectious diseases or antibiotic stewardship training, who provides guidance and expertise on antibiotic use (on-staff or by consultation)	71%
	Our facility has access to an infectious disease physician, who provides guidance on antibiotic stewardship activities (on-staff or by consultation)	29%
Policy & Practice	Our facility requires providers to document the *dose* and *route* of antibiotics	95%
	Our facility requires providers to document the anticipated *duration* of antibiotics, including a *start date* , *end date* , and the planned days of therapy	90%
	Our facility requires providers to document the *indication* of antibiotics, including the rationale and treatment site	76%
	Our facility requires providers to perform a follow-up assessment (an antibiotic "time-out") 2-3 days after a new antibiotic start to determine whether it is still indicated and appropriate	5%
	Our facility provides medical personnel (physicians and non-physician clinical providers) with resources to guide their decisions about antibiotic use (e.g., treatment algorithms, clinical practice guidelines)	29%
Tracking	Our facility receives a summary report of antibiotic resistance from the laboratory (e.g., antibiogram)	57%
	Our facility routinely (weekly, monthly, quarterly) receives reports of antibiotic use (e.g., new orders of antibiotic treatment) from the pharmacy service	81%
Reporting	Our facility provides feedback on antibiotic prescribing practices to medical personnel (physicians and non-physician clinical providers)	38%
Education	Our facility provides training on appropriate antibiotic use to nursing personnel (e.g., aides, LPNs, RNs)	76%
	Our facility provides education to residents and families about antibiotic use	62%

** Data presen **

NHHAIPS next steps

- Review facility specific data with each facility
- Use data to determine Oregon facility education and resource needs
- Deeper dive into data
  - Compare Oregon with all EIP sites
- Plan for next survey

** Data presented are preliminary and subject to change. Slides not for distribution**

QUESTIONS?

Alexia Zhang, MPH
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Oregon Health Authority

Oregon Health Authority Needle Use and Injection Practices Survey

Jackson County Pilot Study

Rachel Steele, MPH, CPH
Acute and Communicable Disease Prevention

Oregon Health Authority

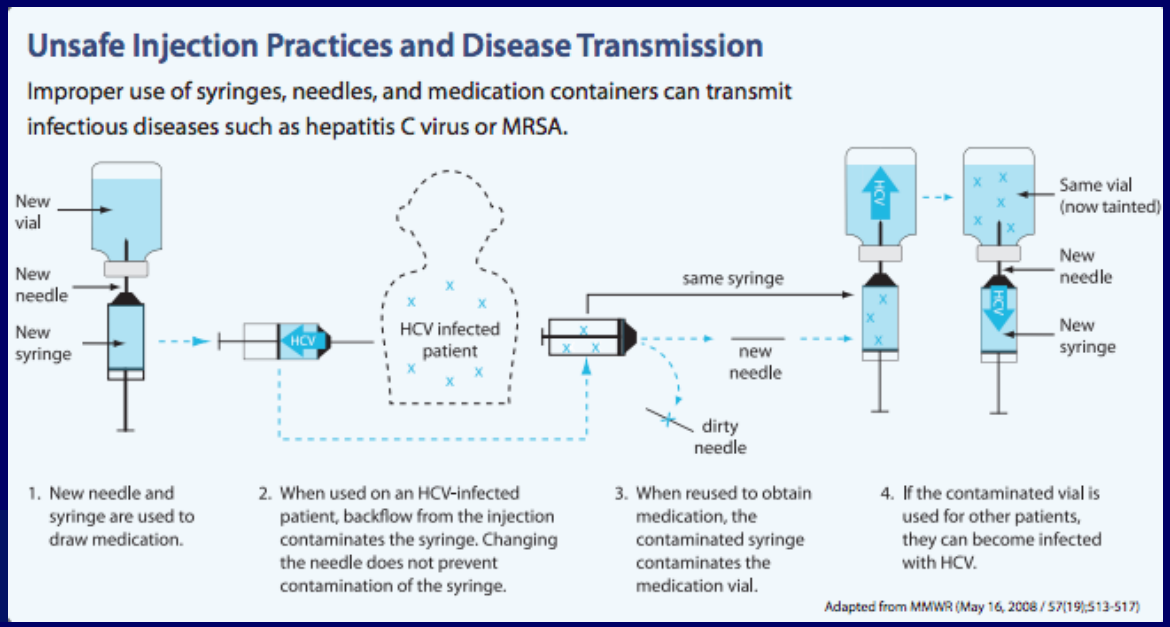
(Enter) DEPARTMENT (ALL CAPS)
(Enter) Division or Office (Mixed Case)

Overview

- Impact of infection control breaches
- Pilot study and qualitative assessment
- County-wide survey distribution
- Toolkit development
- Preliminary results
- Future direction and lessons learned

Injection and Needle Safety

- What makes injection practices safe?
  - No harm to recipient, healthcare worker, or community (WHO)
- 2017 survey
  - N=690 nurses and practitioners
  - 12% physicians and 3% nurses witness syringe reuse



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THE IMPACT OF UNSAFE MEDICAL INJECTIONS IN THE U.S.

Unsafe Injection Practices Have Devastating Consequences[1]

Syringe reuse and misuse of medication vials have resulted in dozens of outbreaks and **THE NEED TO ALERT MORE THAN 150,000 PATIENTS...**

...to seek testing for bloodborne pathogens such as **HEPATITIS B, HEPATITIS C AND HIV,**[2] and have led to...

- Patient illness and death
- Legal charges/ malpractice suits
- Loss of clinician licenses
- Criminal charges

In just one clinic, syringe reuse to access medication vials for multiple patients resulted in an outbreak and one of the largest public health alerts in U.S. history.

1000 = patients notified

50,000 PEOPLE EXPOSED TO INFECTION

$ = 1 million

$16~$20 MILLION IN COSTS

- 1998–2014: >50 injection-related outbreaks

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Needle Use and Injection Practices Survey

- Jackson County survey
- Finalized questionnaire
- Pilot study
- Toolkit
- Questionnaire distribution

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Pilot Survey

- Methods
  - Convenience sampling (n=9)
    - physicians, physician assistants, acupuncturists, nurses, long-term care workers
  - Follow-up interviews
  - Qualitative analysis (NVivo)
  - Summary report

Results

  - Phrasing
  - Perceptions and barriers
    - Safe injections champion
    - Buy-in

Dementia carers 8.nvp - NVivo

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Sources

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Queries

Models

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Free Nodes

Name	Sources	References	Created On	Created By	Modified On	Modified By
bowling competitio	1	1	6/18/2006 10:20	GRG	6/18/2006 10:2	GRG
at home	1	1	3/13/2007 2:40	GRG	3/13/2007 2:40	GRG
Nurse	1	5	6/17/2006 3:59	GRG	3/13/2007 12:5	GRG
Walk	1	2	3/13/2007 4:09	GRG	3/13/2007 4:10	GRG
When first noticed	1	1	11/14/2006 5:39	GRG	3/13/2007 12:5	GRG

Barry

INTERVIEWER
Have you had to give anything up specifically that you enjoyed doing that was important to you?

BARRY
Well, the only thing that we've really given up is - well we used to go dancing. Well she can't do it now so I have to go on my own, that's the only thing really. And then we used to go indoor bowling at the sports centre. But of course, that's gone by the board now. So we don't go there. But I manage to get her down to works club, just down the road on the occasional Saturdays, to the dances. She'll sit

Activities
Coding Density
Core activity
Changes
Togetherness
Bowling
Dancing
Joint activities ceased
Dances a
Doing for
Joint acti

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County-Wide Survey

- Methods
  - Population-based sample
    - Oregon business registry, OHA mailing lists, addresses online
    - 3,474 letters
- Goal: assess needle-based services
- Invitation to distribute materials
- Promotion of resources → Toolkit

Toolkit

- Toolkit development
  - Resources for practitioners and public
  - Evaluation link embedded

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Oregon is a Partner State in the CDC's One & Only Campaign

The **One & Only Campaign** is a public health campaign, led by the Centers for Disease Control and Prevention (CDC) and the Safe Injection Practices Coalition (SIPC), to raise awareness among patients and healthcare providers about safe injection practices. The campaign aims to eradicate outbreaks resulting from unsafe injection practices.

Raising awareness among healthcare providers and patients is critical to eliminating preventable infections caused by unsafe injections.

Injection and Needle Safety Toolkit

Although injections and needle use in professional settings are generally safe, unsafe practices do happen and may cause serious harm.

Unsafe practices, like reusing vials or syringes, have the potential to spread disease by cross-contaminating body fluids. Since 2001, more than 150,000 people in the U.S. have been notified of potential exposure to viral hepatitis and HIV due to lapses in injection and needle safety.

Do your part. Three ways to help stop these infections!

1. **Join the One & Only Campaign**! This campaign is led by the Centers for Disease Control and Prevention (CDC) and the Safe Injection Practices Coalition (SIPC) and raises awareness about safe injection practices.

2. Learn about best practices by using this toolkit.

3. Share what you learn from the toolkit with those in your workplace.

Disclaimer: The resources below contain overlapping information on best practices, but are by no means comprehensive, as new resources continually emerge. In addition, the links provided do not serve as an endorsement of the organizations.

Toolkit Contents

For the Public

- What to know about receiving healthcare involving needles
- At-home injections and needle use

For Health Professionals

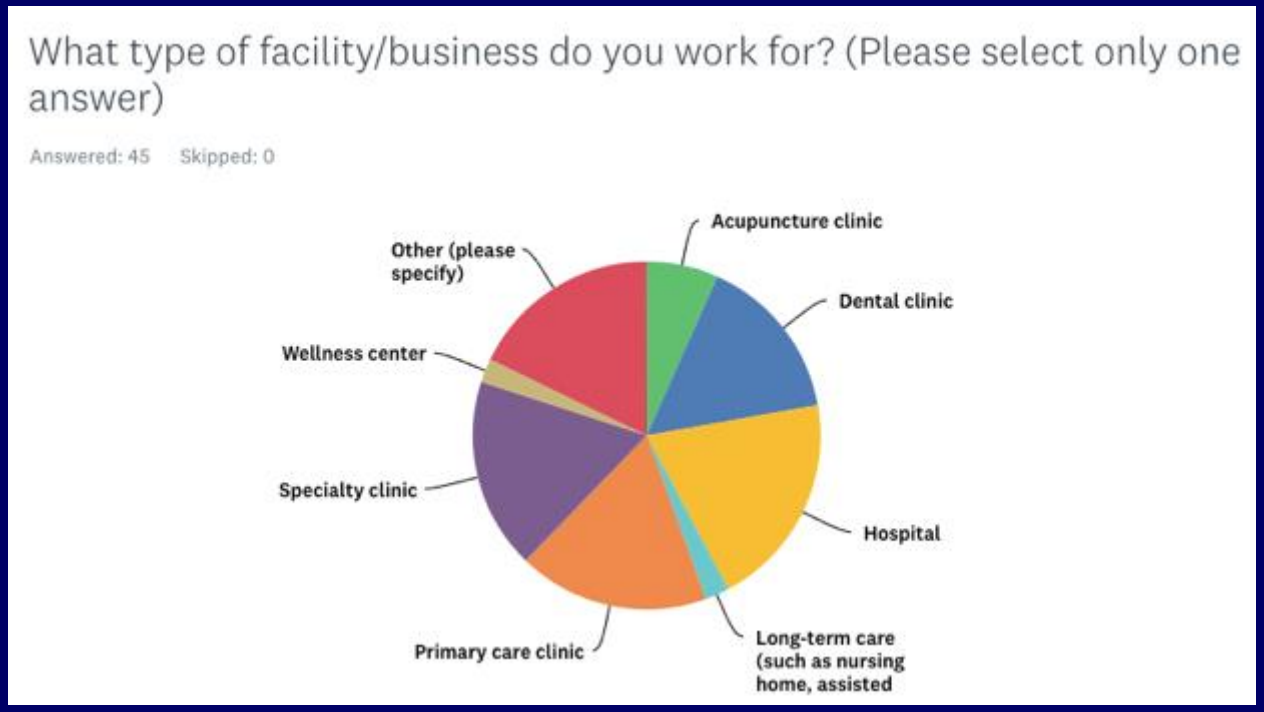
- Guidelines and Recommendations
- Aseptic Technique
- Needle Safety
- Medication and Treatment Management
- Diabetes Care
- Reports of Disease Transmission
- Specialty Specific Resources
- Additional Resources
- References

Feedback

- We want to hear from you! Let us know what you think about this toolkit by completing this quick feedback form.

Preliminary Results

- 72 responses
- 45 complete responses



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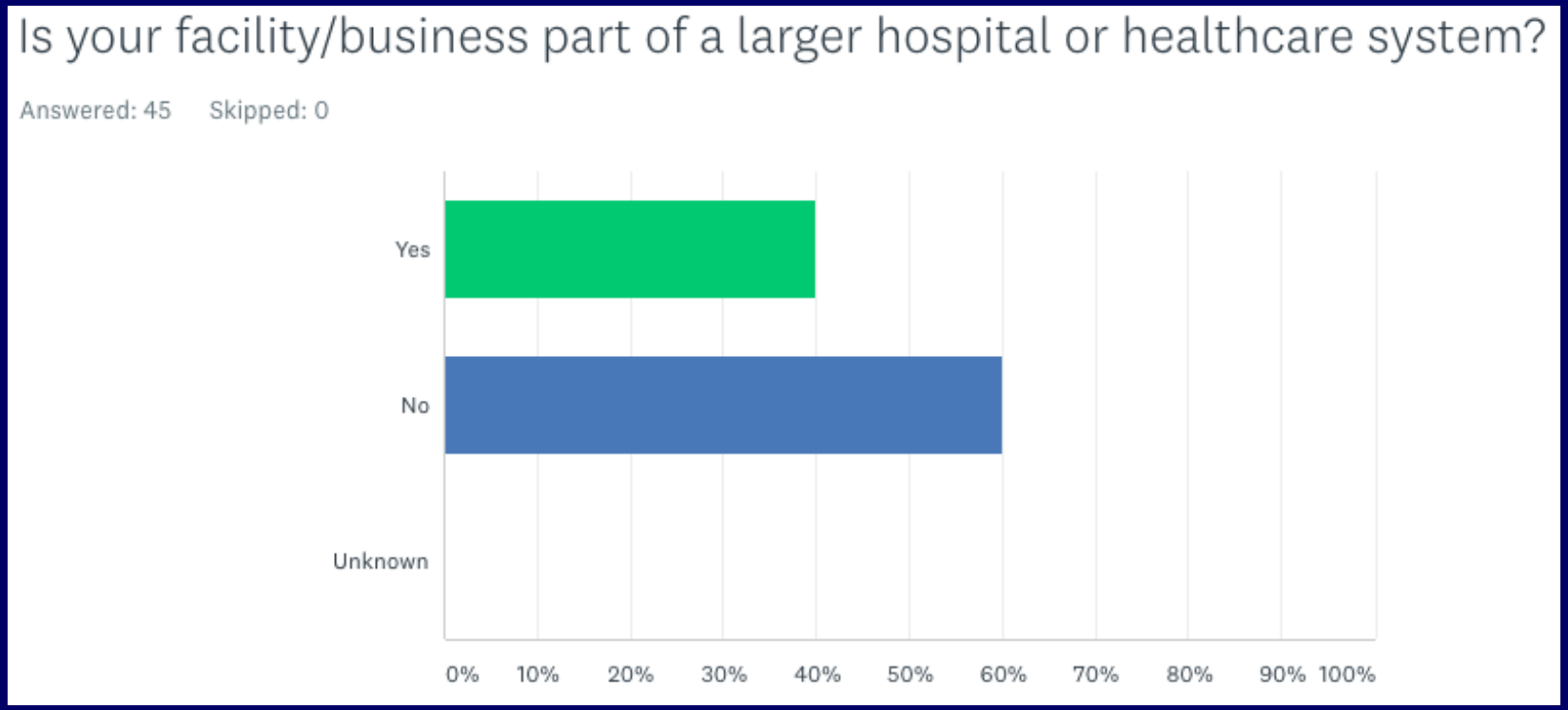

What is the average number of patients/clients who receive at least one injection of any type per day?

- Range: 0 – 200 patients/day

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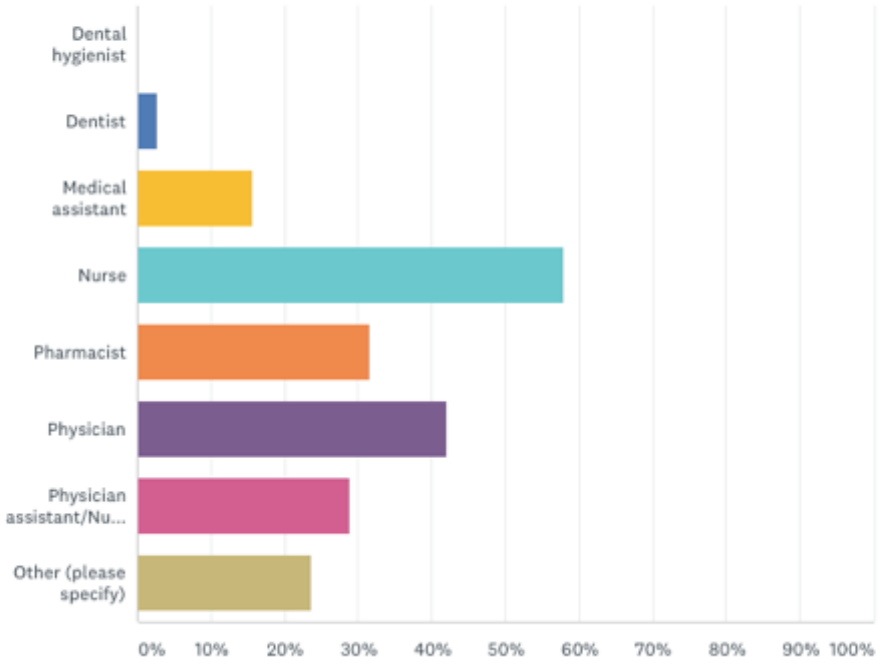
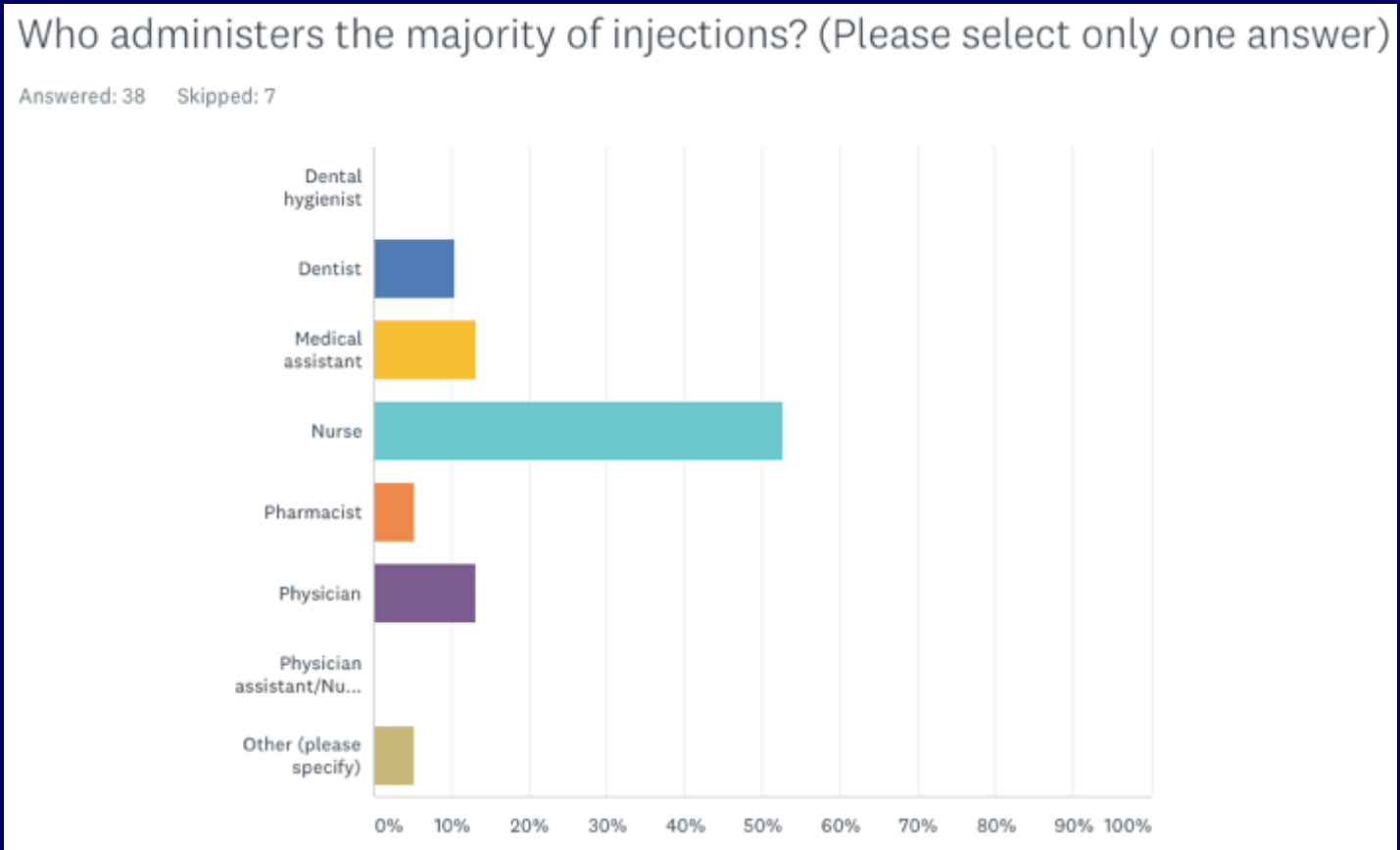
Who draws up injectable medications/treatments into syringes or adds medications to infusion bags? (Please select all that apply)

Answered: 38 Skipped: 7





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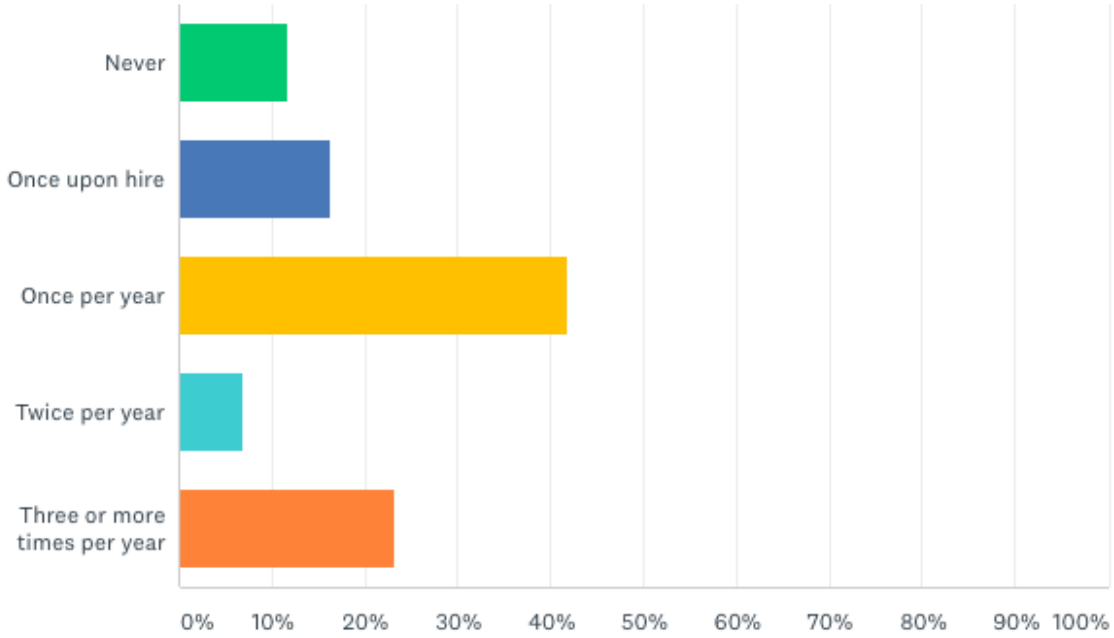
How often is education on needle use or injection practices provided or organized by your facility/business? (Please select only one answer)

Answered: 43 Skipped: 0



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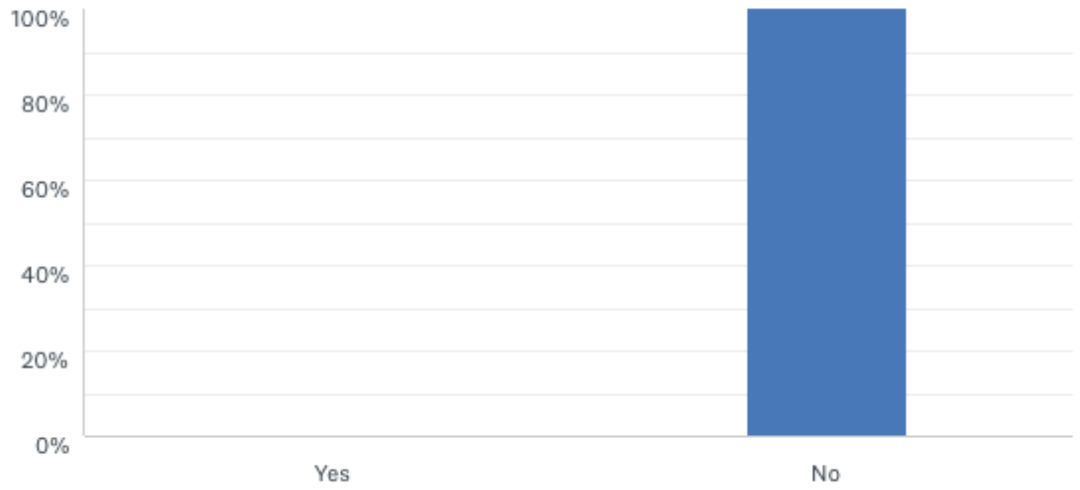
Acupuncturists

Does your facility/business regularly receive general information about clusters of disease, outbreaks, or patient/client notifications associated with needle use or injection practices?

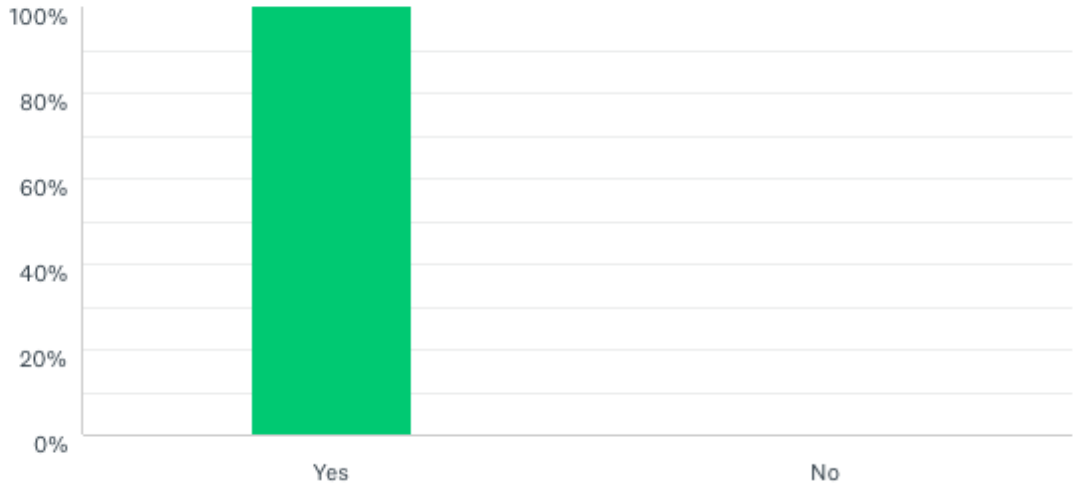
Answered: 3 Skipped: 0



Acupuncturists

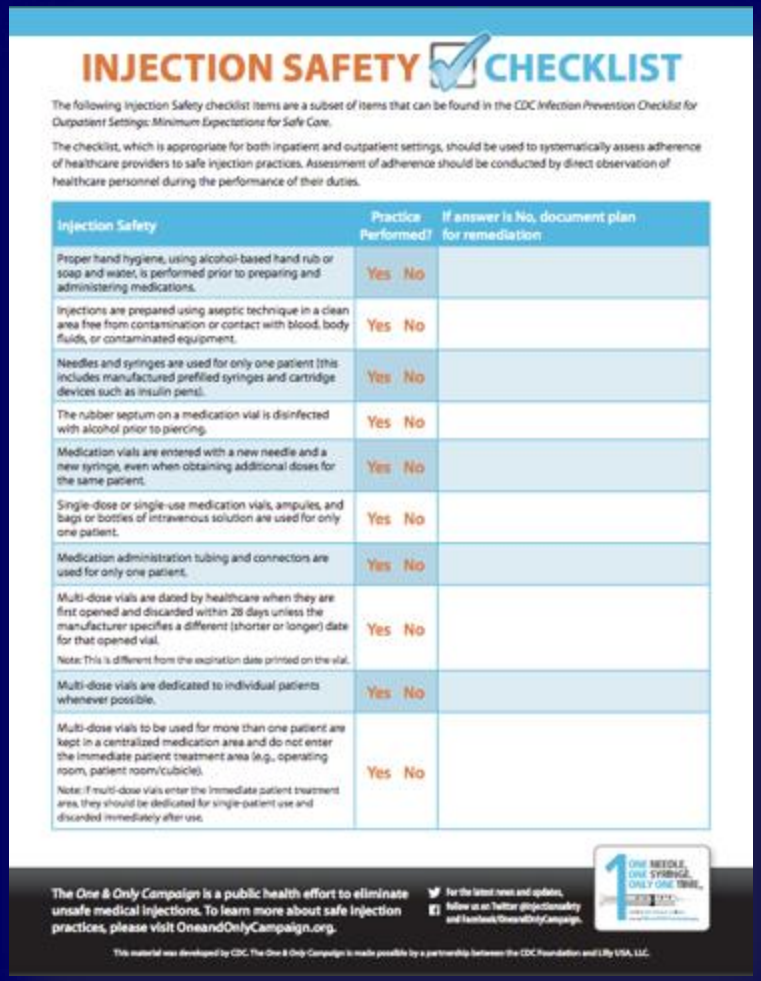
Are you willing to help distribute educational materials about injection and needle use safety sent to you by the Oregon Health Authority?

Answered: 3 Skipped: 0



Future Direction

- Targeted education
  - In-person trainings
  - Toolkit
- Injection safety champion
- State-wide distribution of survey
- Expand to other practice settings
  - Tattoo and piercing businesses
  - Correctional facilities
  - Tribal communities
  - Law enforcement
  - First responders



INJECTION SAFETY CHECKLIST

The following Injection Safety checklist items are a subset of items that can be found in the *CDC Infection Prevention Checklist for Outpatient Settings: Minimum Expectations for Safe Care*.

The checklist, which is appropriate for both inpatient and outpatient settings, should be used to systematically assess adherence of healthcare providers to safe injection practices. Assessment of adherence should be conducted by direct observation of healthcare personnel during the performance of their duties.

Injection Safety	Practice Performed?	If answer is No, document plan for remediation
Proper hand hygiene, using alcohol-based hand rub or soap and water, is performed prior to preparing and administering medications.	Yes No	
Injections are prepared using aseptic technique in a clean area free from contamination or contact with blood, body fluids, or contaminated equipment.	Yes No	
Needles and syringes are used for only one patient (this includes manufactured prefilled syringes and cartridge devices such as insulin pens).	Yes No	
The rubber septum on a medication vial is disinfected with alcohol prior to piercing.	Yes No	
Medication vials are entered with a new needle and a new syringe, even when obtaining additional doses for the same patient.	Yes No	
Single-dose or single-use medication vials, ampules, and bags or bottles of intravenous solution are used for only one patient.	Yes No	
Medication administration tubing and connectors are used for only one patient.	Yes No	
Multi-dose vials are dated by healthcare when they are first opened and discarded within 28 days unless the manufacturer specifies a different (shorter or longer) date for that opened vial. Note: This is different from the expiration date printed on the vial.	Yes No	
Multi-dose vials are dedicated to individual patients whenever possible.	Yes No	
Multi-dose vials to be used for more than one patient are kept in a centralized medication area and do not enter the immediate patient treatment area (e.g., operating room, patient room/cubicle). Note: If multi-dose vials enter the immediate patient treatment area, they should be dedicated for single-patient use and discarded immediately after use.	Yes No	

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.

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Lessons Learned

- Challenges involving mailed letters
  - Returned letters
  - Retired and deceased individuals
  - People moved
- Maybe exclude individual practitioners
- Lack of initial buy-in for champion role

Thank You! Questions?

Acknowledgements

- Dr. Rebecca Pierce, PhD, MS, BSN, HAI & EIP Program Manager
- Roza Tammer, MPH, CIC, HAI Reporting Epidemiologist
- Alyssa McClean, AWARE Program Coordinator
- Alexia Zhang, MPH, HAI Epidemiologist

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- Images:
  http://www.oneandonlycampaign.org/sites/default/files/upload/pdf/SIPC_ProviderBrochure.pdf
  http://www.oneandonlycampaign.org/sites/default/files/upload/pdf/SIPC_infographic.pdf
  https://www.lillyglucagon.com/assets/img/vial.png
  https://www.bd.com/assets/images/our-products/syringes-and-needles/integra-syringe_RC_MPS_HY_0816-0036.png
  http://onlineqda.hud.ac.uk/Step_by_step_software/NVivo/NVivo8/images/Coding2.png
  http://carrollwoodpharmacy.com/wp-content/uploads/2016/01/sterile-compound-2.jpg
  http://www.oneandonlycampaign.org/sites/default/files/upload/pdf/SIPC_insulinpen_BeAware.pdf
  https://i.pinimg.com/736x/93/44/09/9344095bb85098f7072d359d9437ba4c--interactive-infographic-public-health.jpg
  http://www.oneandonlycampaign.org/sites/default/files/upload/pdf/Injection%20Safety%20Checklist-508.pdf

Oregon Health Authority

TAP Assessment Progress

Dat Tran, MD, MS
Healthcare-Associated Infections Program
HAIAC
June 27, 2017

PUBLIC HEALTH DIVISION
Acute and Communicable Disease Prevention Section

Facility Recruitment

- CDI
  - All facilities with CAD > 0
- CLABSI
  - All NICUs (VON)

TAP Assessment Participation

CLABSI

# of respondents per facility	# of facilities
≥ 30	0
20-29	0
10-19	1
< 10	4
Total	**5**

CDI

# of respondents per facility*	# of facilities
≥ 30	6 (4)
20-29	3 (2)
10-19	2 (1)
< 10	5 (3)
Total	**16**

*excludes lab & stewardship surveys
(returned both lab & stewardship surveys)

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CDI: Mean Score by Assessment Domains

	General Infrastructure*	Antibiotic Stewardship	Early Detection, Isolation, Testing	Contact Precautions*	Environmental Cleaning*	Total Overall Score*
	Facilities with ≥ 20 completed surveys (n = 9)					
Mean	64%	24%	45%	65%	56%	58%
Range	58-72%	4-34%	8-72%	55-68%	46-76%	53-61%
	Facilities with ≥ 30 completed surveys (n = 6)					
Mean	64%	23%	42%	65%	61%	58%
Range	58-72%	4-34%	8-72%	55-68%	46-76%	53-61%

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Identification of Leading and Lagging Areas

Leading %	
% Yes	> 75%
Sum of Often + Always	> 75%

Lagging %	
% Unknown	> 75%
Sum of No + Unknown	> 75%
Sum of Never + Rarely + Sometimes + Unknown	> 50%

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CDI: Opportunities for Improvement*

I. General Infrastructure, Capacity, and Processes

6. Does your facility have a physician champion for CDI prevention activities?

III. Early Detection and Isolation, Appropriate Testing

6. Is CDI status (i.e., suspected, confirmed, and recent history) communicated from other facilities upon transfer to your facility?

IV. Contact Precautions / Hand Hygiene

11. Is there a system in place to ensure that patients perform hand washing after using the bathroom and before eating?
20. Do families/visitors adhere to use of gown/gloves for patients on contact precautions?
27. Do families/visitors adhere to hand hygiene policies?

*Based on assessments of facilities with ≥ 20 completed surveys

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Next Steps

- Complete and distribute TAP assessment feedback forms for each participating facility
- Complete analysis of aggregated TAP assessment data
- Refine TAP assessment process

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