Communication during Patient Transfer of Multidrug-Resistant Organisms

Oregon Public Health Division
Acute and Communicable Disease Prevention
Healthcare-associated Infections Program

February 11 and 14, 2014

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*Please mute your phones using *6 during the presentation*

- What is an MDRO?
- Why should we care?
- What is the problem?
- Examples of *C.diff* and CRE
- What are Transmission-based Precautions?
- What is the rule?
- FAQs
- Q&A

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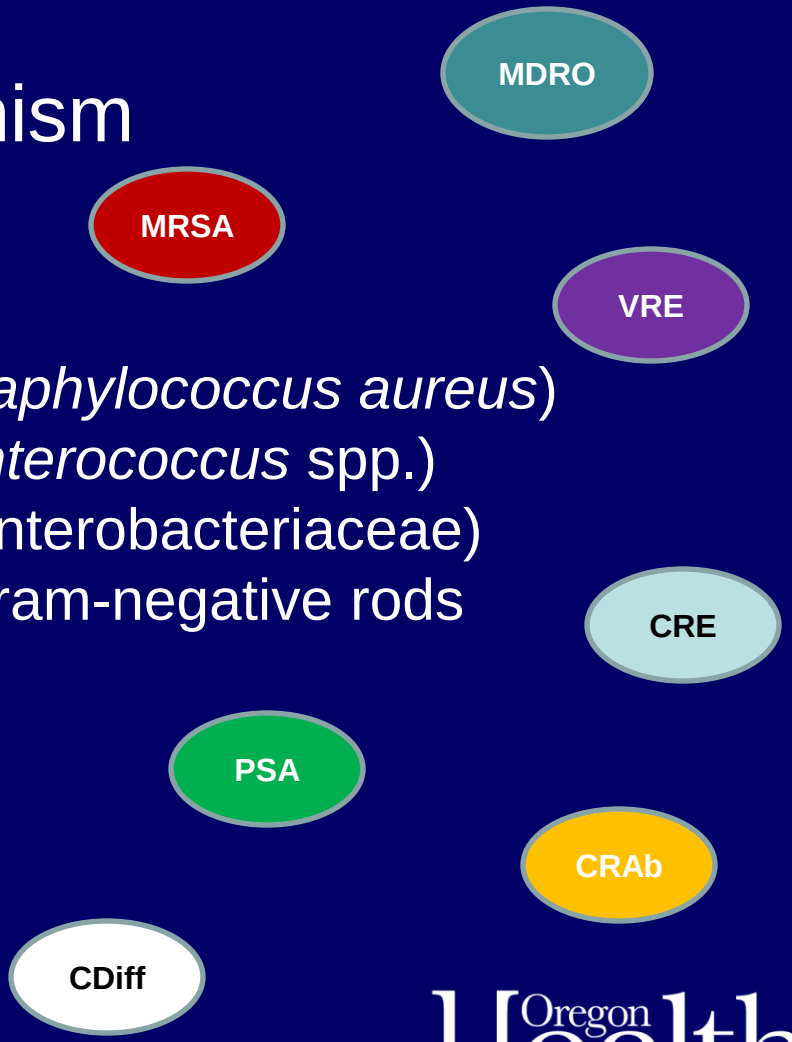
What is an MDRO?

- Multidrug-resistant organism
- Antibiotic resistant
  - MRSA (methicillin-resistant *Staphylococcus aureus*)
  - VRE (vancomycin-resistant *Enterococcus* spp.)
  - CRE (carbapenem-resistant Enterobacteriaceae)
  - Other carbapenem-resistant gram-negative rods
- Difficult to kill
  - C diff (*Clostridium difficile)*



Why should we care?

- MDROs part of modern medicine
- Important to limit spread
  - From endemic areas
  - By preventing selection locally
- More expensive, stronger antibiotics, more side effects
- Increased patient complications, longer stay, increased cost, death

Assisted Living

SNF

LTCF

Adult Foster Home

Resident Care

Opportunity to minimize spread of MDROs with timely communication

- Examples
  - *Clostridium difficile*
  - Carbapenem-resistant Enterobacteriaceae

Clostridium difficile

- Infectious diarrhea, often bloody, some fatal
- 2012: 72% of Oregon hospitals reported ≥1 case
- Klamath & Deschutes Co, 2010–2013:
  - 40% of cases healthcare-associated
  - 77% antibiotic-associated
- Challenges
  - Recurrent infections
  - Environmental reservoir
  - At-risk populations, prolonged health care contact

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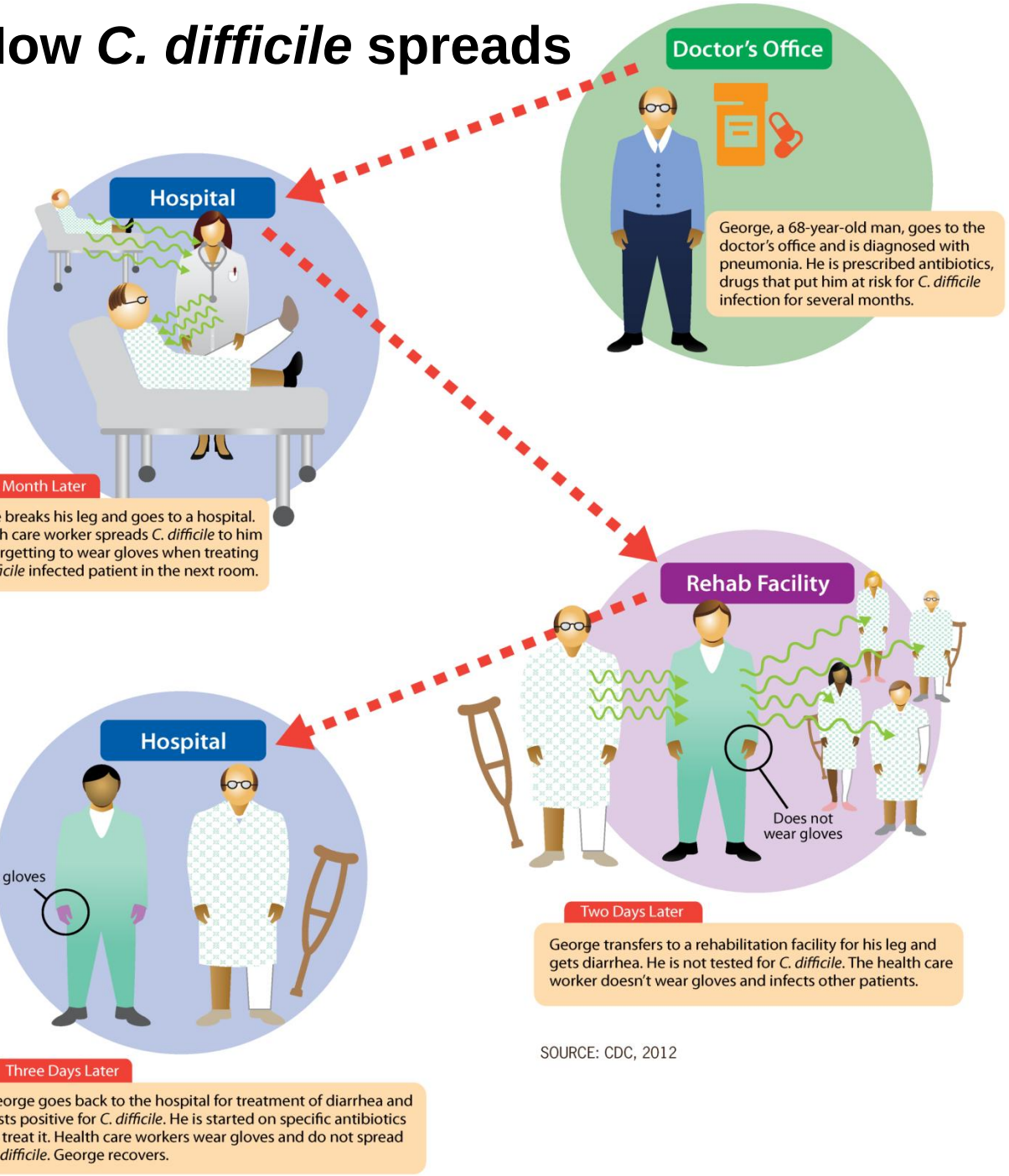
How *C. difficile* spreads



SOURCE: CDC, 2012

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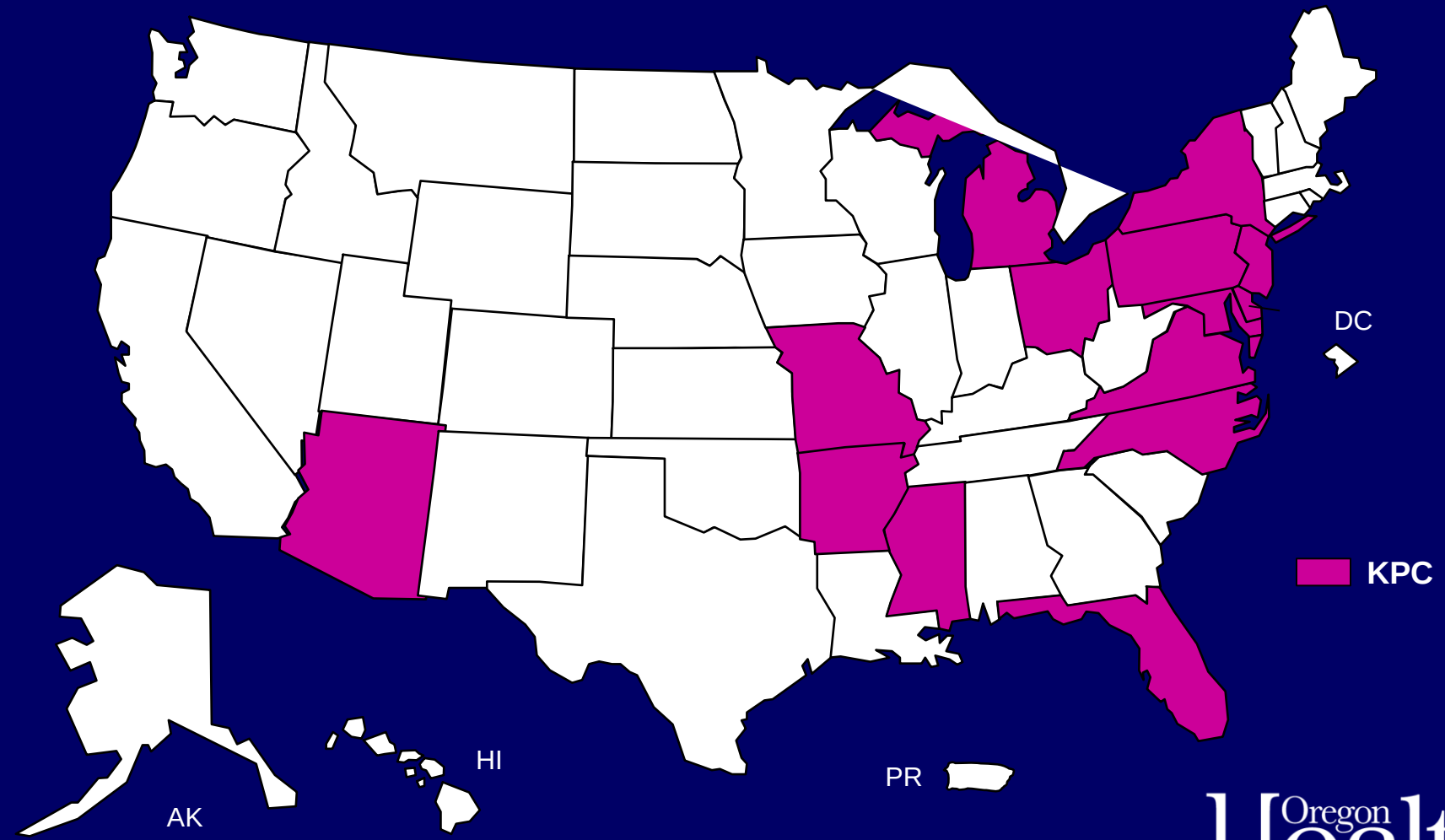
CRE: United States, circa 2009



Patel, Rasheed, Kitchel. 2009. Clin Micro News, CDC, unpublished data

Adapted from Alex Kallen,MD, MPH

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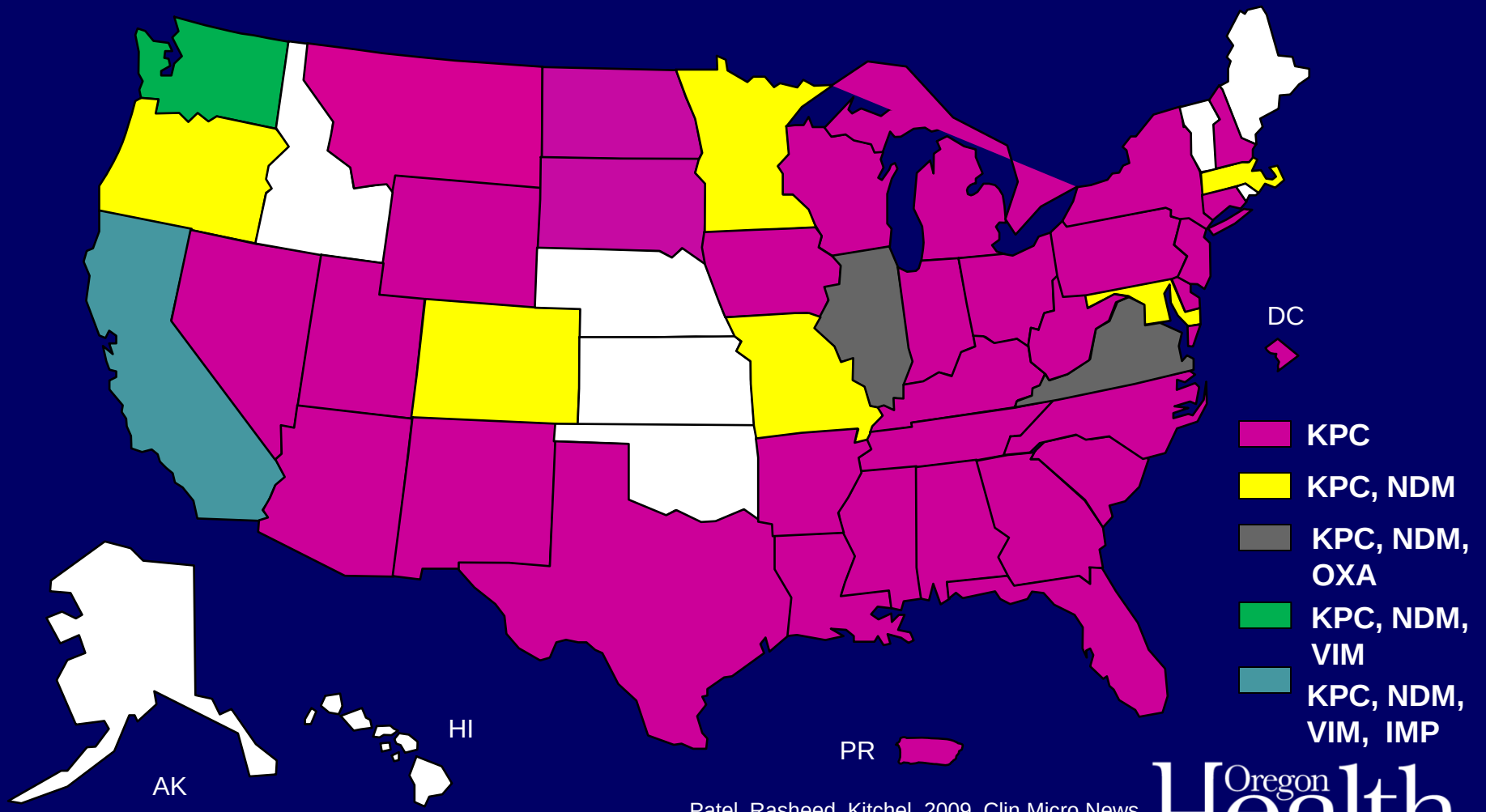
CRE: United States, 2013



Patel, Rasheed, Kitchel. 2009. Clin Micro News
MMWR MMWR Morb Mortal Wkly Rep. 2010 Jun 25;59(24):750.
MMWR Morb Mortal Wkly Rep. 2010 Sep 24;59(37):1212.
CDC, unpublished data

Adapted from Alex Kallen,MD, MPH

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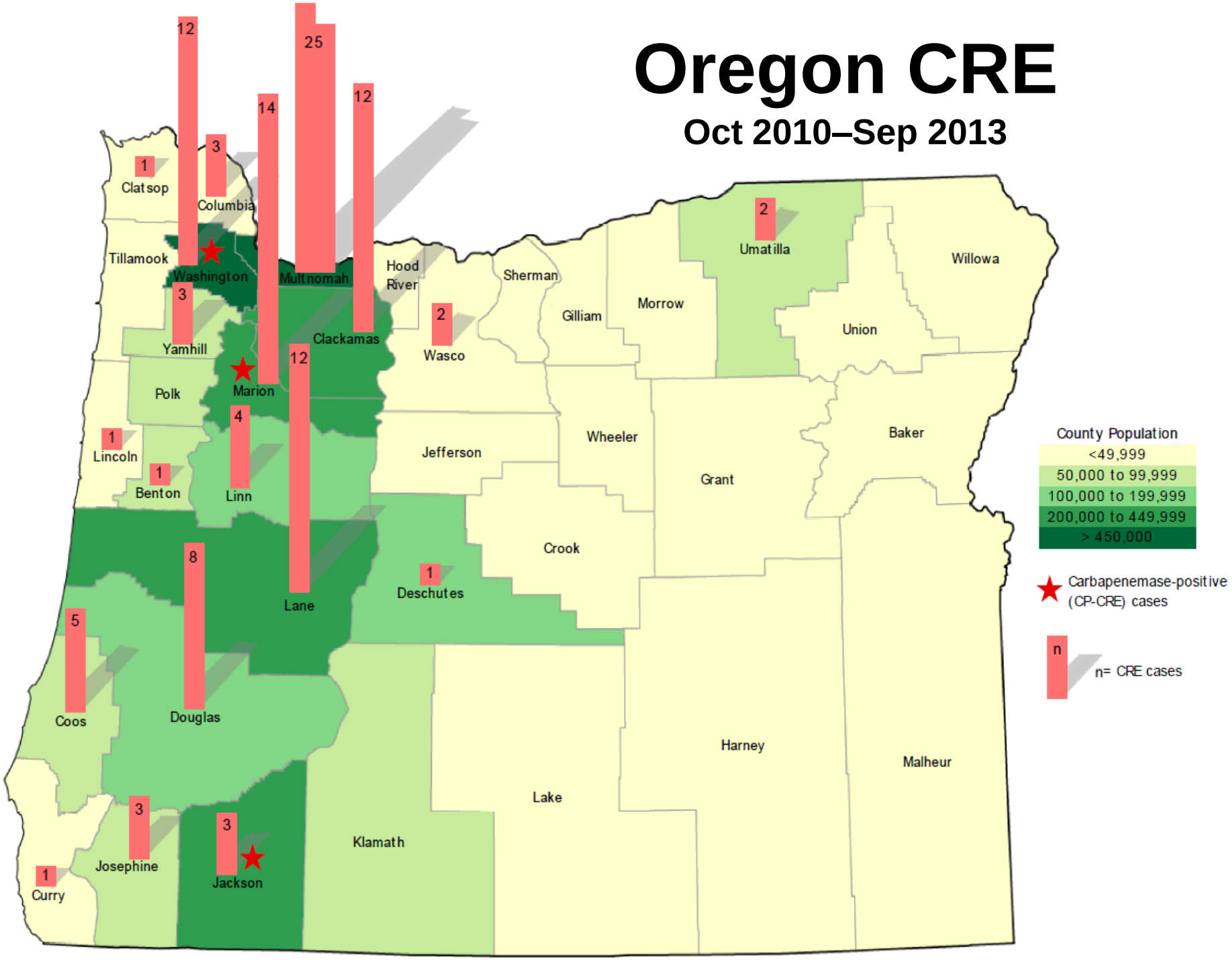
Oregon CRE

Oct 2010–Sep 2013

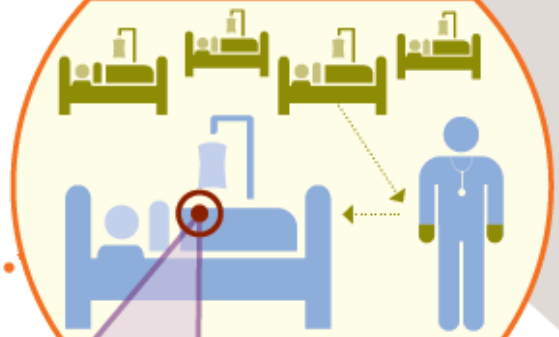


Risk of CRE Infections

1. Local Short-Stay Hospital

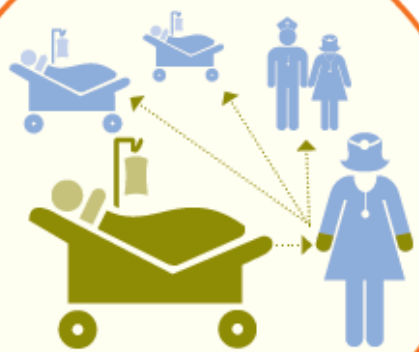
Jan has a stroke and is in the hospital. She is stable but needs long-term critical care at another facility.

2. Long-Term Acute Care Hospital



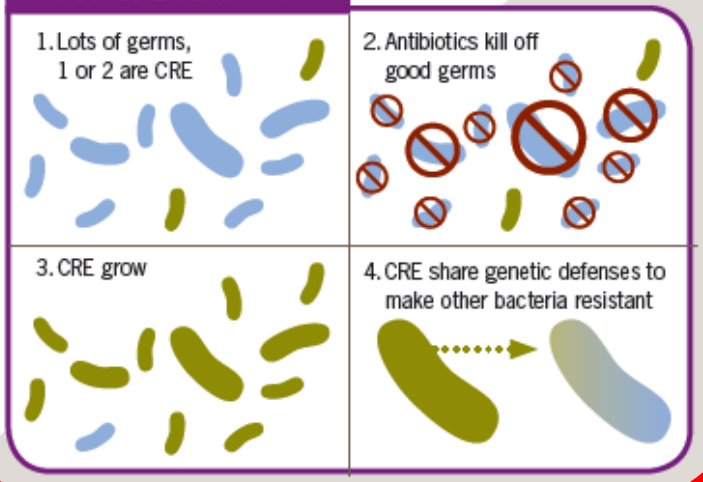
Other patients in this facility have CRE. A nurse doesn't wash his hands, and CRE are spread to Jan. She develops a fever and is put on antibiotics without proper testing.

3. Local Short-Stay Hospital



Jan becomes unstable and goes back to the hospital, but her new doctors don't know she has CRE. A doctor doesn't wash her hands after treating Jan. CRE are spread to other patients.

How CRE Take Over



SOURCE: CDC Vital Signs, 2013

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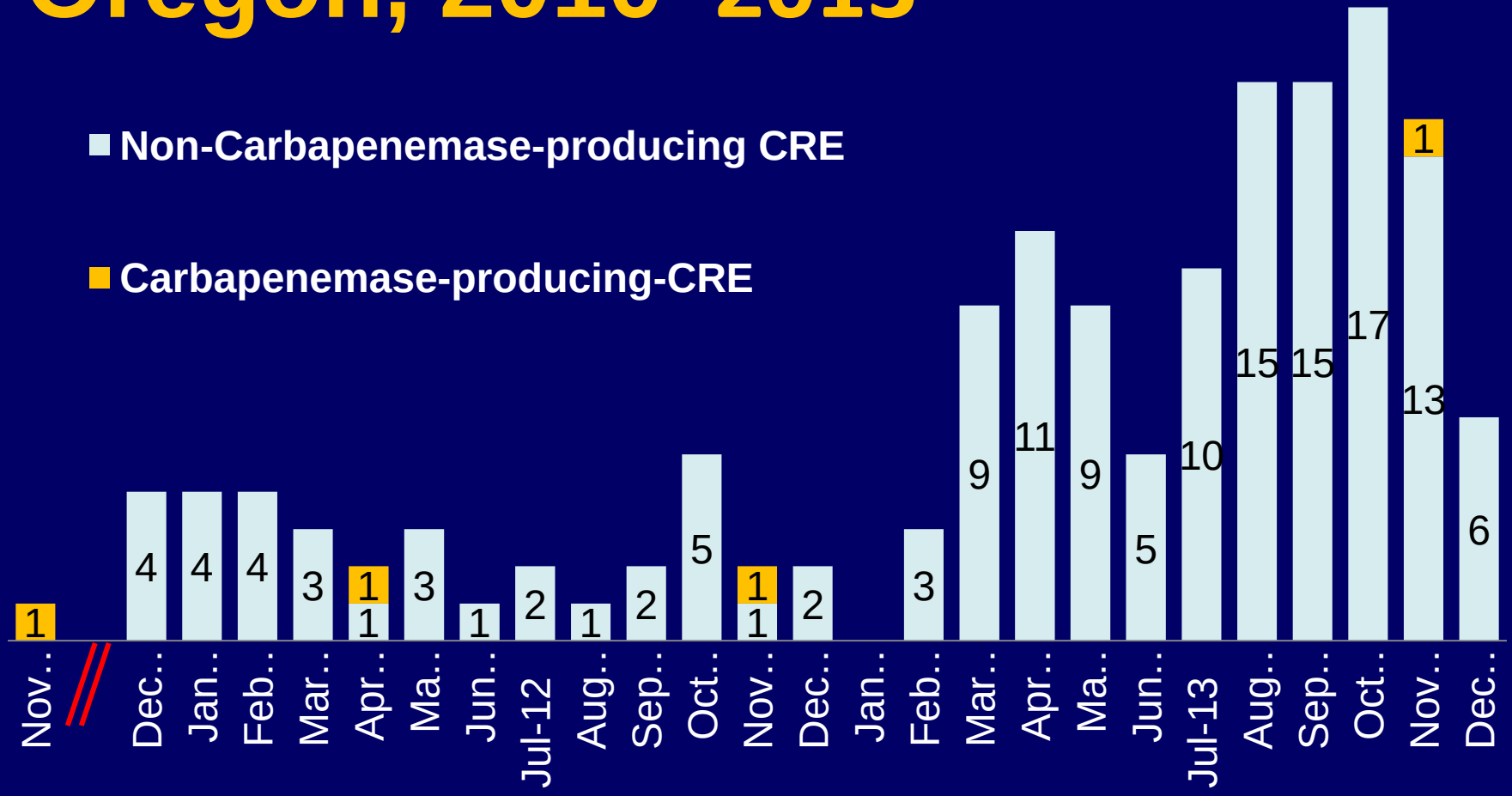
DROP-CRE* Surveillance: Oregon, 2010–2013



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*Drug-Resistant Organism Prevention and Coordinated Regional Epidemiology Network

CRE: Oregon, since Nov 2010

- 154 cases
- 4 carbapenemase-producing CRE

- 129 (84%) ≥50 years old
- 94 (61%) female

- 91 (59%) hospitalized
- 22 of 36 counties reported cases
- Medically complex, indwelling devices

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What can we do?

- Hand hygiene
- Surveillance
- Awareness/Education
- Antibiotic Stewardship
- Standard Precautions
- Transmission-based precautions
- Interfacility communication

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What can we do?

- Hand hygiene...Everyone
- Surveillance…Public health, facility, region
- Awareness/Education…OHA, OPSC*, etc.
- Antibiotic Stewardship…Facility, region, etc.
- Standard Precautions
- Transmission-based precautions
- Interfacility communication

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*Oregon Patient Safety Commission www.oregonpatientsafety.org

Infection Control Precautions

- Standard precautions
  - Hand hygiene before and after any patient contact
  - Body fluids (urine, sputum, feces, etc) as infectious
  - Personal protective equipment (gown, glove, mask)
  - Safe injection practices
- Transmission-based precautions
  - When Standard Precautions are not sufficient
  - Transmission from colonized patients via hands
  - Environmental contamination

Transmission-based Precautions

Type*	Personal Protective Equipment	Examples
CONTACT	Gown, glove (+/- mask)	MRSA, VRE, CRE, C.diff, norovirus, diarrhea
DROPLET	Surgical mask	Influenza, cough
AIRBORNE	N-95 or respirator	Tuberculosis, measles, chickenpox

*May use more than one type depending on bug, patient, procedure

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MDRO Needs Assessment, 2013

- MDRO Interfacility communication
- Infections Preventionists
  - Received MDRO status: 58%
  - Communicated MDRO status: 81.8%
- Long Term Care Facilities
  - Received MDRO status: 75%
  - Communicated MDRO status: 80%

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Examples of Interfacility Communication

- Centers for Disease Control and Prevention (CDC)
- Council of State and Territorial Epidemiologists (CSTE)
- Joint Commission
- New York State (HAI)
- Illinois (*C. diff* Initiative)
- Clark County, Washington, HAI collaborative
- Oregon Regional MDRO Collaborative

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Rationale for new rule

- Inadequate precautions spread MDROs
- Awareness of MDRO or other pathogens before and at time of transfer
- Information available across multiple types of health care facilities
  - Hospitals (short and long-term acute care)
  - Long-term (non-acute) care facilities
  - Assisted living, residential care, foster homes
  - Ambulatory Surgery Centers
  - Dialysis centers
  - Hospice

Rationale for new rule

- Different health care facilities with different goals and needs for their residents,

  but still need access to the same information.

- Medical transport needs high-level information
  - E.g., type of precautions

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Goals for Patient Safety

- MDRO and precautions status travel as part of the “patient picture” on discharge and transfer summaries, and between providers during transfers of care.

- Educate staff about MDROs, Standard and Transmission-based precautions.

Rule 333-019-0052

1. When a referring facility transfers or discharges a patient who is infected or colonized with a multidrug-resistant organism (MDRO) or pathogen which warrants Transmission-based Precautions, it must include written notification of the infection or colonization to the receiving facility in transfer documents. The referring facility must ensure that the documentation is readily accessible to all parties involved in patient transfer (for example, referring facility, medical transport, emergency department, receiving facility).

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What is an MDRO?

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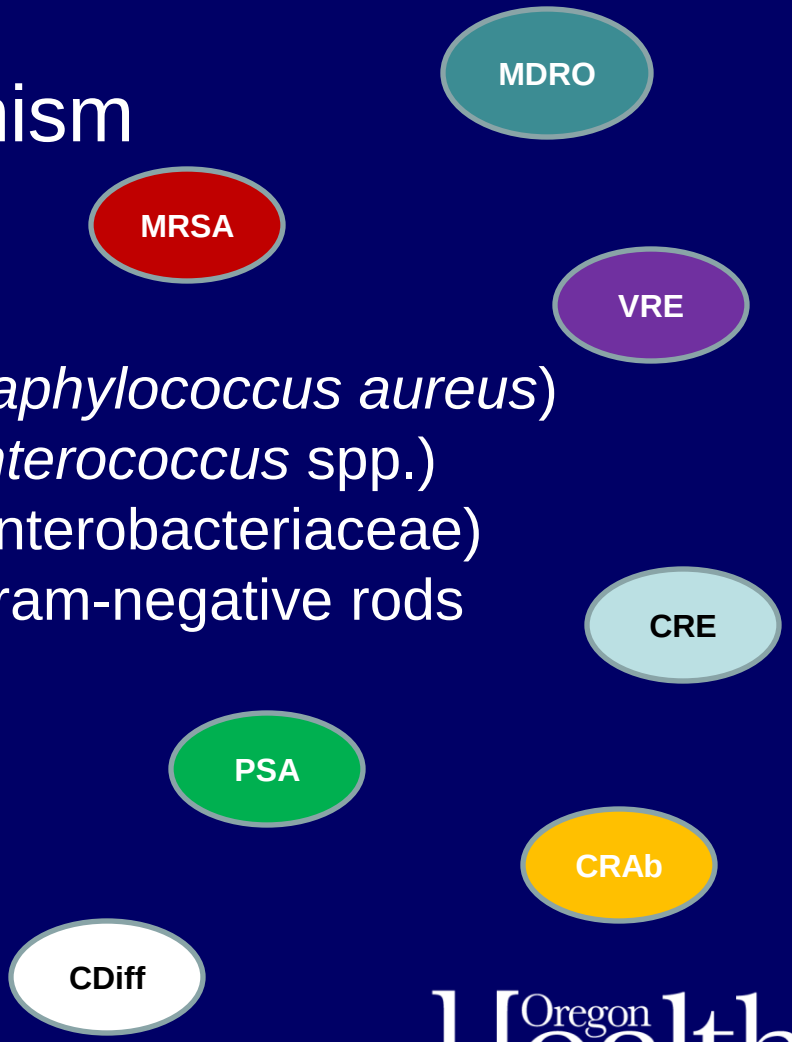

Rule 333-019-0052

2. When a facility becomes aware that it received in transfer one or more patients with an MDRO or pathogen that warrants Transmission-based Precautions, and that was isolated from a patient specimen collected within 48 hours after transfer, it must notify the referring facility.
3. When a facility becomes aware that it transferred or discharged one or more patients who have an MDRO or pathogen that warrants Transmission-based Precautions, the referring facility must notify the receiving facility.

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Rule 333-019-0052

4. If a facility transfers or discharges a patient with *laboratory-confirmed, carbapenemase-producing Enterobacteriaceae***, the facility must notify the local health department communicable disease staff within one working day of the date and destination of the transfer or discharge.

**NOTE: only 4 identified since 2010

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SELECTED FAQS

See website for complete FAQs:

http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/HAI/Pages/Interfacility-Communication.aspx

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What is a health care facility in Oregon?

- A health care facility as that term is defined in ORS 442.015 (hospital, long term care facility, freestanding birthing center, ambulatory surgery center, outpatient dialysis center);
- (B) An infirmary (for example, in a jail or prison);
- (C) A residential facility or assisted living facility as those terms are defined in ORS 443.400;
- (D) An adult foster home as that term is defined in ORS 443.705;
- (E) A hospice program as that term is defined in ORS 443.850; and
- (F) Any other facility that provides 24-hour patient care.

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What happens if a facility does not comply?

- OPHD will investigate complaints
- Oregon law (OAR 333-026) provides for civil penalties for repeated infractions.

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What counts as a transfer or discharge?

- Rule specifies transfers or discharges between two licensed health care facilities.
- Makes communication of MDRO status part of routine sharing of relevant patient information at discharge, transport, and admission.
- Makes information readily available for transport and receiving facilities to see and use.
- Consider patients' MDRO or precaution status during *all transfers of care*, including to non-licensed settings like to a private residence, medical appointments, or day surgery.

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Does a facility need a separate sheet?

- Rule does not specify
- Recommend integrating MDRO status into standard discharge sheet or care plan that accompanies the patient
- Some facilities may prefer to use a separate sheet:

  See examples in resources: http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/HAI/Pages/Interfacility-Communication.aspx

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Q&A

Please send in questions using GoToWebinar

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APPENDIX

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Standard Precautions

- Minimum infection prevention measures that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where healthcare is delivered. (CDC Resource)
- (A) Hand hygiene;
- (B) Use of personal protective equipment (for example, gloves, gowns, facemasks), depending on the anticipated exposure;
- (C) Respiratory hygiene and cough etiquette;
- (D) Safe injection practices; and
- (E) Safe handling of potentially contaminated equipment or surfaces in the patient environment.

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References for Transmission-based Precautions

- Healthcare Infection Control Practices Advisory Committee's *Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, 2007:*
  - http://www.cdc.gov/hicpac/2007ip/2007ip_appenda.html
- CDC Resources for different health care settings:
  - http://www.cdc.gov/HAI/prevent/prevention.html
- CDC Resources for Personal Protective Equipment:
  - http://www.cdc.gov/HAI/prevent/ppe.html
- Standard Precautions:
  - http://www.cdc.gov/HAI/settings/outpatient/basic-infection-control-prevention-plan-2011/standard-precautions.html

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Interfacility Transfer Forms

- Oregon
- CDC
- Clack County, WA
- Go to “Other Resources” at: http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/HAI/Pages/Interfacility-Communication.aspx

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Contact information

- Healthcare-associated Infections Program, Acute & Communicable Disease Prevention
  - 971-673-1111
  - General: ohd.acdp@state.or.us

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Educational resources

- Oregon Patient Safety Commission
  - http://oregonpatientsafety.org/
- Centers for Disease Control and Prevention
  - http://www.cdc.gov/hai/index.html
- Acute and Communicable Disease Prevention, Healthcare-associated Infections Program
  - http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/HAI/Pages/index.aspx

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Thank you!

- ACDP: Zints Beldavs, Paul Cieslak, Ann Thomas, Maureen Cassidy, ACDP staff
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- DOJ: Shannon O'Fallon
- OPSC: Mary Post, Rebecca Rothman, Jessica Lenar
- DROP-CRE Workgroup: JJ Furuno, Chris Pfeiffer, John Townes
- DHS: David Allm, Renee Shearer, Warren Bird, Silvia Rieger
- ACIP: Cathy Stone
- IFT Workgroup
- HAI Workgroup

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