

Ebola Assessment Hospitals and ICAR Centers of Excellence

November 2016

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2/7/2017

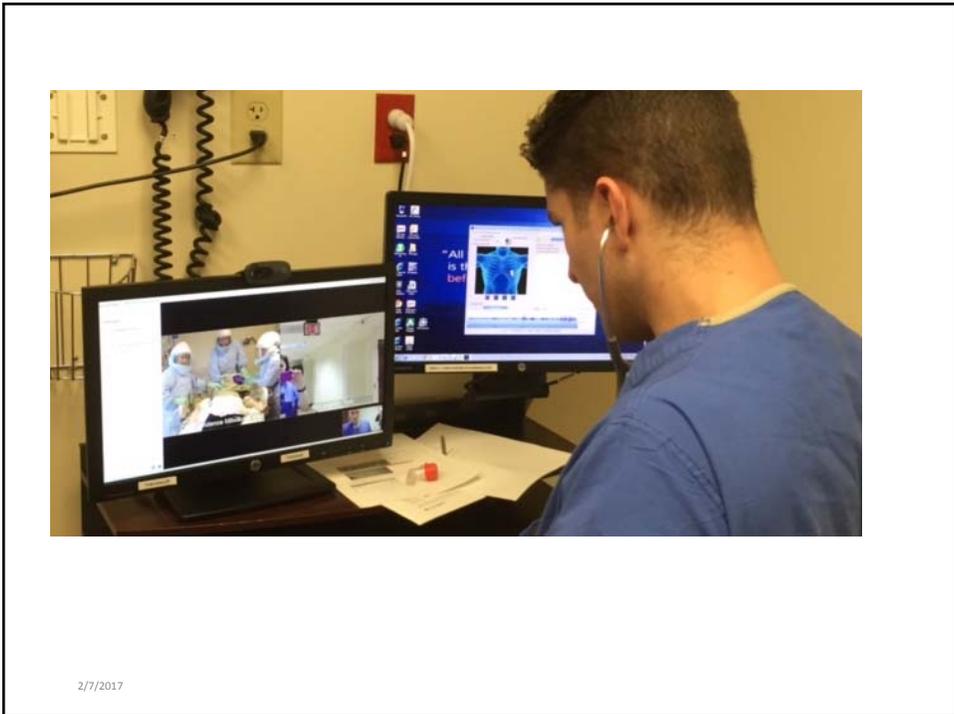
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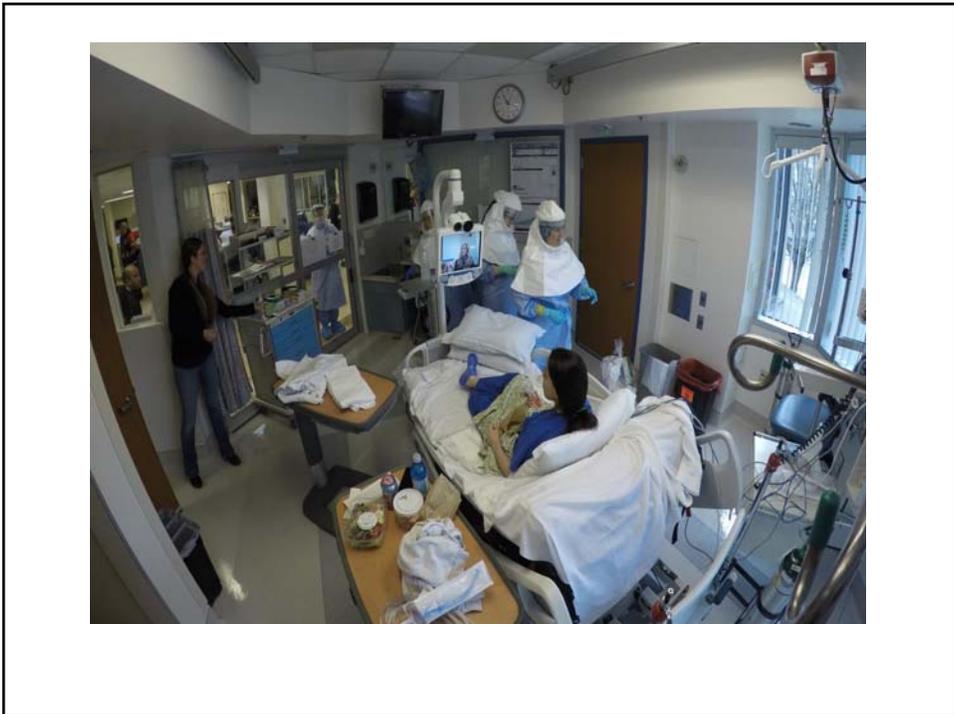
Objectives

- Update of Oregon Ebola Assessment Hospital (EAH) designation
- Review of Oregon HAI Program's work with EAHs
- Discuss HAI Program's strategy to "step down" but continue Oregon's infection prevention infrastructure and preparedness
- Discuss HAI Program's new collaboration with Oregon NICU's to decrease antibiotic use

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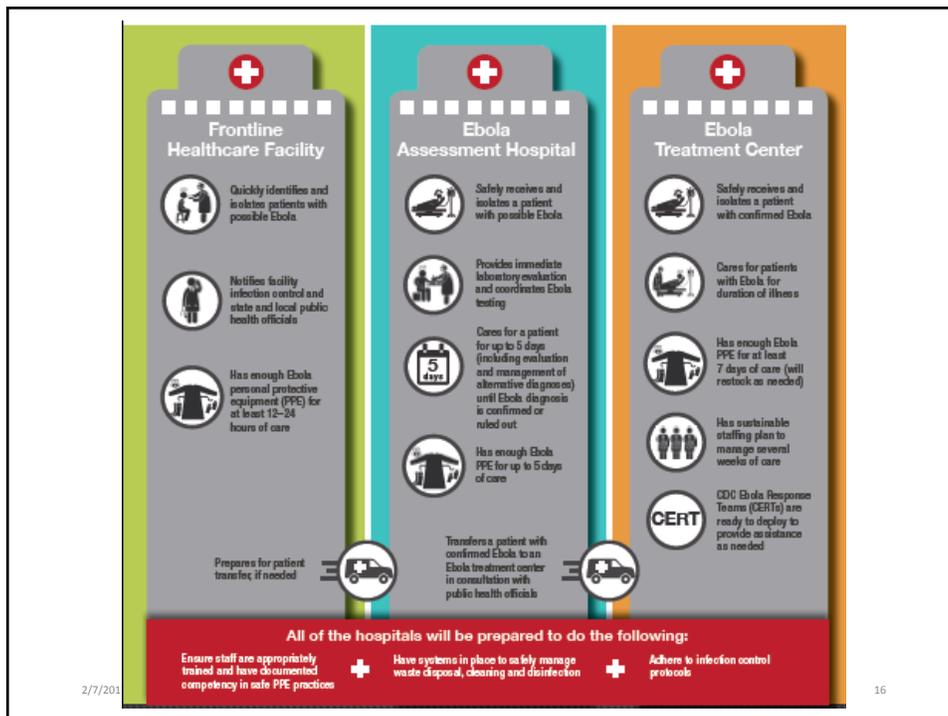


Ebola Assessment Hospitals Updated 11/2016

- Asante Ashland Community Hospital
- Legacy Good Samaritan Hospital
- Samaritan Lebanon Community Hospital

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Reminder: No More PUMs!

- No entry screening for returning travelers
- Continued triage screening will be crucial for rapid identification → isolation → notification
 - Acute illness+ recent international travel
- Ebola Assessment Hospital Designation continues
 - How do we continue collaboration & improvement?

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Oregon ICAR Centers of Excellence

Infection Control Assessment and Response

The screenshot shows the CDC website page for the Infection Control Assessment and Response (ICAR) Program. The page is titled "State-based HAI prevention" and includes a navigation menu on the left with options like "Healthcare-associated Infections", "Map: HAI Prevention Activities", "Infection Control Assessment and Response (ICAR) Program", "HAI Prevention Projects", "Tracking", "Investments", "State Success", and "Resources for States". The main content area features social media icons (Facebook, Twitter, YouTube) and a heading "Infection Control Assessment and Response (ICAR) Program". Below this heading is a section titled "On this Page" with a list of states: Alabama, Alaska, American Samoa, Arkansas, California, Chicago, Colorado, Connecticut, Delaware, District of Columbia, Federated States of Micronesia, Florida, Georgia, Guam, Hawaii, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York City, New York, North Carolina, North Dakota, Ohio, Oregon, and Pennsylvania. The right sidebar contains a "Get email updates" section, a "Contact Us" section with the CDC address (1600 Clifton Rd, Atlanta, GA 30333), phone number (800-CDC-INFO), and TTY number (888) 232-6348, and a "Contact CDC-INFO" link.

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What is an ICAR Center of Excellence?

- Initial collaboration with self-identified Ebola Assessment Hospitals
- Continued active engagement with OHA to strengthen infection prevention
 - Each hospital's work & priorities will vary
 - Periodic updates
 - Continued collaboration via telephone, email, webinar, etc.

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“Repurposing” CDC’s Assessment Hospital Document

- These are not center “expectations”
- Summarizes a hospital’s overall readiness for preventing the transmission of highly contagious pathogens, and commitment to strengthening Oregon’s infection prevention infrastructure

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Facility Infrastructure

- Review of Hand Hygiene product placement
- Review of PPE placement throughout hospitals
- AIIR capacity
 - Within each hospital, and across entire hospital system
 - Ensure safety checks are in place

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Patient Transportation

- Inter-Facility
 - Continued partnerships with EMS partners (mostly through Ebola work):
 - Transport plans
 - Annual training of EMS partners (PPE, safe transport)
 - Notification of MDROs and isolation recommendations prior to accepting or transfer to another facility

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Laboratory

- Maintaining POC or central lab area for necessary diagnostics (based on differential diagnosis)
- Continued collaboration to improve lab personnel competencies and education
- Designated primary lab partner with OSPHL to serve as clinical liaison

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Staffing

- Detailed, scalable staffing plans to support 96 hours of care

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Worker Safety

- Compliance with OSHA Respiratory Protection Program and Bloodborne Pathogen and Needlestick Prevention
- Plans for employee exposures (TB, measles, varicella, blood and body fluids)
- Immunization promotion, monitor rates immunized (flu, MMR, VZV, Tdap)
- Ill provider policy

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Clinical planning

- Hospital has patient (and visitor) post-exposure management and prophylaxis plans in place
 - Influenza, measles, varicella, pertussis, blood or body fluids

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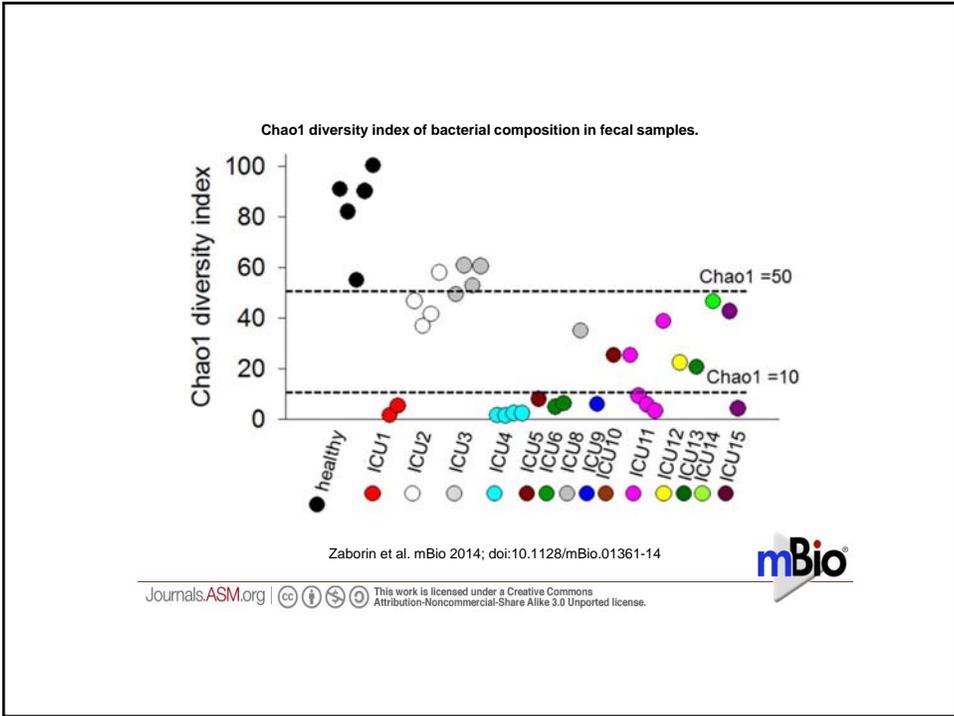
Antibiotic stewardship collaboration

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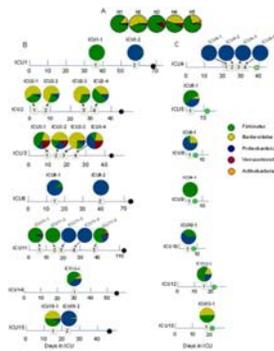
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Antimicrobial stewardship

- Antimicrobial stewardship = microbiome stewardship
- Disruption of GI microbiome is multi-factorial
 - Also: acid-reducing agents, TPN, vasoactive agents
- "Commensal lifestyle" can shift to a "Pathogenic lifestyle" during physiologic stress, above exposures, and critical illness
- An understanding of the microbiome is critical in order to determine new methods for HAI and MDRO prevention



ICU stay leads to dramatic microbiome disruption



The taxonomic composition of the gut microbiome at the phylum level determined by 16S rRNA:

- (A) Healthy volunteers
- (B) ICU patients dying with signs of severe sepsis
- (C) ICU patients who had recovered

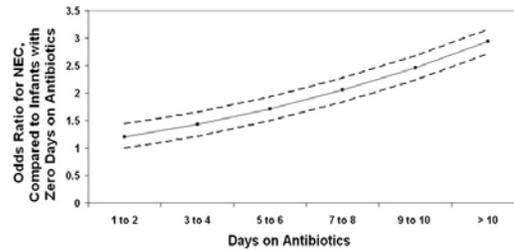
Zaborin et al. mBio 2014; doi:10.1128/mBio.01361-14

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Antibiotic exposure and NEC

Figure



The figure depicts the odds ratio of developing necrotizing enterocolitis (Y-axis) as the cumulative duration of antibiotic exposure increases (X-axis) in neonates without a prior diagnosis of culture-proven sepsis. The comparison group is neonates with zero days of antibiotic exposure. The dotted lines represent 95% confidence intervals. A statistically significant increase is observed.

Alexander et al. J Pediatrics 159(3): 392-397, 2011

Antibiotic restriction decreases MDRO

- Ciprofloxacin restriction decreases MDR-P aeruginosa
- 3rd generation cephalosporin restriction in NICU reduces MDR-Enterobacter sp.
- Cephalosporin restriction decreases MDR-Klebsiella infection and colonization by 44% (71% reduction in MICUs, 88% in SICU)
 - Concomitant 69% increase in imipenem-resistant Pseudomonas sp.

Lewis et al. ICHE 33(4): 368-73, 2012.

Callil et al. AJIC 29: 133-8, 2001

Rahal et al. JAMA 280:1233-7, 1998

APPROVED: New Antimicrobial Stewardship Standard

The Joint Commission recently announced a new Medication Management (MM) standard for **hospitals, critical access hospitals, and nursing care centers**. Standard MM.09.01.01 addresses antimicrobial stewardship and becomes **effective January 1, 2017**.

Current scientific literature emphasizes the need to reduce the use of inappropriate antimicrobials in all health care settings due to antimicrobial resistance. According to the World Health Organization (WHO): "Antimicrobial resistance threatens the effective prevention and treatment of an ever-increasing range of infections caused by bacteria, parasites, viruses and fungi."¹ The Centers for Disease Control and Prevention (CDC) identified that 20%–50% of all antibiotics prescribed in US acute care hospitals are either unnecessary or inappropriate.² The CDC has also stated: "Antibiotics are among the most commonly prescribed medications in nursing homes. Up to 70% of long-term care facilities' residents receive an antibiotic every year."³

https://www.jointcommission.org/assets/1/6/New_Antimicrobial_Stewardship_Standard.pdf

Proposed CMS rule includes antibiotic prescribing measure, open for public comment

The Centers for Medicare and Medicaid Services (CMS) is inviting the public to comment on proposed rule changes related to hospital payment and quality reporting. One proposed rule is to include hospitals' antibiotic prescribing data to the CMS Hospital Inpatient Quality Reporting (IQR) Program. Hospitals would send their information to CMS through CDC's National Healthcare Safety Network (NHSN) Antimicrobial Use module. They can then compare their antibiotic prescribing to national benchmarks and evaluate and improve antimicrobial prescribing as needed.

NHSN is already used by hospitals, CDC, and CMS to gather and report progress on a number of other quality and safety measures. CMS is proposing the NHSN Antimicrobial Use measure to further advance national efforts combating antibiotic resistance. Evidence shows that programs dedicated to optimizing inpatient antibiotic prescribing, known as **antimicrobial stewardship programs (ASPs)**, can slow the emergence of antibiotic resistance and improve both appropriateness of antimicrobial use and patient outcomes.

By commenting on proposed rules, members of the public play an important role in the rulemaking process. Comments must be received no later than 5 p.m. EDT on June 17, 2016.

- Proposed CMS rules open for public comment: <https://federalregister.gov/a/2016-09120>
- NHSN Antimicrobial Use Measure summary (NQF #2720): http://www.qualityforum.org/Measures_Reports_Tools.aspx
- CDC's NHSN Antimicrobial Use and Resistance (AUR) Module: <http://www.cdc.gov/nhsn/acute-care-hospital/aur/index.html>
- CMS's Hospital IQR Program: <https://www.cms.gov/MedicareQuality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInitia/HospitalIQRDAPU.html>



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E-mail communication. CDC (cdc@service.govdelivery.com). Thursday, April 28, 2016

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Choosing Antibiotics Wisely
Presented in Collaboration with
The Centers for Disease Control and Prevention



Vermont Oxford Network

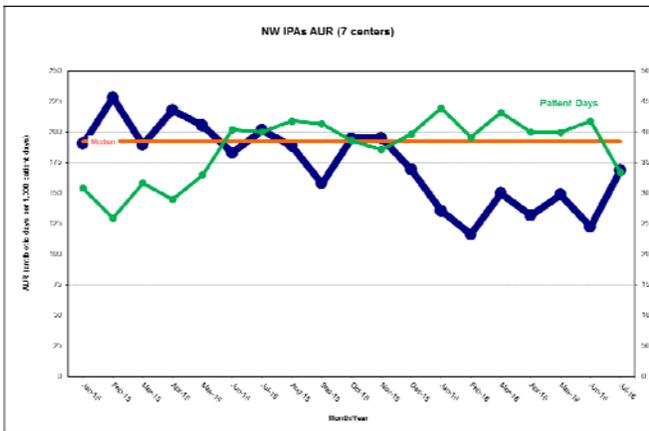
Vermont Oxford Network's 2016 (and 2017) QI Collaborative

- Partnership with CDC's DHQP
 - Faculty: Arjun Srinivasan, MD & Daniel Pollack, MD
- 169 participating teams (NICUs + MBUs)
- 39 states, 7 countries and Puerto Rico
- Five statewide collaboratives
 - Colorado, Oregon, Tennessee, Washington, Wisconsin

NW Improvement Priority: Antibiotic Stewardship (NW IPAs)

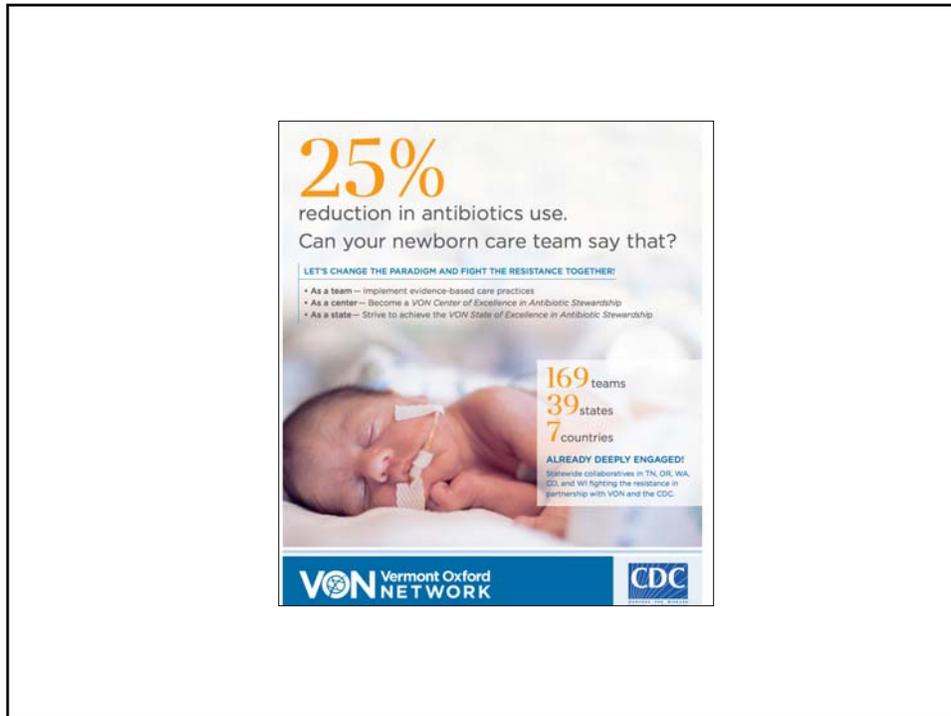


NW IPAs AUR



- Y-axis – AUR
- Y-axis – total patient days for NW IPAs
- X-axis – month/year
- Thick dark blue line – average AUR for 7 of 11 participating centers in NW IPAs
- Individual lines – NW IPAs individual centers monthly AUR





Conclusions

- Ebola Assessment Hospital self-designations continue
- ICAR Centers of Excellence collaboration will continue to strengthen Oregon's infection prevention preparedness
- 9 Oregon (+ 2 SW WA) NICUs have demonstrated dedication to antibiotic stewardship as a region
 - CDC's DHQP and OHA's HAI program committed to supporting VON collaborative through 2017

Thank you!