

Healthcare-Associated Infections Advisory Committee

June 24, 2015

- MEMBERS PRESENT:** Paul Cieslak, MD
 Kelli Coelho, RN, CNOR (phone)
 Jamie Grebosky, MD (phone)
 Laurie Murray-Snyder
 Rachel Plotinsky, MD (phone)
 Pat Preston, MS (phone)
 Dana Selover, MD, MPH
 Dee Dee Vallier (phone)
 Diane Waldo, MBA, BSN, RN, CPHQ, CPHRM, LNCC
 Bethany Walmsley, CPHQ, CPPS
- MEMBERS EXCUSED:** Jordan Ferris, RN, BSN, CMSRN
 Jon Furuno, PhD
 Joan Maca, RN
 Csaba Mera, MD
 Nancy O'Connor, RN, BSN, MBA, CIC
 Mary Shanks, RN, MSN, CIC
- STAFF PRESENT:** Zintars Beldavs, MS, HAI Program Manager
 Kate Ellingson, PhD, HAI Reporting Epidemiologist
 Judith Guzman, DO, Physician Lead for HAI Ebola Consultations
- ISSUES HEARD:**
- Call to Order and Roll Call
 - Approval of March 2015 HAIAC Meeting Minutes
 - Member Updates: Round Robin
 - OAR Updates on Healthcare Worker Influenza Vaccination
 - 2014 HAI Annual Report: Preliminary Results/Trends, CDC-Endorsed Format, and Executive Summary with Graphics
 - Updated State Plan to Include Infection Control Assessment and Prevention (ICAP) Subcommittee of the HAIAC
 - Overview of Upcoming Ebola Assessment Hospital Consultations and CDC Site Visit
 - Group Discussion on Ebola Funding Supplement, Facility IPC Assessments, and HAIAC Role
 - 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.

Call to Order and Roll Call

Kate Ellingson, OHA (filling in for Chair Mary Shanks)

The meeting was called to order at approximately 1:00 pm. There was a quorum.

Approval of March 2015 HAIAC Meeting Minutes

All Committee Members

Minutes for March 25, 2015 meeting were unanimously approved as written.

OAR Updates on Healthcare Worker Influenza Vaccination

Kate Ellingson, OHA (filling in for Monika Samper)

Dialysis facilities will be required to report healthcare worker influenza vaccination data through NHSN beginning in the 2015-2016 flu season.

2014 HAI Annual Report: Preliminary Results/Trends, CDC-Endorsed Format, and Executive Summary with Graphics

Kate Ellingson, OHA

Report Data

- 2014 Oregon annual report will require a large amount of data to cover the growing number of reportable HAIs.
 - Hospitals:
 - * Central line-associated bloodstream infections (CLABSIs)
 - * Catheter-associated urinary tract infections (CAUTIs)
 - * Methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia
 - * *Clostridium difficile* infections (CDIs)
 - * Six types of surgical site infections (SSIs)
 - * Healthcare worker influenza vaccinations
 - Dialysis Facilities – bloodstream infections (BSIs) and access-related BSIs
 - Ambulatory Surgery Centers – healthcare worker influenza vaccinations
 - Skilled nursing facilities - healthcare worker influenza vaccinations
- Facility data must be verified prior to publication to ensure completeness and accuracy.
 - Data downloaded from NHSN has been sent to healthcare organizations to confirm that information accessible to OHA matches actual data entered by facilities.

- Incomplete or invalid data has been identified and forwarded to facilities for correction: missing reporting plans and data, abnormally long surgical procedure times, and inconsistent data such as misclassification of wound/ASA status.
- Denominator data of hospitals claiming exemption from reporting mandates has been checked to ensure exemption criteria were met with regard to volume of annual surgical procedures and device days.
- Verification of NHSN data is nearly finished for most healthcare organizations.
 - 57 out of 61 hospitals and all dialysis facilities have submitted complete data and confirmed accuracy of OHA reports through confirmation emails.
 - Ambulatory surgery center data cannot be confirmed until later because CMS has extended their reporting deadline until late August 2015.
- Common reasons for invalid data were software issues and inexperience with NHSN/HAI definitions.
 - Glitch with NHSN group user function caused data discrepancies.
 - Malfunction during import of data from EMRs into NHSN resulted in surgical closure status erroneously defaulting to non-primary closure.
 - Unfamiliarity with CDC definitions of CAUTI and MRSA bacteremia, new CMS reporting requirements effective January 1, 2014, lead some facilities to submit erroneous data.
 - Employee turnover and a lack of CMS reporting incentives for hospitals with less than 25 beds created challenges for OHA. Hospital staff were not always knowledgeable about HAI definitions, and in some cases, were not enrolled in NHSN.

Resources for Design and Content of Report

- Committee proposals:
 - Provide concise report in easy-to-read format.
 - Create tight executive report summarizing all Oregon reportable HAIs.
 - Offer both simple data for consumers and complex data for providers/technically savvy readers.
 - Present aggregate data by hospital size for benchmarking.
 - Consider inclusion of infection rates.
 - Solicit consumer feedback from sources such as patient boards (will not be implemented until next year due to time constraints).
- CDC and Council of State and Territorial Epidemiologists (CSTE) key recommendations for standardization of state reports:
 - Create different reports for consumers and providers to accommodate each group's interests.
 - Do not publish rates for SSIs, *C. difficile*, or MRSA; only use SIRs because they incorporate risk adjustment, which makes inter-hospital comparison fairer. Rates are acceptable for intra-hospital comparison of CLABSIs and CAUTIs, for example, when stratified by patient location.
 - Use terms "better", "same", or "worse" in consumer report to describe SIRs in relation to national baseline.

- Recognize hospitals with zero infections (primarily small facilities) whose SIR may not be statistically significant or cannot be calculated because the predicted number of infections is less than 1, but be mindful of limitations.

Draft 2014 HAI Annual Report: Report Outline & Executive Summary

- Separate reports are presented for consumers and providers.
 - Consumer report provides simple metrics and patient-oriented information.
 - Provider report incorporates complex statistics and healthcare-related materials.
- Both reports will have the same organizational structure:
 - Introduction
 - Purpose
 - Methods
 - Executive summary
 - Detail-level data by facility type
 - Resources
- Each report includes an executive summary with aggregate data to provide an overall picture of Oregon.
- Executive summary for hospital-reported HAIs is comprised of a 2-pages:
 - Consumer page integrates basic data into a drawing of a human figure:
 - * Total infections for each HAI type.
 - * Percentage total infections are above/below national baseline.
 - * Symbols signifying:
 - Oregon's SIR in relation to national baseline data collected by CDC.
 - Whether Oregon met 2013 national targets for HAI reductions set by the U.S. Department of Health and Human Services (HHS).
 - Provider page displays both simple and technical metrics in a table format including:
 - * HHS reduction targets
 - * Criteria for exemption status
 - * Standard infection ratio
- Executive summaries for dialysis facility-reported events and healthcare worker vaccinations combine consumer and provider information in a 1 page report.

Draft HAI Report Facility-Level Data

- Hospital section for consumers:
 - Quantitative data is limited to number of procedures, observed infections, and predicted infections. The number of procedures allows comparisons among hospitals.
 - Symbols are used to convey more complex information.
 - * Color-coded directional triangles signify how a facility's SIR compares to national baseline data.
 - Green - fewer infections than predicted, statistically significant
 - Gray - not statistically significant
 - Red - more infections than predicted, statistically significant
 - * Green check mark and red "X" indicate whether Oregon met 2013 HHS targets.

- 50% reduction in CLABSIs;
 - 25% reduction in SSIs, CAUTIs, and MRSA
 - 30% reduction in *C. difficile* infections
 - Basic information is furnished about each HAI and what patients can do to protect themselves from infections.
- Full Report for Providers:
 - Additional data such as SIR, 95% confidence interval, and change since last year.
 - Synopsis is provided on what providers can do to prevent HAIs along with a list of prevention partners and resources (yet to be compiled).
- Healthcare worker influenza vaccination section offers two formats for presenting facility-level data:
 - Color-coded bar chart ordered by facility healthcare worker vaccination rates (format used in previous HAI annual reports). The bar color represents the target year for Healthy People (HP) goals established by the U.S. Office of Disease Prevention and Health Promotion:
 - * Dark green – vaccination rate above 90%; 2020 HP goal
 - * Light green - vaccination rate above 75%; 2015 HP goal
 - * Light red - vaccination rate above 60%; 2010 HP goal
 - * Dark red - vaccination rate below 60%
 - Table format which incorporates CDC/CSTE guidelines and OHA ideas.
 - * Both consumer and provider report contain basic vaccination data and employ a green check mark/red “X” to indicate whether facilities met Healthy People targets.
 - * Provider report includes percentage of change in vaccination rate since 2013 and the number of additional vaccinations needed to meet Healthy People 2015 goal.

Committee Recommendations

- Consumer executive summary:
 - Remove number of infections and HHS reduction target data; only provide information related to Oregon’s rank on the national distribution.
 - Add text explaining that all metrics in the executive summary, so readers are not required to refer to legend.
 - Move some of the circles on human figure to better indicate location of infection.
- Consumer and provider executive summaries: add simple metric to signify how Oregon compares to the nation, such as 30% better. OHA noted that 2013 national data is available in CDC reports, so comparative data can be published.
- Throughout report:
 - Use verbiage, such as “better”, “same”, or “worse”, in addition to color-coded triangles, to accommodate color-blind readers and eliminate need to refer to legend.
 - Add footnote specifying that HHS infection reduction targets are for 2013.

OHA Comments

HHS reduction targets were added to the report this year because they are considered to be more up-to-date performance measures than SIRs:

- The SIR, calculated by dividing observed number of infections by expected number of infections, inflates a hospital's success at preventing infections because the denominator is derived from old national baseline data collected six to nine years ago.
- 2013 HHS goals seek to reduce SIRs by a given percentage rather than evaluate outcomes based on old data.

Updated State Plan to Include Infection Control Assessment and Prevention (ICAP) Subcommittee of the HAIAC

Kate Ellingson, OHA

Topic will be covered at a future meeting due to time limitations.

Overview of Upcoming Ebola Assessment Hospital Consultations and CDC Site Visit

Judy Guzman, OHA/OPSC

Ebola Domestic Grant Statewide Objectives:

- Build infection prevention infrastructure through Ebola readiness consultations with Oregon tier 2 assessment hospitals. Ebola assessment hospitals include:
 - Providence Milwaukie Hospital
 - Legacy Good Samaritan Medical Center
 - Kaiser Permanent Westside Medical Center
 - St. Charles Medical Center – Redmond
 - Samaritan Lebanon Community Hospital
 - Asante Ashland Community Hospital
- Develop statewide infection control capacity to prevent HAIs including device-associated infections and surgical site infections (SSIs).
- Expand bio-safety capacity at Public Health Laboratory.

Healthcare Infection Control Assessment and Response (ICAR)

- ICAR program developed by CDC emphasizes collaboration, partnership, and active engagement of healthcare facilities and partners across the country to expand HAI program.
 - Exciting opportunity at the state level to work closely with hospitals to improve infection prevention infrastructure.
 - * Hospitals will have multiple opportunities to consult directly with both state and federal subject-matter experts.
 - * Participants will be able to share success stories and learn from each other.
 - Partners include a variety of groups and organizations.
 - * Grant steering committee is planning and driving activities to ensure goals of Ebola Domestic Grant are met.

- * HAI Advisory Committee, Oregon Patient Safety Commission, Oregon Association of Hospitals and Health Systems (OAHHS), and local health departments are some of the agencies involved with development and implementation of program.
- Activity A component of ICAR program entails readiness consultations with Ebola assessment hospitals to ensure facilities are prepared to safely and effectively care for patients with possible/confirmed Ebola until transfer to a treatment facility (2-year funding).
 - State assessment team will conduct onsite baseline consultation at all tier 2 hospitals to establish current state of readiness. Team will be comprised of lead physician, infection preventionist, industrial hygienist, and laboratory consultant.
 - Readiness consultation will evaluate eleven capability domains:
 - * Facility infrastructure: patient rooms – space for donning and doffing and adequate air flow.
 - * Patient transportation – ability to safely transport patient from home to hospital and from hospital entry points to care areas.
 - * Laboratory – safe and effective handling of blood and body fluids.
 - * Staffing – ample staff to care for patient for approximately 3 days of testing to rule in/rule out Ebola.
 - * Training
 - * Personal protective equipment (PPE) – sufficient and appropriate PPE and adequate staff training on how to use equipment.
 - * Waste management
 - * Worker safety
 - * Environmental services
 - * Clinical management
 - * Operations coordination

	Proper disposal
	of contaminated
	patient care items.
	Well established emergency
	operation coordination (EOC) plan.
 - Gaps in readiness will be addressed through consultation and training using CDC-based resources.
 - Gap mitigation efforts will be evaluated during follow-up visits coupled with guidance on how to strengthen infection prevention plan.
- Activity B component of ICAR program focuses on expansion of general infection prevention infrastructure (3-year funding). Oregon will develop and provide training and education for healthcare workers across the state, including critical access hospitals, dialysis facilities, ambulatory surgery centers, skilled nursing facilities, and outpatient clinics to bolster HAI prevention programs.
 - HAI Advisory Committee will provide feedback on criteria for selecting the next group of facilities to receive general IP consult. Potential selection criteria might include: highest infection burden based on NHSN data, CMS HAC score, or HAI outbreak such as Norovirus.
 - ICAP subcommittee will be established to analyze and present aggregate data collected from readiness consultations to HAI Advisory Committee in order to enable development of effective infection prevention policies. Subcommittee will be composed of readiness assessment team, physician from OHA regulatory department, and other interested parties.
- Implementation of ICAR program is well underway in Oregon.

- 5 out of 6 assessment hospitals have confirmed site visit dates scheduled from the last week in July until the end of September 2015.
 - CDC will provide onsite training for facilities and state assessment team during initial consultations.
 - * CDC ICAR team will conduct first consultation at Providence Milwaukie Hospital while the Oregon team observes.
 - * Oregon team will lead second consultation at Legacy Good Samaritan Medical Center while CDC assists and critiques performance.
 - * Debriefing session will be held after consultations completed.
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Group Discussion on Ebola Funding Supplement, Facility IPC Assessments, and HAIAC Role

Zints Beldavs, OHA and Judy Guzman, OHA/OPSC

Topic not covered due to time limitations.

Public Comment / Adjourn

Chair

No comments from public.

Minutes Reviewed by:

Kate Ellingson

Zintars Beldavs

Exhibit Summary

A – Agenda

B – March 25, 2015 Minutes

C – 2014 HAI Annual Report June Update

D – Proposed Update to Oregon State HAI Plan

E – Ebola Assessment Hospitals in Oregon: Readiness Consultation Visits

F – Discussion Ebola Grant Activities

Oregon 2014 Annual Report

Healthcare-Associated Infections & Healthcare Worker Influenza Vaccination

Kate Ellingson, PhD
Healthcare-Associated Infections Program
Oregon Health Authority
September 23, 2015

Oregon
Health
Authority

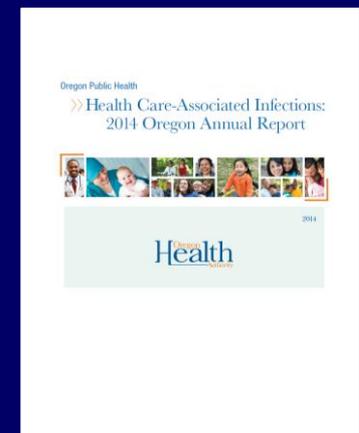
Objectives



- Update on 2014 Annual Report
 - Status on release
 - Materials included in provider & consumer formats
- Review aggregate Oregon data and trends
- Review facility-specific tables
 - Facility names redacted until official release
- Discussion: how to make mandatorily reported data more actionable

Status & Format

- Revised release date: 9/28/2015
- Full/Provider Report
 - 87 pages, landscape orientation
 - Detailed facility-specific data
 - All-Oregon data with trends over time for each metric
- Consumer Report
 - 38 pages, portrait orientation
 - Concise facility-specific data; light on statistics
 - Tips for consumers and families on prevention
 - No trends over time
- Executive Summary in both versions



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 hospitals } **✓** Performed statistically better than the U.S.
✓ 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 hospitals } **✓** Performed statistically better than the U.S.
✓ 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 hospitals } **✓** Performed statistically better than the U.S.
✗ 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 hospitals } **=** Performed statistically equal to the U.S.
✗ 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, leading to skin, muscle, deep tissue, organ space, bone, or implant infection.

Coronary artery bypass graft (heart surgery) 20 SSI

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

Laminectomy (back surgery) 56 SSI

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

Colon surgery 183 SSI

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

Abdominal hysterectomy surgery 49 SSI

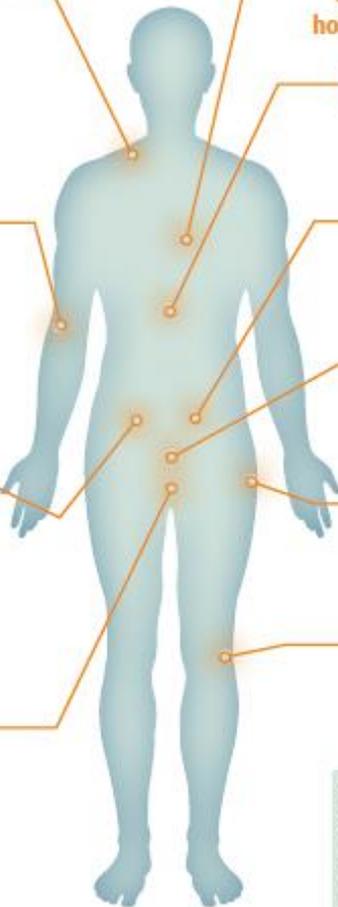
Oregon hospitals } **=** Performed statistically equal to the U.S.
✗ Did not meet national reduction target set by HHS

Hip replacement surgery 56 SSI

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

Knee replacement surgery 41 SSI

Oregon hospitals } **=** Performed statistically equal to the U.S.
✓ 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.

* Statistical comparisons made using the Oregon 2014 standardized infection ratio (SIR) for each infection; see table.

† All CLABSIs combined for adult and neonatal ICUs; see table for separate data by ICU type

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

Health care-associated infection type	National baseline years	HHS reduction target*	# OR hospitals reporting†	2014 Oregon SIR‡	2014 SIR meets HHS reduction target?	2014 OR SIR vs. 2013 nat'l SIR [§]	2014 OR SIR vs. 2013 OR SIR [§]
CLABSI in adult ICUs	2006–2008	50% (SIR=0.5)	41	0.24	✓ YES	✓ Statistically better	↓ 16%
CLABSI in NICUs	2006–2008	50% (SIR=0.5)	7	0.60	✗ NO	= Statistically equal	↑ 103%
CAUTI in ICUs	2009	25% (SIR=0.75)	42	1.11	✗ NO	= Statistically equal	⊘ N/A (no 2013 data)
<i>C. difficile</i> hospital-onset LabID events	2010–2011	30% (SIR=0.7)	61	0.73	✗ NO	✓ Statistically better	↓ 4%
MRSA BSI hospital-onset LabID events	2010–2011	25% (SIR=0.75)	61	0.65	✓ YES	✓ Statistically better	⊘ N/A (no 2013 data)
SSI: Heart (CBGB)	2006–2008	25% (SIR=0.75)	14	0.35	✓ YES	= Statistically equal	↓ 42%
SSI: Back (laminectomy)	2006–2008	25% (SIR=0.75)	22	0.53	✓ YES	⊘ No 2013 national data	↓ 38%
SSI: Colon	2006–2008	25% (SIR=0.75)	38	0.85	✗ NO	= Statistically equal	↑ 10%
SSI: Abdominal hysterectomy	2006–2008	25% (SIR=0.75)	35	0.91	✗ NO	= Statistically equal	↓ 20%
SSI: Hip replacement	2006–2008	25% (SIR=0.75)	42	0.83	✗ NO	= Statistically equal	↑ 14%
SSI: Knee replacement	2006–2008	25% (SIR=0.75)	43	0.65	✓ YES	= Statistically equal	↓ 6%

* The U.S. Department of Health and Human Services (HHS) determined target 5-year HAI reductions in 2009: www.health.gov/hcq/pdfs/HAI-Targets.pdf

† Hospitals are exempt from reporting CLABSIs if fewer than 50 central line days, CAUTIs if they have no ICUs and specific SSIs if fewer than 20 procedures performed annually

‡ Standardized Infection Ratio: (observed infections)/(expected # based on risk-adjusted national baseline rates)

§ No 2014 national data available at the time of report publication, so 2013 data were used, available here: www.cdc.gov/hai/progress-report/index.html

¶ None of the changes in state SIRs from 2013 to 2014 were statistically significant

Example of Provider Report Summaries

Brief summary of HAI

Describes Oregon performance in 2014

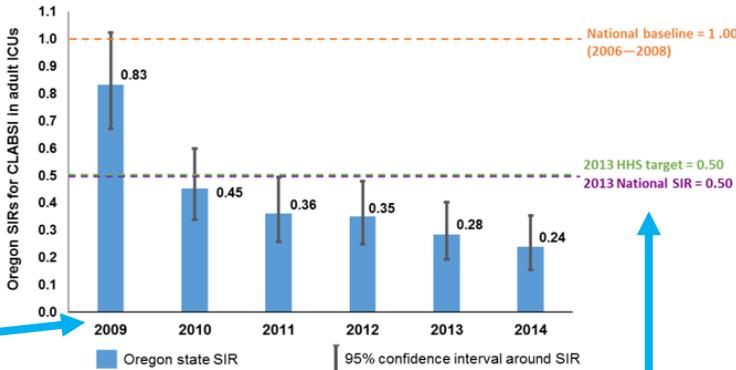
Central line-associated bloodstream infections (CLABSI) in adult intensive care units (ICU)

Central line-associated bloodstream infections (CLABSIs) occur when microorganisms enter the bloodstream through central venous catheters. Mortality from CLABSIs is approximately 12–25%.³ Large gains in CLABSI prevention have been made over the past decade due to standardization and monitoring of central line insertion and maintenance.⁴

Since 2009, hospitals in Oregon have reported CLABSIs in adult medical, surgical, and medical-surgical ICUs as required by the HAI reporting program. Beginning in 2015, hospitals also will report CLABSIs for all adult and pediatric medical wards. In 2014, Oregon's SIR was 0.24, meaning Oregon had 76% fewer infections than would be predicted based on risk-adjusted national baselines. Further, Oregon hospitals exceeded the 2013 HHS target SIR of 0.50 (Figure 1, green line). When comparing Oregon's adult ICU 2014 CLABSI SIR to the most recent annual adult ICU SIRs published by CDC (Figure 1, purple line), Oregon's SIR was statistically lower ($p < 0.0001$).



Figure 1. Oregon CLABSI standardized infection ratios (SIR) in adult ICUs: 2009–2014



SIR trends over time with 95% CIs

What can providers do to prevent <HAI>

What can providers do to prevent CLABSI in adult ICUs?

- ✓ Follow central line insertion checklist for each insertion:
 - Clean hands
 - Use appropriate skin antiseptic
 - Wait for skin prep to dry
 - Use sterile barriers
- ✓ Once line is in place:
 - Follow recommended maintenance practices
 - Perform hand hygiene before/after touching line
- ✓ Remove central line as soon as it is no longer needed

CDC prevention resources: www.cdc.gov/HAI/bsi/CLABSI-resources.html

National Benchmarks:

- National baseline
- 2013 national SIR
- HHS target SIR

CLABSI in adult ICUs

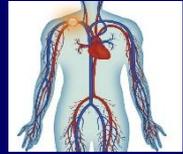
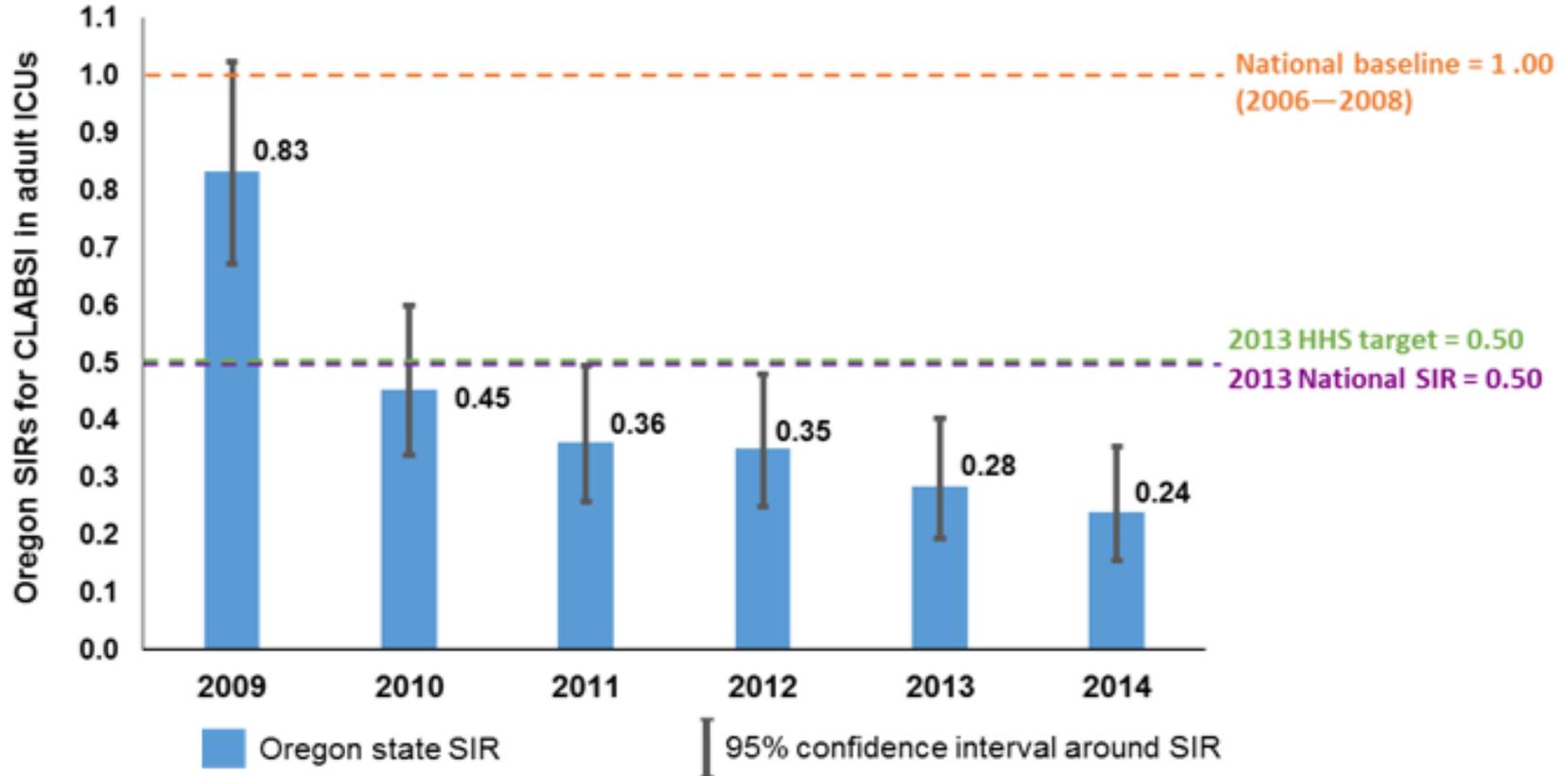


Figure 1. Oregon CLABSI standardized infection ratios (SIR) in adult ICUs: 2009–2014



CLABSI in NICUs

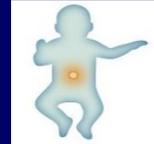
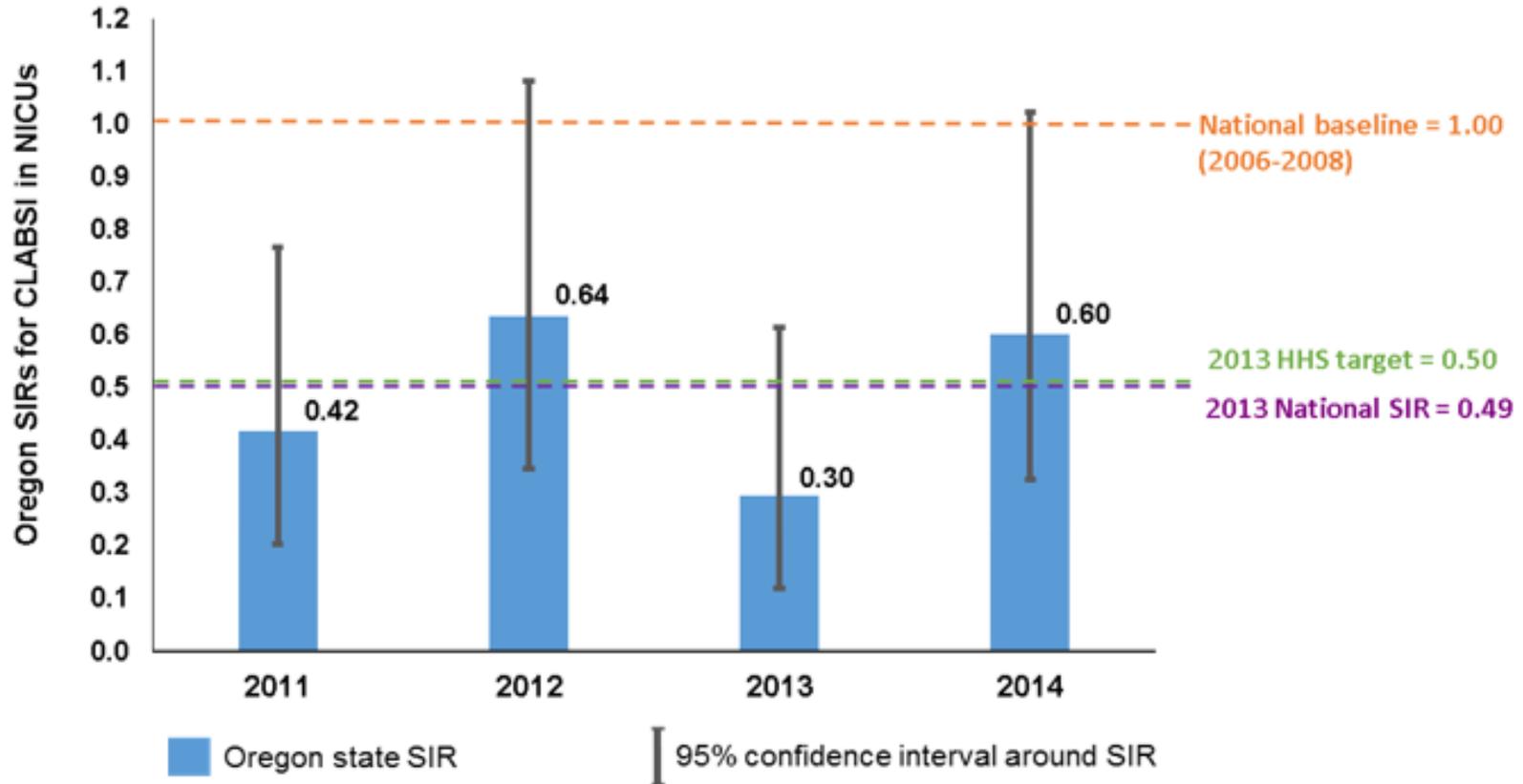


Figure 2. CLABSI standardized infection ratios with 95% confidence intervals for Oregon NICUs: 2011–2014



CLABSI in adult ICUs

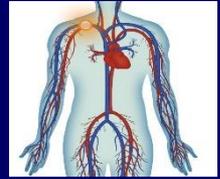
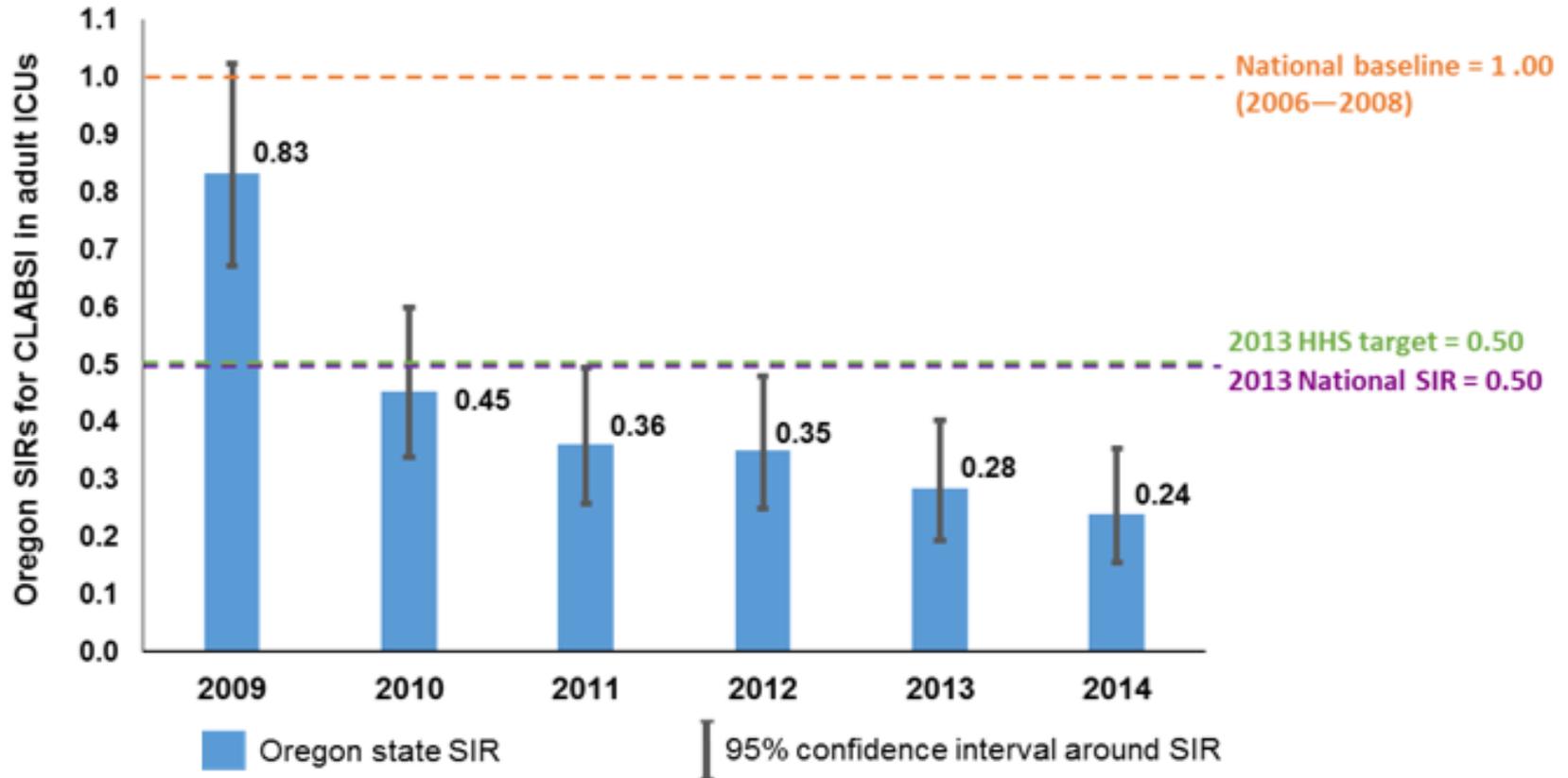


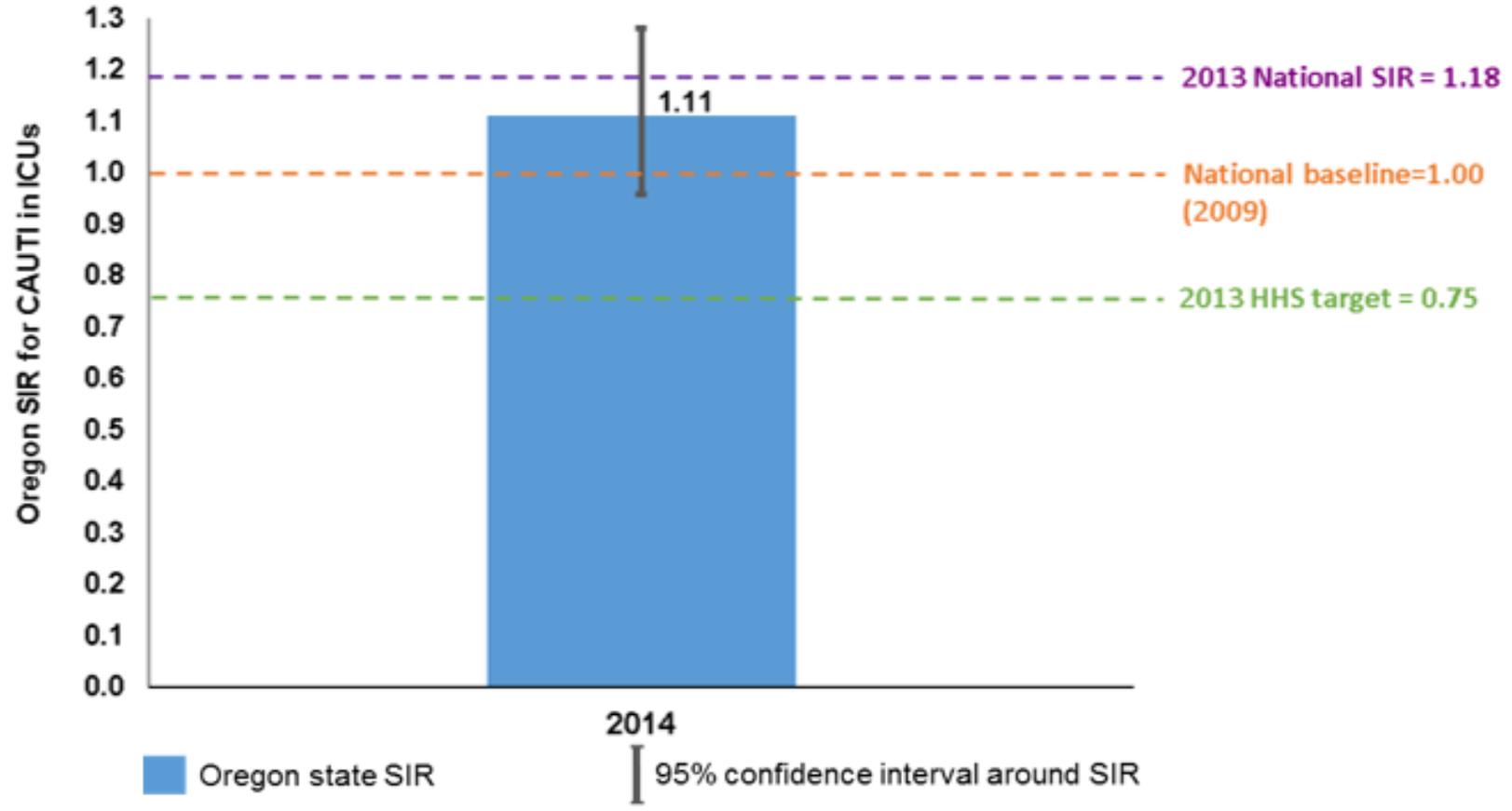
Figure 1. Oregon CLABSI standardized infection ratios (SIR) in adult ICUs: 2009–2014





CAUTI in adult & pediatric ICUs

Figure 3. CAUTI standardized infection ratio (SIR) for Oregon ICUs



C. Difficile LabID Events: Facility-wide

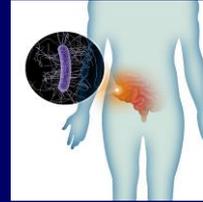
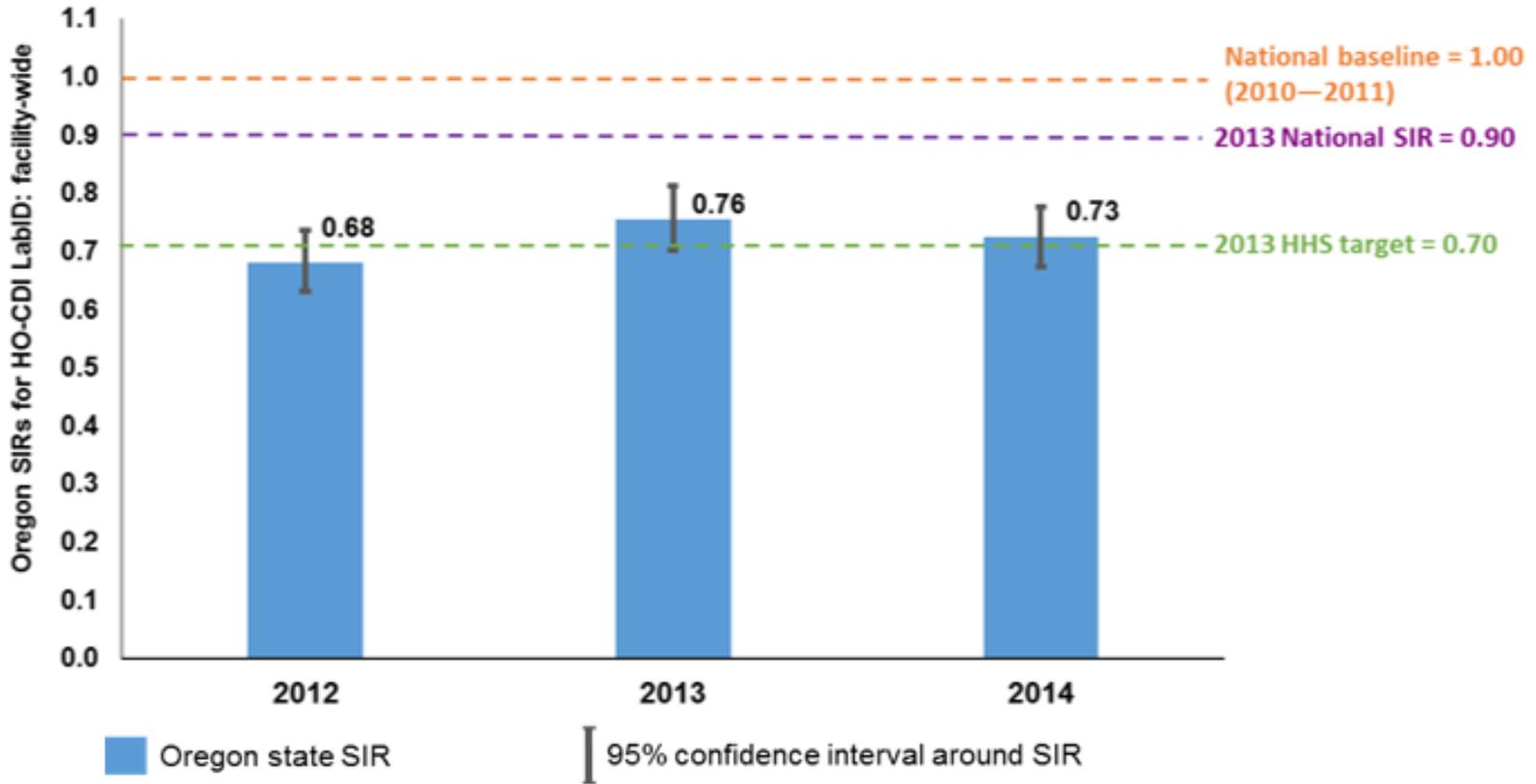


Figure 4. Aggregate hospital-onset *C. difficile* identified through laboratory records for Oregon: 2013–2014



MRSA Bloodstream Infection: Facility-wide

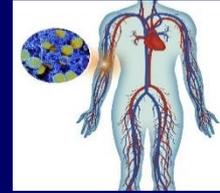
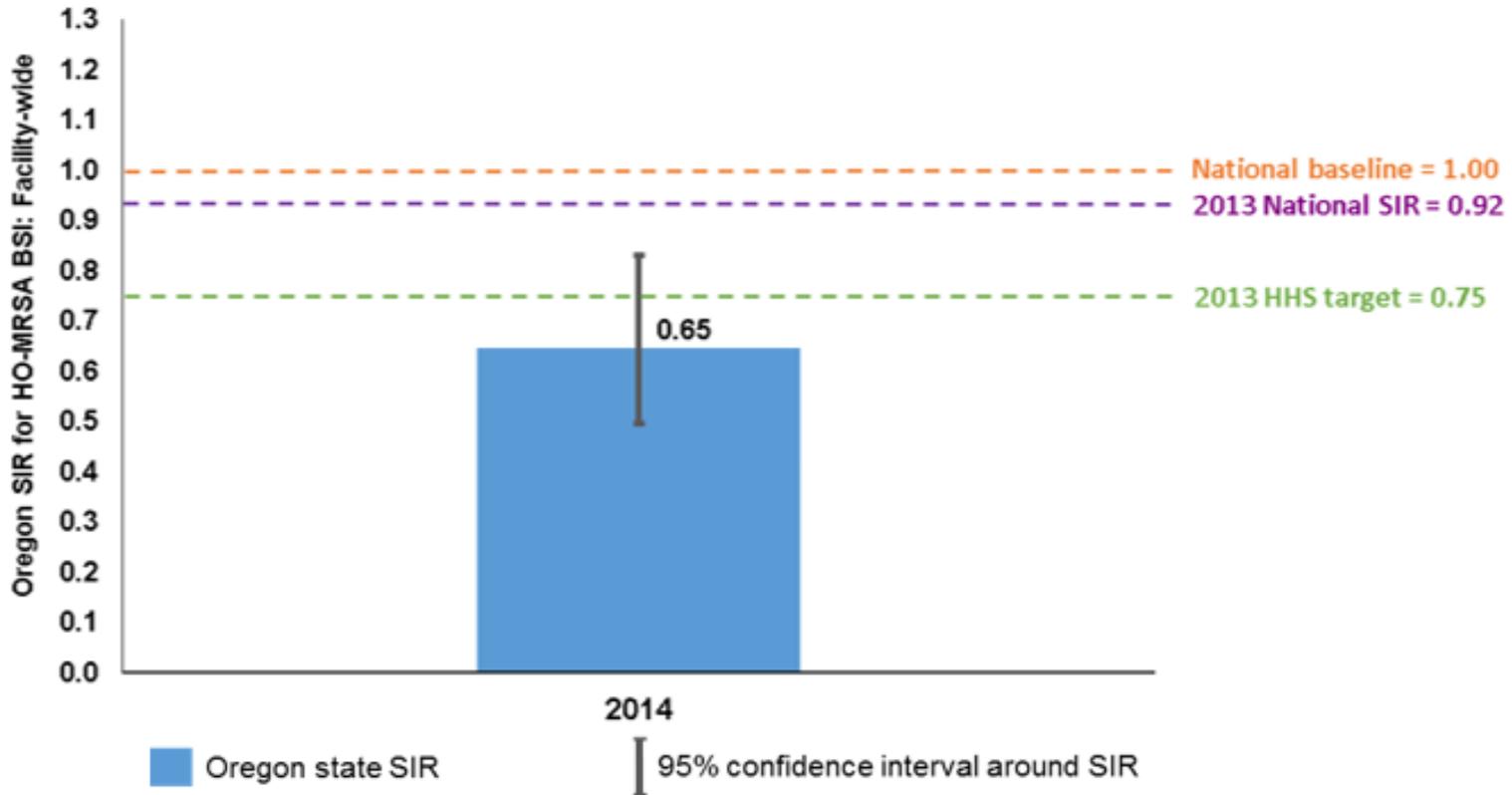
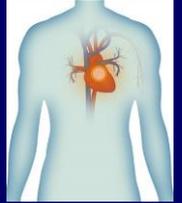


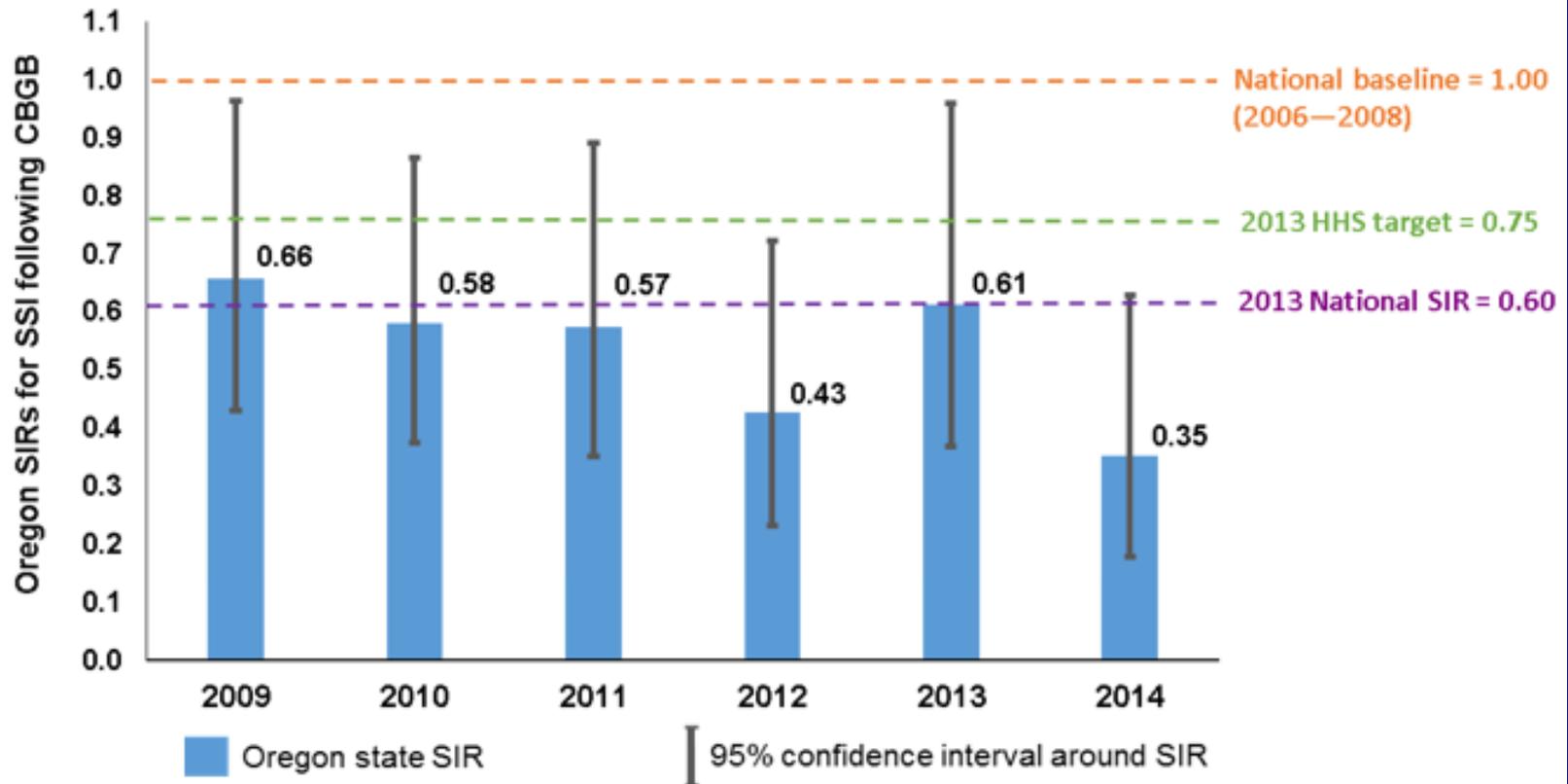
Figure 5. Aggregate hospital-onset facility-wide MRSA bacteremia identified through laboratory records for Oregon — 2014





SSI following CBGB

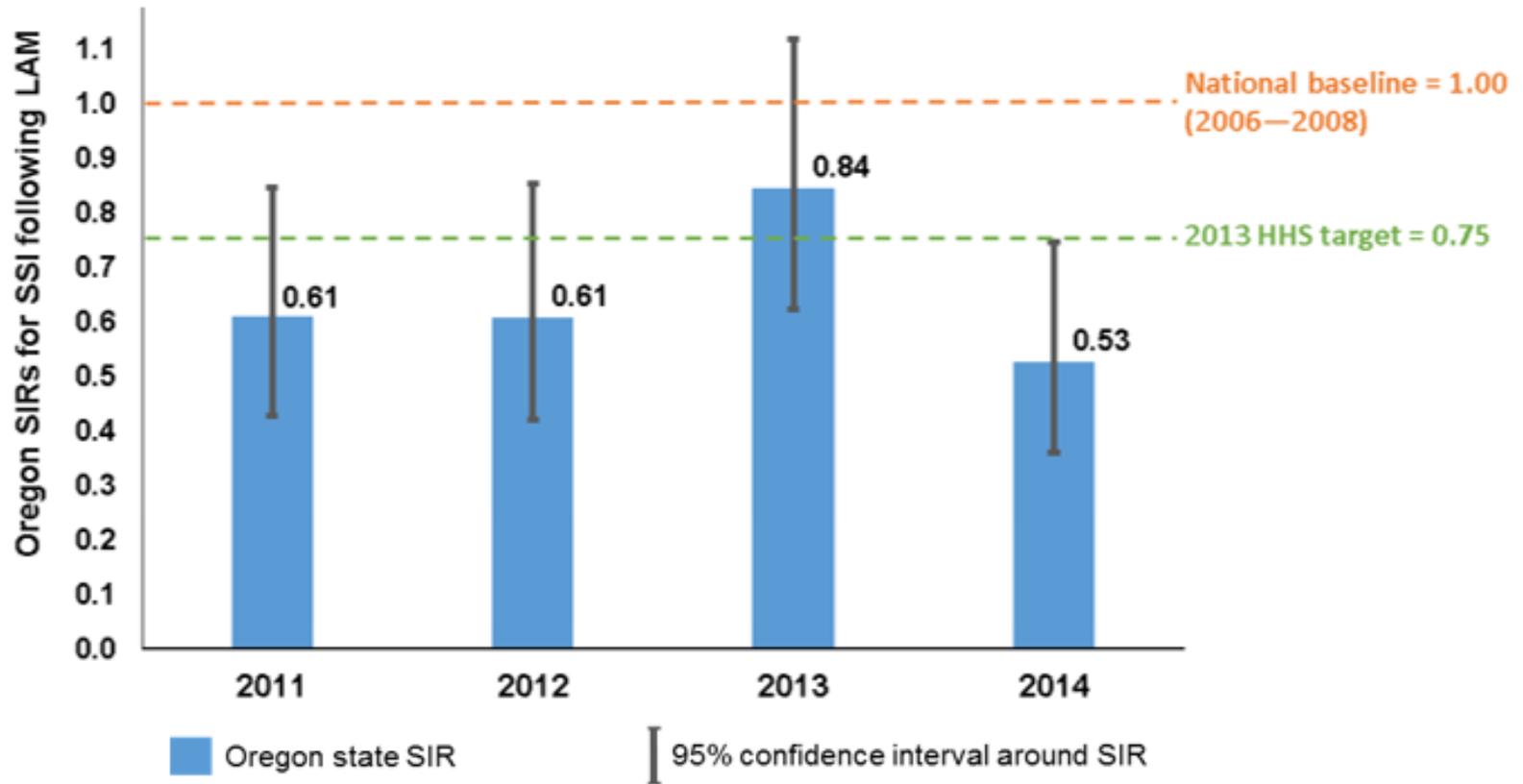
Figure 6. Aggregate SIRs for SSI following coronary artery bypass graft (CBGB) surgery for Oregon: 2009–2014



SSI following laminectomy



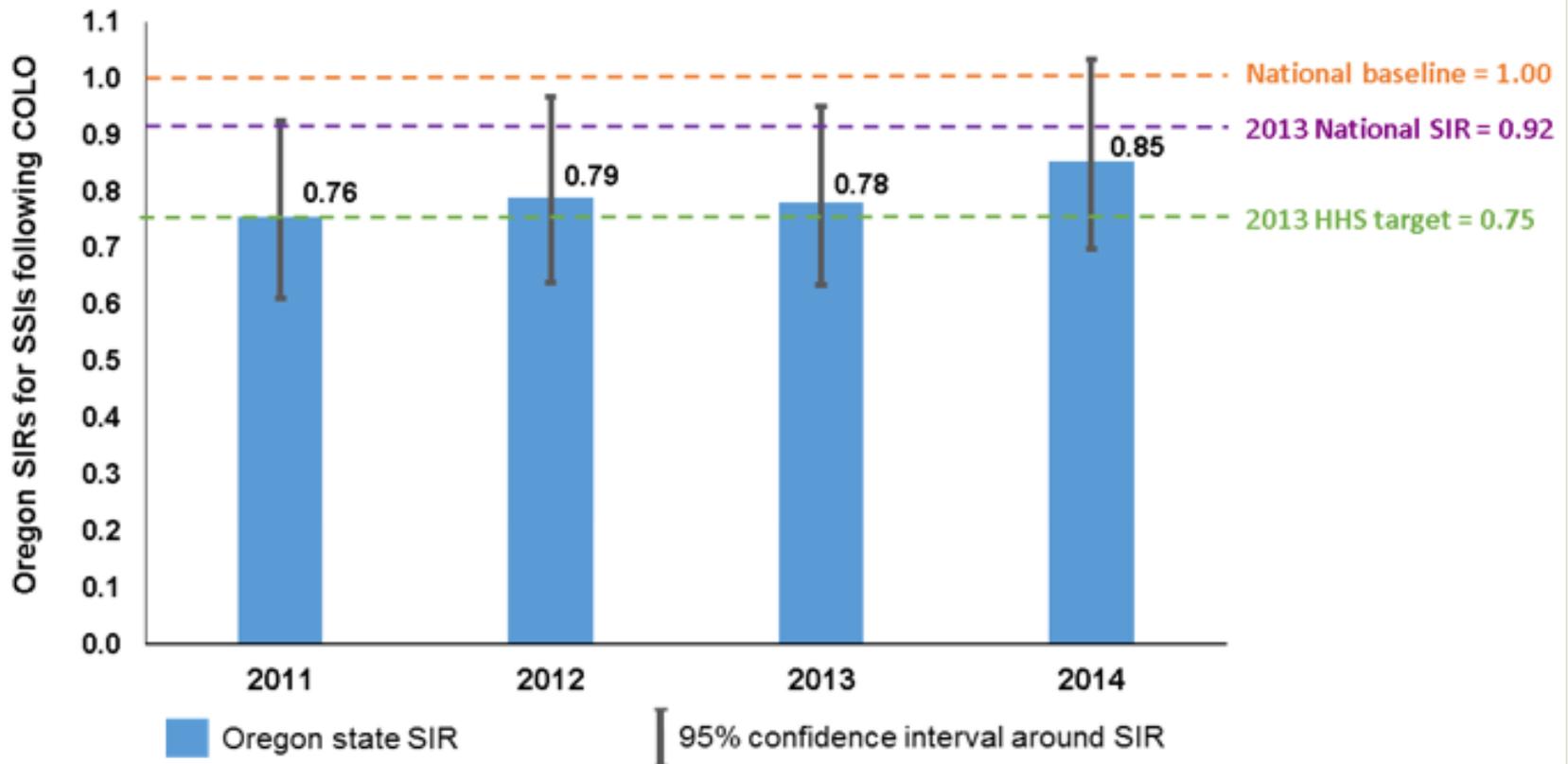
Figure 7. Aggregate SIRs for SSI following laminectomy (LAM) surgery for Oregon: 2011–2014





SSI following colon surgery

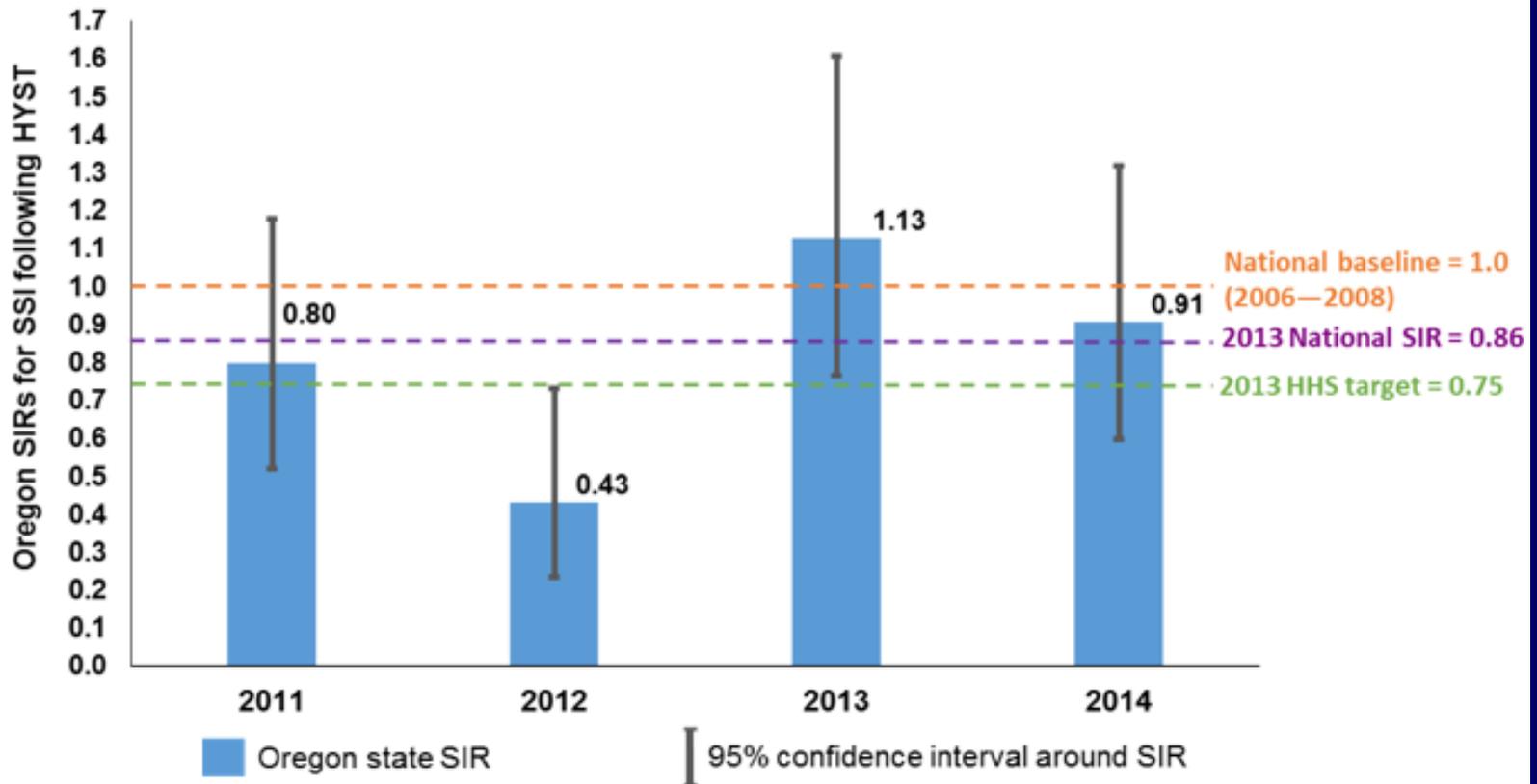
Figure 8. Aggregate SIRs for SSI following colon (COLO) surgery for Oregon: 2011–2014





SSI following abdominal hysterectomy

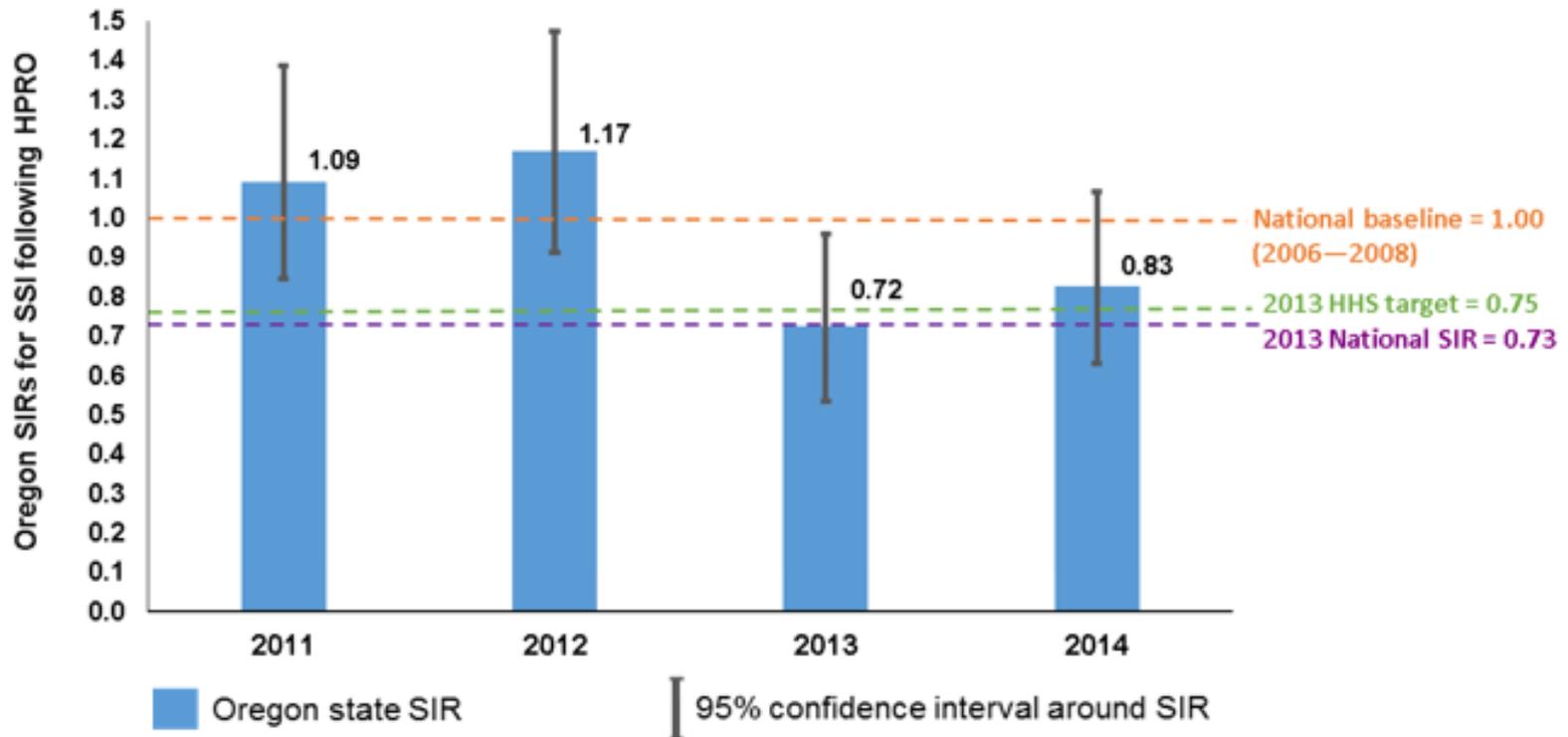
Figure 9. Aggregate SIRs for SSI following abdominal hysterectomy (HYST) surgery for Oregon: 2011–2014



SSI following hip prosthesis surgery



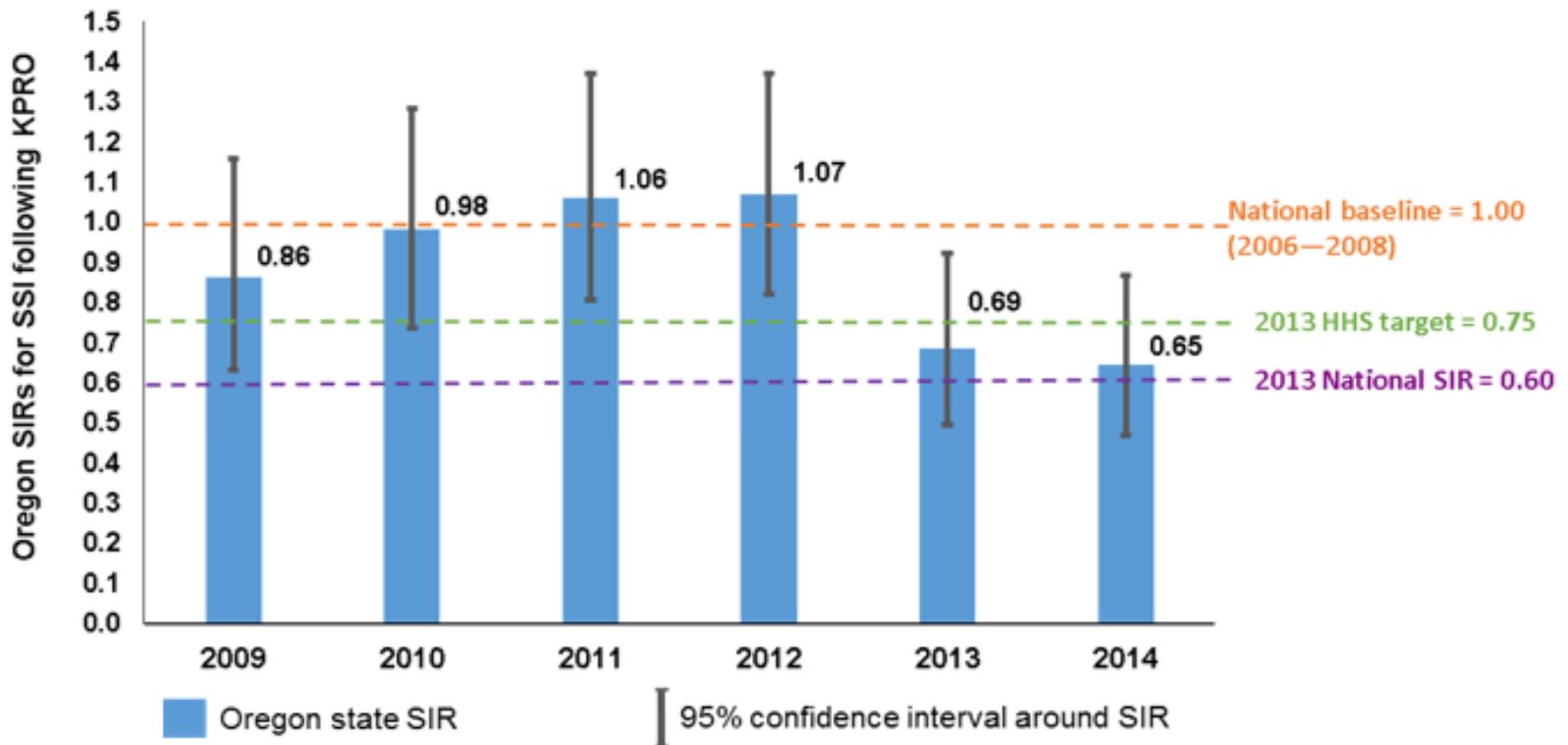
Figure 10. Aggregate SIRs for SSI following hip prosthesis (HPRO) surgery for Oregon: 2011–2014





SSI following knee prosthesis surgery

Figure 11. Aggregate SIRs for SSI following knee prosthesis (KPRO) surgery for Oregon: 2009–2014



Bloodstream infection in freestanding outpatient clinics

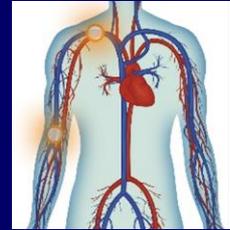


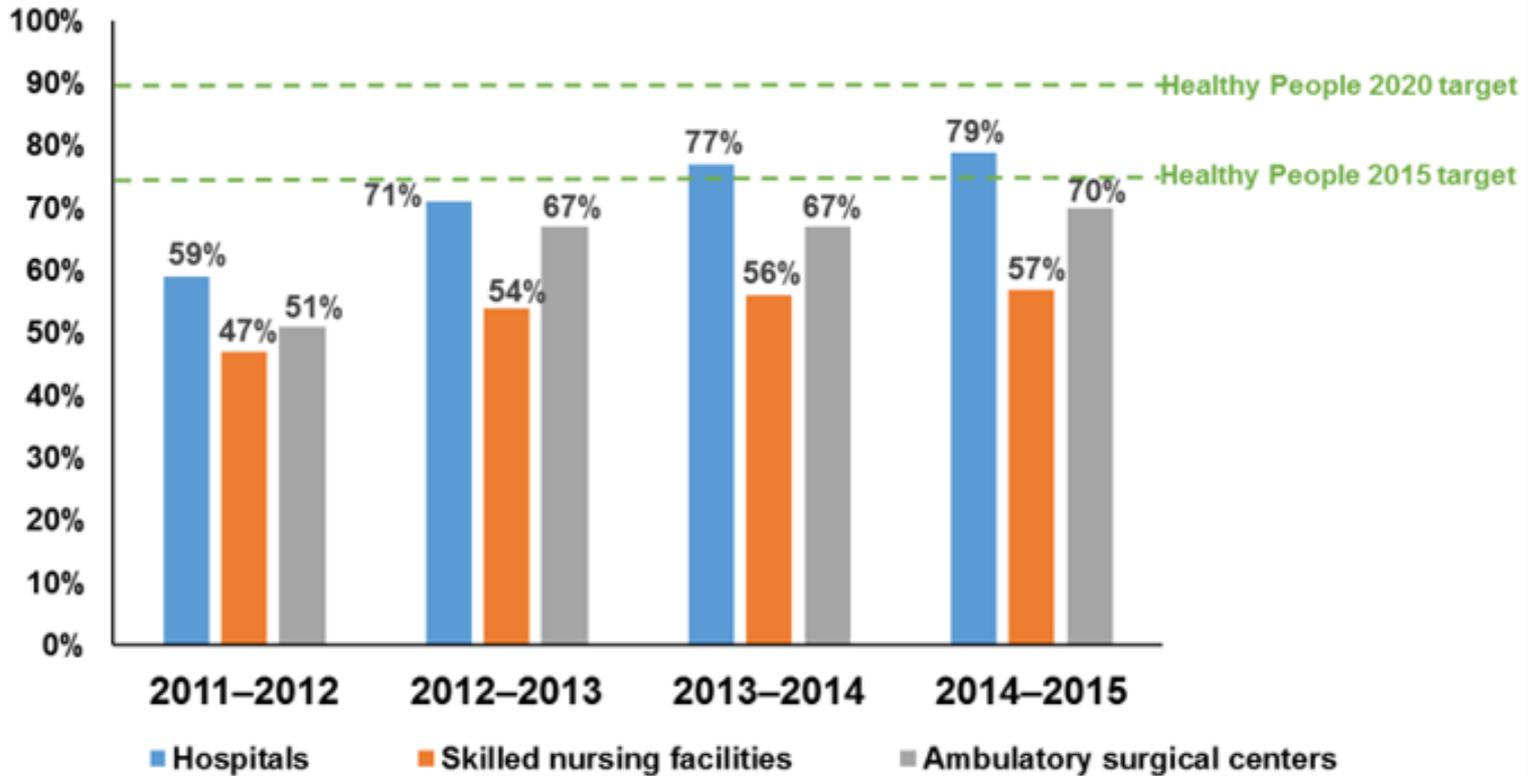
Table 15. National pooled means (2013) and Oregon pooled means (2014) for bloodstream infections (BSI) by access type

Access type	National pooled mean	Oregon pooled mean	Percent difference
All	1.27	0.50	-65%
Fistula	0.48	0.21	-57%
Graft	0.88	0.44	-50%
Any CVC	3.21	1.37	-57%
Tunneled CVC	3.24	1.35	-58%
Non-tunneled CVC	2.78	3.30	19%

Healthcare worker influenza vaccination: 2014–2015



Figure 13. Influenza vaccination rates for all health care workers (HCW) by influenza season and health care facility type



Healthcare worker influenza vaccination: 2014–2015



Table 17. Aggregate HCW influenza vaccination rate data for the 2014–2015 influenza season for hospitals, ambulatory surgical centers and skilled nursing facilities stratified by HCW type.

Facility and worker type	Total number of HCW eligible for vaccination*	Aggregate rate of influenza vaccination among eligible HCW	Aggregate rate of influenza vaccine declination by eligible HCW	Aggregate rate of unknown vaccination status among eligible HCW	Change in rate of HCW influenza vaccination since 2013
Hospitals					
All health care worker (HCW)	92,648	79%	9%	13%	+3%
Employees	69,637	84%	10%	5%	+1%
Independent practitioners	9,398	58%	3%	40%	0%
Other contractors	1,404	39%	2%	59%	-29%
Students/Volunteers	12,209	67%	5%	28%	+3%
Ambulatory surgical centers					
All HCW	5,039	70%	16%	14%	+4%
Employees	3,026	70%	20%	10%	-1%
Independent practitioners	1,817	70%	9%	21%	+11%
Other contractors	102	61%	23%	17%	+205%
Students/Volunteers	93	78%	4%	17%	+16%
Skilled nursing facilities					
All HCW	15,749	57%	16%	26%	+2%
Employees	13,497	61%	18%	20%	+5%
Independent practitioners	327	54%	5%	41%	+35%
Other contractors	339	57%	9%	34%	0%
Students/Volunteers	1,586	25%	1%	74%	-24%

* Includes total number of health care worker (HCW), including employees, licensed independent practitioners, other contractors, students and volunteers without documented medical contraindication for influenza vaccination

Facility-specific table example: provider report

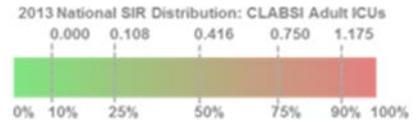


Table 3. Facility-specific 2014 annual CLABSI data for adult ICUs (n=41)

Hospital name*	Central line days	Standardized infection ratio (SIR)					2014 SIR interpretation and comparison			
		Observed infections	Predicted infections †	SIR	Lower 95% CI	Upper 95% CI	Meets HHS target or zero infections [¶]	Observed vs. predicted from nat'l. baseline (2006–2008)	Percentile range on 2013 national SIR distribution (lower = better)**	Change in SIR since 2013
[REDACTED]	1,029	0	1.5	0.00		1.94	✓	▼ Fewer infections	0–10th 	-100%
[REDACTED]	996	2	1.5	1.34	0.22	4.42	✗	▲ More infections	91–100th 	+16%
[REDACTED]	1,316	0	2.0	0.00		1.52	✓	▼ Fewer infections	0–10th 	n/a (SIR=0 in 2013)
[REDACTED]	116	0	0.2	§			✓			
[REDACTED]	6,800	3	16.6	0.18	0.05	0.49	✓	▼ Statistically fewer infections	26–50th 	+288%

Dialysis bloodstream infection table example

Dialysis facility name	Access type	Patient-months	Number BSI	Rate: BSI/100 patient-months	Comparison to national pooled mean	Percentile on nat'l distribution (lower = better)	Change since 2013
[REDACTED]	All	247	1	0.41	▼ Fewer infections		-13%
	Fistula	150	1	0.67	▲ More infections	79%	+9%
	Graft	44	0	0.00	▼ Fewer infections	50%	
	Any CVC	53	0	0.00	▼ Fewer infections	10%	
	Tunneled central line	53	0	0.00	▼ Fewer infections	10%	
	Non-tunneled central line	0	0		n/a		
	Other	0	0		n/a		
[REDACTED]	All	926	5	0.54	▼ Statistically fewer infections		-33%
	Fistula	550	1	0.18	▼ Fewer infections	49%	-39%
	Graft	113	2	1.77	▲ More infections	83%	+6%
	Any CVC	263	2	0.76	▼ Statistically fewer infections	25%	-51%
	Tunneled central line	263	2	0.76	▼ Statistically fewer infections	28%	-51%
	Non-tunneled central line	0	0		n/a		
	Other	0	0		n/a		

Healthcare worker influenza vaccination table example: 2014-15

Facility name	# HCW eligible for influenza vaccine*	Rate of influenza vaccination for eligible HCW†	Rate of vaccine declination by eligible HCW	Rate of "unknown vaccine status" for eligible HCW	Change in vaccination rate since last season	Met HP2015 target (75%)	Met HP2020 target (90%)	Additional HCW needed to vaccinate to reach HP2020‡
	708	79%	7%	15%	+7%	✓	✗	81
	4,362	74%	8%	18%	+4%	✗	✗	703
	449	84%	5%	11%	-4%	✓	✗	25
	4,781	76%	6%	18%	+5%	✓	✗	687
	964	74%	9%	17%	+8%	✗	✗	157

* Includes total number of health care worker (HCW), including employees, licensed independent practitioners, other contractors, students and volunteers without documented medical contraindication for influenza vaccination

† Calculated as: (total number of HCW vaccinated at the facility + total number of HCW vaccinated elsewhere) / (total number of HCW eligible for influenza vaccination)

‡ Percentage change not calculated if vaccination rate was 0% during the 2013–2014 influenza season, or if hospital did not report influenza vaccination to OHA in 2013–2014

§ Calculated as: (total HCW eligible for vaccination * 0.9) – (total number of HCW vaccinated at the facility + total number of HCW vaccinated elsewhere)

Example of Consumer Report Summary

Brief summary of HAI

Central line-associated bloodstream infections (CLABSI) in adult intensive care units (ICU)

A "central line" or a "central catheter" is a tube placed into a patient's large vein, usually in the neck or chest, which is used to draw blood and give fluids and medications. It may be left in place for several weeks. A central line-associated bloodstream infection (CLABSI) can occur when germs travel down the central line and enter the blood. Great gains in prevention have been made over the past decade by following evidence-based recommendations for insertion and maintenance of central lines².



What can patients and families do to prevent CLABSI in Adult ICUs?

- Ask a health care provider if the central line is absolutely necessary, and ask them to help you understand the need for it and how long it will be in place.
- Pay attention to the bandage and the area around the central line. If the bandage comes off or gets wet or dirty, tell a health care worker right away.
- Tell a health care worker if the area around the catheter is sore or red or if the patient has a fever or chills.
- Do not let any visitors touch the catheter or tubing, and remind anyone visiting the patient to wash their hands — before and after they visit.
- The patient should avoid touching the tubing as much as possible.
- Ask staff if they use a central line insertion checklist and whether they follow recommended practices for safely maintaining central lines.
- Speak up about any concerns so health care personnel are reminded to follow the best infection prevention practices.
- For more information, see: www.cdc.gov/HAI/bsi/CLABSI-resources.html

What can patients and families do to prevent <HAI>

Tables:

- # observed
- # predicted
- HHS target or zero infections
- Comparison to nat'l baselines

Table 2. Facility-specific 2014 annual CLABSI data for adult ICUs (n=41)

Hospital name*	Central line days	Observed infections	Predicted infections†	Meets 2013 HHS target or zero infections‡	Comparison to national baselines (2006–2008)
All Oregon	55,064	23	96.1	✓	▼ Statistically better

	2,573	3	3.9	✗	▼ Better
	774	0	1.2	✓	▼ Better
	996	2	1.5	✗	▲ Worse

Dialysis BSI in Consumer Report

Facility name	# HCW eligible for influenza vaccine*	Rate of influenza vaccination for eligible HCW†	Rate of vaccine declination by eligible HCW	Rate of “unknown vaccine status” for eligible HCW	Change in vaccination rate since last season	Met HP2015 target (75%)	Met HP2020 target (90%)	Additional HCW needed to vaccinate to reach HP2020‡
	708	79%	7%	15%	+7%	✓	✗	81
	4,362	74%	8%	18%	+4%	✗	✗	703
	449	84%	5%	11%	-4%	✓	✗	25
	4,781	76%	6%	18%	+5%	✓	✗	687
	964	74%	9%	17%	+8%	✗	✗	157

* Includes total number of health care worker (HCW), including employees, licensed independent practitioners, other contractors, students and volunteers without documented medical contraindication for influenza vaccination

† Calculated as: (total number of HCW vaccinated at the facility + total number of HCW vaccinated elsewhere) / (total number of HCW eligible for influenza vaccination)

‡ Percentage change not calculated if vaccination rate was 0% during the 2013–2014 influenza season, or if hospital did not report influenza vaccination to OHA in 2013–2014

§ Calculated as: (total HCW eligible for vaccination * 0.9) – (total number of HCW vaccinated at the facility + total number of HCW vaccinated elsewhere)

HCW Influenza Vaccination in Consumer Report

Facility name	# HCW eligible for influenza vaccine*	Rate of influenza vaccination for eligible HCW†	Met HP2015 target (75%)
	2,480	84%	✓
	516	58%	✗
	3,801	69%	✗
	1,343	78%	✓
	1,219	78%	✓
	224	53%	✗
	349	58%	✗
	577	83%	✓
	258	51%	✗
	231	82%	✓
	308	83%	✓
	2,928	75%	✓

Discussion: making data actionable

- CDC encouraging regular downloads of NHSN data and follow-up with outlier facilities
- How to define outlier facilities for prevention?
 - Those worse than national baselines?
 - Consider statistical significance?
 - Comparison to current national data?
 - Different criteria for small v. large hospitals?
 - Prioritize certain HAIs based on Oregon aggregate data?
- Considerations for data quality
 - OHA not funded for continued external validation
 - Do high rates reflect poor surveillance or poor performance?
 - What can we do to encourage better data quality?



Oregon HAIAC HAI Program Update

Are we there yet?

Zintars Beldavs

HAI Program Manager

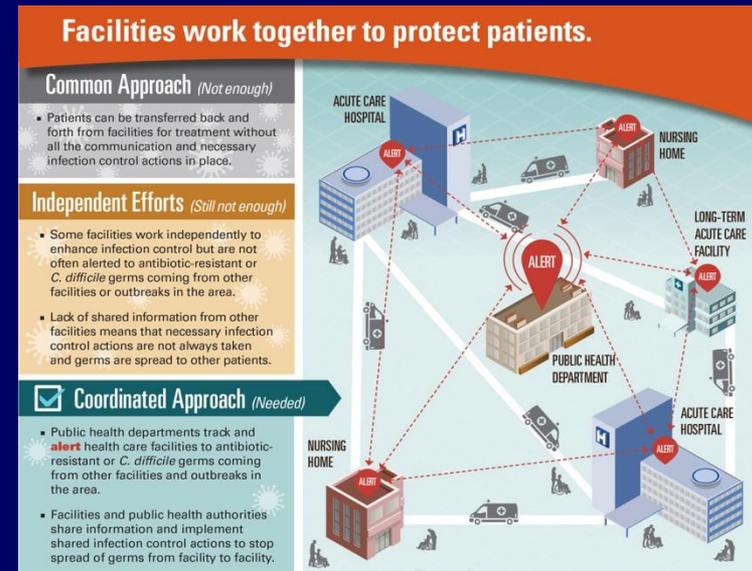
Wednesday, September 23rd



Oregon
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Where we want to go → The Path to Zero

- Detect → Protect → Evaluate → Reinvigorate
 - No patient or facility is an island
 - Regional interconnectedness of healthcare systems
 - Integrate approaches for maximum effectiveness
 - Antibiotic Stewardship
 - CDI ↔ MDROs



Where we are: Protect

- Regional Systems Approaches and collaboratives
 - MDRO, Dialysis BSIs, Stewardship
 - CDI and IFT Hub Effort
- Education
 - Webinars, Meetings
- Outbreak Response
 - Any Carbapenemase
 - Multi-facility Clusters



Where we are: Validate, Analyze, and Evaluate

- Validation of HAI data
 - CLABSI (2x), CDI, CABG SSIs
- Emerging Infections Program (EIP)
 - Mortality Study
 - Studies to improve surveillance
 - NHSN definitions
 - Denominator simplification project
 - CDI Risk factors, co-infection, etc.
- Ebola assessment facility consultations



Where we are going: Reinvigorate

- CDI/MDRO/Stewardship Regional Prevention Hubs
- Statewide infection control evaluation and support
 - Focus on LTCFs and other needed settings
- Injection safety outreach
- Finding ways to make NHSN actionable
 - Increase HCWI vaccination
 - Outbreak detection
 - Targeting facilities for prevention

Where we are going: Reinvigorate

- More Outbreak Response Capacity
- Special studies
 - CRE hospital effluent, CRE prevalence
- Evaluation and assurance of IFT notification requirement

Oregon Skilled Nursing Facility Survey 2015: Preliminary data

Which of the following statements best describes your facility's current implementation of the above rule (OAR 333-019-0052)?

Answer Options

Answer Options	Response Percent	Response Count
I was not previously aware of such a rule.	12.8%	17
I have heard of the rule, but I don't understand how to put it into practice.	1.5%	2
I understand the rule, but my facility has not yet put it into practice.	10.5%	14
My facility has put into practice written interfacility communication of MDROs since January 2014.	45.1%	60
My facility met the requirements of the rule before the rule went into effect January 2014.	22.6%	30
Other (please specify)	7.5%	10
<i>answered question</i>		133

Oregon Hospital Survey 2015: Preliminary data

Which of the following statements best describes your facility's current implementation of the above rule (OAR 333-019-0052)?

Answer Options

Answer Options	Response Percent	Response Count
I was not previously aware of such a rule.	8.9%	5
I have heard of the rule, but I don't understand how to put it into practice.	0.0%	0
I understand the rule, but my facility has not yet put it into practice.	5.4%	3
My facility has put into practice written interfacility communication of MDROs since January 2014.	48.2%	27
My facility met the requirements of the rule before the rule went into effect January 2014.	25.0%	14
Other (please specify)	12.5%	7
<i>answered question</i>		56

When will we get there? What else is needed?

- What are appropriate goals?
 - Zero?
 - Low prevalence?
- How can we maximize existing resources?
- How can we better inform efforts by most impacted?
 - Patients and family members impacted
 - Healthcare workers preventing HAIs
 - Everyone – any of us might face an HAI

Thank You!

<http://public.health.oregon.gov>

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HEALTHCARE-ASSOCIATED INFECTIONS ADVISORY COMMITTEE: EBOLA GRANT OVERVIEW PART B

September 23, 2015

Mary T. Post, RN, MS, CNS, CIC
Director, Infection Prevention
Oregon Patient Safety Commission

Objective

Describe the General Infection Prevention Assessment specific elements of the new Epidemiology and Lab Capacity (ELC) Domestic Ebola Grant awarded to the Oregon Health Authority

CDC Ebola Grant

Focus: building statewide infection prevention infrastructure, capacity and education

- Conduct Ebola readiness consultations of Oregon Ebola Tier 2 Assessment Hospitals
- Develop statewide infection control capacity to prevent healthcare associated infections
- Expand biosafety capacity at the Public Health Laboratory

Key Partnerships

- Healthcare facilities
- Local health departments
- Oregon Health Authority (OHA), Public Health Division, Acute and Communicable Disease Section
- Oregon State Public Health Laboratory
- HAI Advisory Committee (HAIAC)
- Association for Professionals in Infection Control and Epidemiology (APIC)
- Centers for Disease Control and Prevention (CDC)
- Hospital Preparedness Program (HPP) and Public Health Emergency Preparedness Program (PHEP) liaisons
- Emergency Medical Services (EMS)—parallel assessments for out-of-hospital transport
- Regulatory agencies and licensing boards
- Professional organizations

Healthcare Infection Control Assessment and Response (ICAR)

- A.1: Expand State HAI Plan and Advisory Group
- A.2: Improve coordination between OHA and healthcare settings
- A.3: Assess readiness of designated Ebola facilities
- A.4: Assess and improve HAI outbreak reporting and response

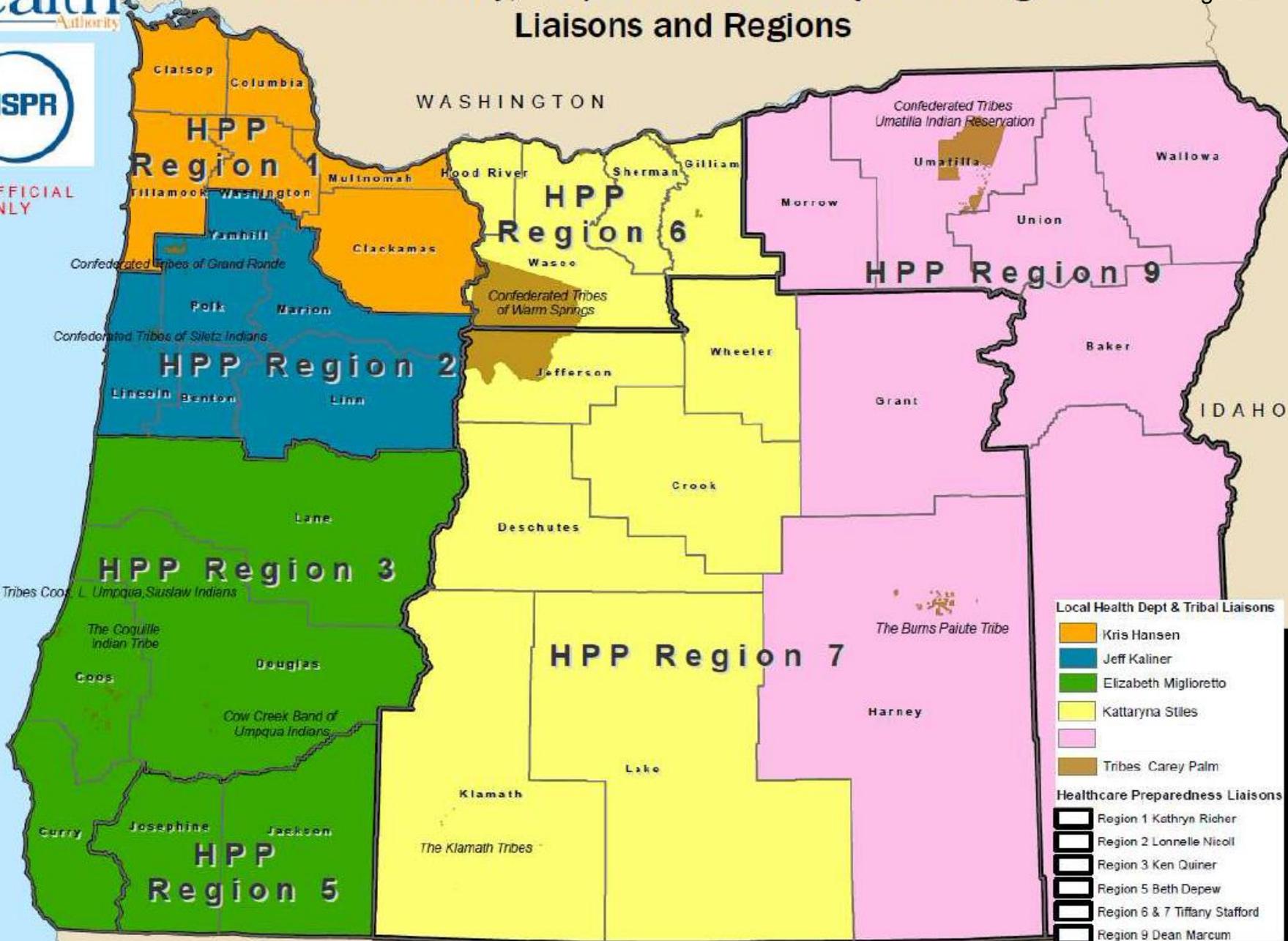
ICAR Activity B (Strategy 1)

B.1: Expand infection prevention consultations

- Expand both number of facilities and depth of content
 - Include long term care facilities, ASCs, dialysis, medical clinics
- Incorporate follow up assessments to document mitigation
- Regional approach - work with HPP and county health departments
- Contract with state APIC certified infection preventionists
- Similar to Nebraska Infection Control Network
- Resource and tool development



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	Jeff Kaliner
	Elizabeth Miglioretto
	Kattaryna Stiles
	
	Tribes Carey Palm

Healthcare Preparedness Liaisons	
	Region 1 Kathryn Richer
	Region 2 Lonelle Nicoll
	Region 3 Ken Quiner
	Region 5 Beth Depew
	Region 6 & 7 Tiffany Stafford
	Region 9 Dean Marcum

General Infection Prevention Consultations

- Goal: identify common gaps and trends so state and national agencies can target improvement strategies
- Selection criteria involves a review of multiple data sources: outbreak or unusual pathogens, NHSN data, regulatory surveys, influenza immunization data, and regional partners
- Consultations will be scheduled for September-November
- 25 facilities targeted for this year
 - Seven hospitals
 - Five ambulatory surgery centers
 - Ten long-term care facilities
 - Three dialysis centers

Initial Scheduling Call

- Purpose of consult collaborative, not regulatory
- Focus on quality improvement
- Receive assessment forms pre-visit
- Ask if there are areas where they would appreciate additional assistance
- Review what they can expect during the visit and how findings will be used
- What will happen if there are identified gaps/lapses in infection control

During the Visit

- Opening conference
- Brief tour of facility
- Meet with individuals responsible for the IP program
- Use assessment tool to assess IP program infrastructure, competency–based training and routine auditing of IP practices
- Perform recommended observations (varies by facility type)
- Exit conference
- Initial visits will take 4-8 hours

Assessment Domains

- Infection Control Program and Infrastructure
- Infection Control Training, Competency, and Implementation of Policies and Practices
 - Hand Hygiene
 - Personal Protective Equipment (PPE)
 - Injection Safety
 - Environmental Cleaning
 - Equipment Reprocessing
 - Other (based on facility setting)
- Systems to Detect, Prevent, and Respond to HAIs and MDROs

ICAR Activity B (Strategies 2 & 3)

B.2: Increase infection control competency and practice

- Incorporate improved competency into credentialing, continuing education, licensing
- Sustainable training with partners
 - Regional training workshops around assessments and tools
 - Five infection prevention fundamentals training courses over three years - includes local and state health departments and regulatory surveyors

B.3: Enhance surveillance analytic and reporting capacity

Infection Prevention Education

- Infection Prevention Fundamentals Training Course
 - Target dates are the last week in February
- Additional training courses
 - Hands-on instrument reprocessing course
 - ASC and long-term care specific courses
- Webinars and/or consult opportunity for specific topics

Conclusions

Oregon has an excellent opportunity to

- Build the state's infection prevention infrastructure
- Establish systems for early identification and management of pathogens and outbreaks
- Promote partnerships between agencies across the continuum of care
- Close gaps in licensing/credentialing requirements
- Provide on-site assessments and free educational opportunities

Grant Steering Team

- **Zints Beldavs** Grant Project Oversight
- **Judy Guzman-Cottrill** Ebola Consultations
- **Mary Post** Expansion of General IP Consultations and Education
- **Gen Buser** Surveillance and Outbreak Systems
- **Kate Ellingson** HAIAC Committee and incorporation of analysis & findings from all grant components (assessments, surveillance, regulatory findings) into annually revised HAI Plan