

Healthcare-Associated Infections Advisory Committee (HAIAC) Meeting

September 27, 2017
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:**

- Paul Cieslak, MD, Medical Director, Acute and Communicable Disease Prevention, Oregon Health Authority
- Kelli Coelho, RN, CASC, MBA, Executive Director, RiverBend Ambulatory Surgery Center (phone)
- Jordan Ferris, BSN, RN, CMSRN, Nursing Practice Consultant, Oregon Nurses Association
- Jon Furuno, PhD, Associate Professor, Department of Pharmacy Practice, Oregon State University/College of Pharmacy, Oregon Health and Science University
- Rebecca Pawlak, MPH, Director of Public Policy, Oregon Association of Hospital and Health Systems (phone)
- Laurie Polneau, RN, MHA, CPHRM, Director, Quality/Risk Management/Infection Control, Vibra Specialty Hospital Portland
- Pat Preston, MS, Executive Director, Center for Geriatric Infection Control (phone)

- Kirsten M. Schutte, MD, Infectious Disease and Medical Director of Infection Prevention and Control, Asante (phone)
- Dee Dee Vallier, Consumer Advocate (phone)

NOMINATED
MEMBERS
EXCUSED:

- 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
- Wendy L. Edwards, RN, BSN, Patient Safety Surveyor, Health Facility Licensing and Certification, Oregon Health Authority
- Vicki Nordby, RN, BSN, Nurse Consultant, Marquis Companies, Inc.
- Mary Shanks, RN, MSN, CIC, Infection Preventionist, Kaiser Westside Medical Center
- Tom Stuebner, MSPH, Executive Director, Oregon Patient Safety Commission

OTHER
PARTICIPANTS
PRESENT:

- Jennifer Burnette, MPH, Medical Countermeasures Coordinator/CHEMPACK State Coordinator, Health Security, Preparedness, and Response (HSPR), Oregon Health Authority
- April Gillette, MPH, Director of Infection Control & Quality, Blue Mountain Hospital District (phone)
- Judy Guzman-Cottrill, DO, Pediatric Infectious Disease Physician, Oregon Health and Science University/Oregon Health Authority
- Tiah Kershaw, System Analyst, Providence Health Plans (phone)
- Kate Medred, MA, Logistics Coordinator, Infection Prevention, Oregon Patient Safety Commission
- Mary Post, RN, MS, CNS, CIC, Director, Infection Prevention, Oregon Patient Safety Commission/Oregon Health Authority

- Rachel Plotinsky, MD, Medical Director of Infection Prevention Program, Providence St. Vincent Medical Center (phone)
- Rebecca Rottman, MPA, Lead Logistics Coordinator, Infection Prevention, Oregon Patient Safety Commission

OHA STAFF
PRESENT:

- Zintars Beldavs, MS, ACDP Section Manager
- Alyssa McClean, AWARE Program Coordinator
- Rebecca Pierce, PhD, HAI & EIP Program Manager
- Monika Samper, RN, HAI Reporting Coordinator
- Roza Tammer, MPH, CIC, HAI Reporting Epidemiologist
- Lisa Takeuchi, MPH, Emerging Disease Epidemiologist
- Dat Tran, MD, Public Health Physician
- Alexia Zhang, MPH, HAI Epidemiologist

ISSUES HEARD:

- Call to order and roll call
- Introductions and membership updates
- Approve June 2017 minutes
- Outbreaks update 2017
- HCW influenza vaccination
- HAI Program communications
- Legislative update
- Discussion: themes and topics for future 2017 meetings
- Public comment
- Adjourn

<p>These minutes are in compliance with Legislative Rules. <u>Only text enclosed in italicized quotation marks reports a speaker's exact words.</u> For complete contents, please refer to the recordings.</p>
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Item	Discussion	Action Item
Call to Order and Roll Call Roza Tammer, Temporary Chair	Quorum met. Sixty-seven percent of members present.	No action items
Introductions and Membership Updates Roza Tammer	<ul style="list-style-type: none"> Healthcare-Associated Infections (HAI) Advisory Committee still has two vacancies: <ul style="list-style-type: none"> Healthcare purchasing representative Health insurer representative Committee is also searching for additional consumer and patient advocates/representatives. Contact the Oregon Health Authority (OHA) if you are interested in an opening or have suggestions for potential candidates. OHA will most likely post vacancies on Facebook and Twitter based on positive feedback from committee. 	Committee will continue efforts to fill open positions.
Approve June 2017 Minutes All Committee Members (Pages 1-14 of meeting materials)	June 28, 2017 meeting minutes were approved.	No action items
Outbreaks Update 2017 Alexia Zhang (Pages 15-21 of meeting materials)	<ul style="list-style-type: none"> 45 outbreaks were reported since 6/15/17: <ul style="list-style-type: none"> 11 norovirus, 1 <i>Campylobacter</i>, 1 <i>Clostridium difficile</i>, 4 <i>Salmonella</i>, 1 sapovirus, 2 rotavirus, 1 Shigella, and 15 gastroenteritis with etiology unknown. 	No action items

Item	Discussion	Action Item
	<ul style="list-style-type: none"> ○ 6 influenza B, 3 pertussis, 1 <i>Streptococcus pyogenes</i>, and 2 unknown respiratory illness with etiology unknown. ● Of the 45 outbreaks, 20 (44%) occurred in a healthcare facility. <ul style="list-style-type: none"> ○ Outbreaks occurred most often in assisted living facilities, followed by mixed facilities (e.g., combined assisted living and skilled nursing facility). ○ Most common etiology in healthcare facilities was norovirus. ● 1 outbreak of interest was <i>Salmonella</i> Paratyphi B: <ul style="list-style-type: none"> ○ 19 cases reported in Oregon and Washington. ○ Multiple cases mention sushi during exposure period. ○ Environmental Health in Washington and Clark Counties visited restaurants. ○ Fish samples were collected and sent for testing. ○ Identified serotype was also associated with a tuna outbreak in 2015. 	
Health Care Worker Influenza Vaccination Monika Samper	<ul style="list-style-type: none"> ● OHA has collected health care worker (HCW) influenza vaccination data from 356 facilities for 2016-2017 flu season including: hospitals, ambulatory surgery centers (ASCs), dialysis facilities, and skilled nursing facilities (SNFs). ● Oregon requires influenza vaccination surveys to be submitted by May 31st. <ul style="list-style-type: none"> ○ Hospitals, dialysis facilities, and ASCs that are certified Medicare/Medicaid providers are required to report data in the National Healthcare Safety Network (NHSN) 	No action items

Item	Discussion	Action Item
	<p>database by both Centers for Medicare and Medicaid Services (CMS) and Oregon.</p> <ul style="list-style-type: none"> ○ SNFs and ASCs that are not certified by CMS are asked to enter information in SurveyMonkey, an online survey tool. ● OHA is considering changing May 31st due date to match May 15th CMS deadline, but would not be able to impose late fines until after May 31st. ● As of May 31st deadline: <ul style="list-style-type: none"> ○ Reported data were incorrect for 11% of surveys: sum of numerators did not equal denominator. ○ Data had not been received from: <ul style="list-style-type: none"> ▪ 1.5% of hospitals ▪ 7% of dialysis facilities ▪ 26% of ASCs ▪ 52% of SNFs ● Reasons healthcare organizations are remiss in submitting data include: <ul style="list-style-type: none"> ○ Facility ownership and personnel are continually changing, particularly in SNFs. ○ Staff are overwhelmed with multiple roles. ○ Facilities are unaware of mandatory requirement for vaccination survey. ○ Facilities exempt from reporting data to CMS do not face federal government penalties for noncompliance (although facilities are subject to state fines). 	

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	<ul style="list-style-type: none"> • OHA is in the process of sending emails to every facility asking for verification of compiled influenza vaccination data and to solicit comments for inclusion in annual report. • Annual HCW influenza vaccination report is anticipated to be approved and published within next few months. <p><u>Comment</u> Dialysis facilities that have centralized reporting of HAI data at their corporate office have been very successful. Therefore, OHA should consider recommending this model to other corporate-owned healthcare organizations, particularly skilled nursing facilities, to facilitate data reporting.</p>	
HAI Program Communications Roza Tammer (Pages 22-38 of meeting materials)	<p><u>HAI annual report</u></p> <ul style="list-style-type: none"> • Progress of 2016 report: <ul style="list-style-type: none"> ○ Aggregate and facility-specific data calculated with original standardized infection ration (SIR) baseline is expected to be published at the end of October 2017. Prior to publication: <ul style="list-style-type: none"> ▪ Facilities will be able to view data. ▪ OHA will provide talking points. ○ Facility-specific data using the 2015 baseline is anticipated to be published later this fall; facilities will have an opportunity to verify data before publication. • Data quality and validation: <ul style="list-style-type: none"> ○ OHA will be assessing current schedule and process for validating data; ideas for improvement will be presented to committee and local Association for Professionals in 	<p>OHA will:</p> <ul style="list-style-type: none"> • Add online instructions on how to access tables, containing HAI reportable data, on table landing pages. • Compile and analyze data to determine best way to redesign HAI website.

Item	Discussion	Action Item
	<p>Infection Control and Epidemiology (APIC) chapter for feedback.</p> <ul style="list-style-type: none"> ○ OHA is considering a project to validate NHSN Centers for Disease Control and Prevention (CDC) location codes (denote characteristics of a patient population), assigned by hospitals to each unit/patient area, to ensure data quality. <p><u>HAI website</u></p> <p>Committee offered suggestions on location of materials, discussed a variety of issues, and recommended formatting and design improvements:</p> <ul style="list-style-type: none"> • <u>Location of videos</u> <ul style="list-style-type: none"> ○ OHA asked committee to recommend a website location for infection prevention videos developed by Oregon Patient Safety Commission, which cover a wide range of topics from environmental cleaning for food and laundry services to specific methods used to address outbreaks caused by flu, norovirus, and other infections. ○ OHA proposed placing videos under “Infection Control Resources” (link is in lower left margin of HAI landing page) and an attendee suggested under “Resources” because link is located at top of HAI landing page. • <u>Issues</u> <ul style="list-style-type: none"> ○ Unclear how to access tables containing reportable HAI data. 	

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	<ul style="list-style-type: none"> ▪ Table is not displayed on table landing page, accessible through “2015 Oregon HAI Facility Specific Tables and Maps” link on “HAI Publications and Maps” webpage. ▪ OHA response: <ul style="list-style-type: none"> ▫ User must select “Explore Data” located at top of screen and choose “View Data” from drop-down menu to see table. ▫ OHA will provide detailed instructions on how to display tables in “View Data” mode on table landing page. ○ Need additional dialysis event data. <ul style="list-style-type: none"> ▪ Dialysis facility data in maps and tables only encompass bloodstream infections and access-related bloodstream infections ▪ Additional dialysis measures, especially antibiotic starts, would be useful for quality improvement projects. • <u>Improvements:</u> <ul style="list-style-type: none"> ○ HAI website needs to be reformatted and restructured to facilitate locating information. <ul style="list-style-type: none"> ▪ Users must be able to easily locate data, resources, and tools on website, which is considerable in size and scope of material. ▪ Current design of pages causes text to appear somewhat uniform, making it difficult to discern 	

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	<p>topics on left side of screen and to find specific information within body of material.</p> <ul style="list-style-type: none"> ▪ Modifications to website are limited by OHA design standards including font, format, and general layout, but OHA offered suggestions for improving website: <ul style="list-style-type: none"> ▫ Add photos and links to YouTube videos. ▫ Create a specific section for facility tools. ▫ Include a feature box at top of webpage to highlight events, such as publication of HAI annual report. ▫ Incorporate links on main Public Health Division webpage, under related subjects, to activities on HAI website. ▫ Place links to featured items underneath “Healthcare-Associated Infections in Oregon” banner that would be updated regularly. ▪ Analytics and usability testing would provide useful information on how best to redesign website. Ideas included: <ul style="list-style-type: none"> ▫ Analyze number of times links on left margin of webpages and in other areas of HAI website are used by visitors. ▫ Develop survey for infection preventionists, members of the community, and other pertinent groups to 	

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	<p>convey whether they were able to perform a list of key tasks.</p> <ul style="list-style-type: none"> ▫ Enlist and observe volunteers from different backgrounds to determine: how user navigates website, number of clicks and mistakes, and amount of time to find information (resource intensive option). ▫ Determine optimal number of topic links on each webpage based on analysis of collected data; too many links can be overwhelming while too few links make it difficult to find specific information. 	
<p>Legislative Update Rebecca Pierce (Pages 39-41 of meeting materials)</p>	<p>Proposed rule change to OAR 333-018-0130 would eliminate language specifying timing and content of annual HAI report.</p> <ul style="list-style-type: none"> • OHA's reasons for requesting change include: <ul style="list-style-type: none"> ○ Report content largely duplicative of data available on the CMS Hospital Compare website. ○ Modified rule aligns with House Bill 2301. • Language retained in proposed rule would still allow: <ul style="list-style-type: none"> ○ OHA to collect HAI data. ○ Public disclosure of state- and facility-level data in the form of a report or other method of data visualization. ○ Data review period for facilities prior to public release of information. ○ Communication of findings from analysis of HAI data. 	

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	<ul style="list-style-type: none"> • Change would permit more flexibility to respond to: <ul style="list-style-type: none"> ○ Emerging HAI trends. ○ Address public and healthcare facility data needs. ○ Utilize data to inform public health action to reduce HAIs. <p><u>Comments/Questions</u></p> <ul style="list-style-type: none"> • Attendee asked whether currently mandated data that is not required by CMS is eliminated in modified rule. OHA response: changes to rule do not affect reporting requirements. • Attendee commented on importance of Oregon HAI annual report noting that facilities use the data as a benchmark from which strategic plans are developed. Although, comparative data is available in Hospital Compare, the information is older than Oregon's data and some critical access hospitals (CAHs) are exempt from reporting HAIs to CMS. OHA response: <ul style="list-style-type: none"> ○ New rule would not preclude publication of informative data that is largely unavailable elsewhere. ○ National data in NHSN, which is more current than published data, can be used by facilities as a comparative measure. 	

Item	Discussion	Action Item
<p>Discussion: Themes and Topics for Future 2017 Meetings All members</p>	<ul style="list-style-type: none"> • OHA is planning the following agenda items for December meeting: <ul style="list-style-type: none"> ○ Public Health Veterinarian Dr. Emilio DeBess will talk about infection prevention and control when service/therapy animals visit patients in healthcare facilities. ○ OHA will review HAI reporting exemptions and present Oregon 2016 Annual HAI Report and 2016-2017 Healthcare Worker Influenza Vaccination Report. • Meeting attendees suggested the topics below for future meetings. <ul style="list-style-type: none"> ○ Update on progress of website renovation plan including any findings from analytics and focus groups. ○ Overview of hot topics presented at October ID Week conference, including “Journal of the American Medical Directors Association” (JAMDA) template for antimicrobial stewardship programs in long-term care facilities. ○ Sharing of personal experiences by individuals impacted by HAIs. ○ Presentation of cases by infection preventionists: issues encountered, cause analysis, remediation methods, and how practices changed. ○ Assessment of whether hurricanes and earthquakes in Texas and Florida were associated with an increase in HAIs and how hospitals are responding. 	<p>OHA will follow-up on proposed topics/themes.</p>
<p>Public Comment</p>	<p>No public comment</p>	<p>No action items</p>

Item	Discussion	Action Item
Adjourn		

Next meeting will be December 13, 2017, 1:00 pm - 3:00 pm, at Portland State Office Building, Room 1B

Submitted by: Diane Roy
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

Annual HAI Report: 2016 Data

Roza Tammer, MPH, CIC
HAI Reporting Epidemiologist, HAI Program

HAIAC
December 13, 2017



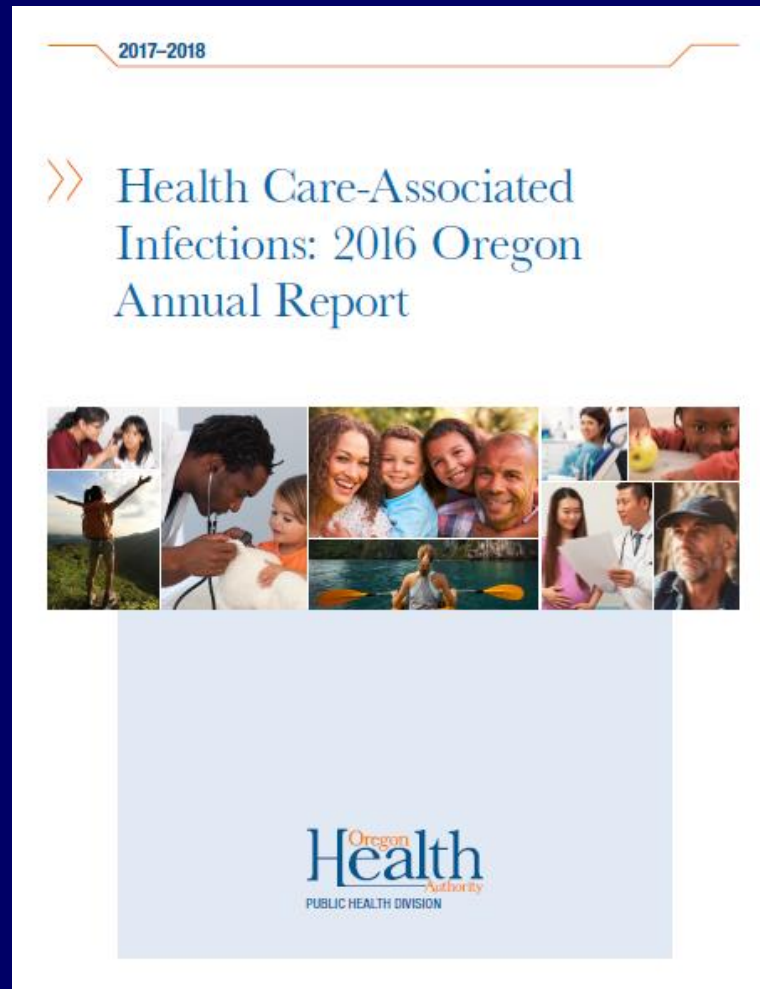
HAIAC guidance for 2016 report

- Context
 - Updated SIR baselines
 - Updated HHS targets
- Goals
 - Clarity
 - Brevity
 - Utility
 - Allows patients to use data to make healthcare choices
 - Allows healthcare facilities to use data to improve patient safety

HAIAC guidance for 2016 report

- Multiyear rollout of new SIRs/HHS targets
 - Aggregate data (summary report):
 - Present only old SIR/HHS targets in graphs
 - Reference new SIR/HHS targets in narrative introduction
 - Facility-specific data (data.oregon.gov)
 - Present both old and new SIR/HHS targets
- Next time similar data are presented, will likely show only new SIR/HHS targets

Summary report: Aggregate data



<https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/HAI/Pages/Reports-and-Data.aspx>

Summary report: HAI measures

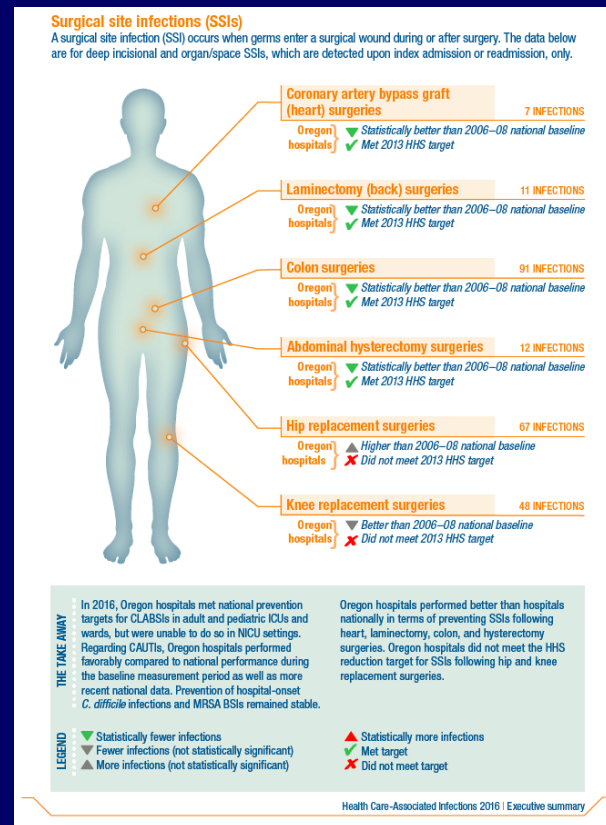
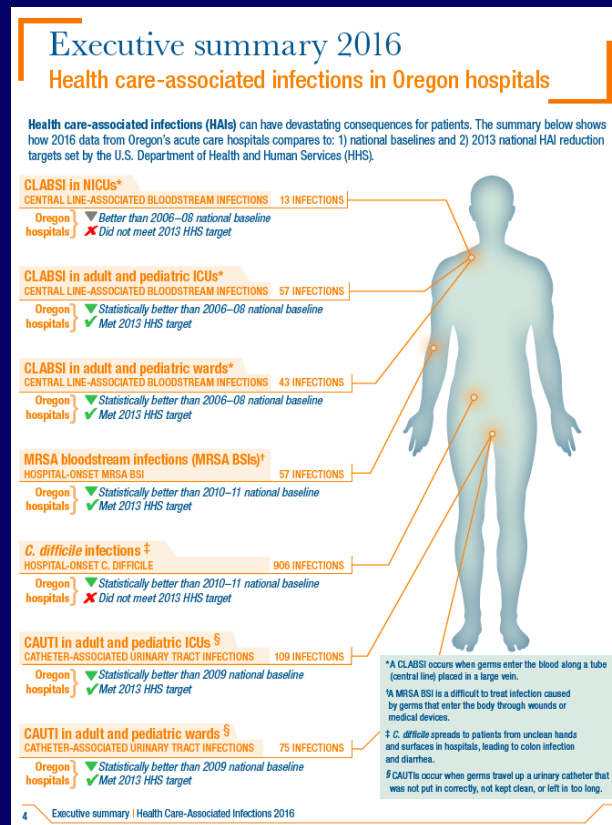
- Central line-associated bloodstream infections (CLABSI)
 - Adult & pediatric intensive care units (ICUs) and wards
 - Neonatal ICUs (NICUs)
- Catheter-associated urinary tract infections (CAUTI)
 - Adult & pediatric ICUs and wards
- Surgical site infections (SSI)
 - Coronary artery bypass graft (CBGB) surgical procedures
 - Colon (COLO) surgical procedures
 - Hip prosthesis (HPRO) surgical procedures
 - Abdominal hysterectomy (HYST) surgical procedures
 - Knee prosthesis (KPRO) surgical procedures
 - Laminectomy (LAM) surgical procedures
- Laboratory-identified (LabID) Events
 - *Clostridium difficile* infection (CDI)
 - Methicillin-resistant *Staphylococcus aureus* (MRSA) BSIs
- Dialysis Events
 - BSI
 - Access-related BSI

What's new?

- Addition of acronym glossary (p. 28)
- Removed “Location mapping for reportable HAIs in Oregon” (former Appendix I)
- Revised language in “Recommendations for patients and families to minimize HAI risk” (former Appendix II, new Appendix I)

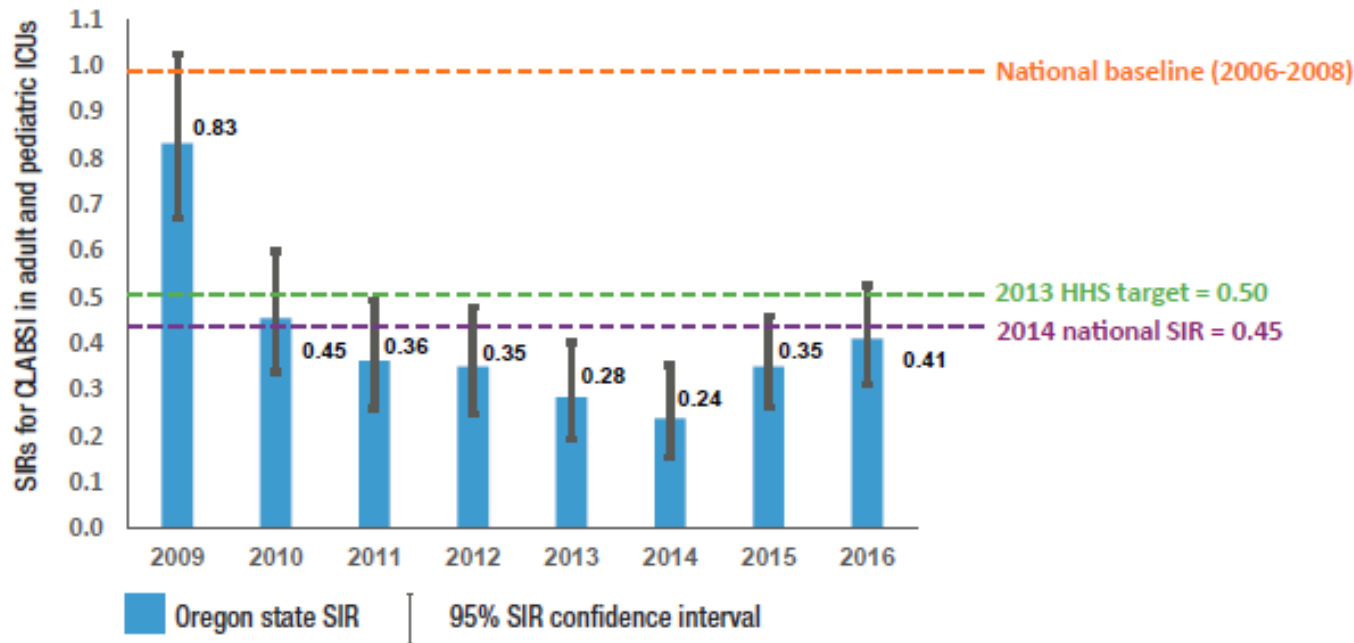
Executive summary

- 2013 U.S. Department of Health and Human Services (HHS) Target SIRs
- 2014 Centers for Disease Control and Prevention (CDC) national SIRs

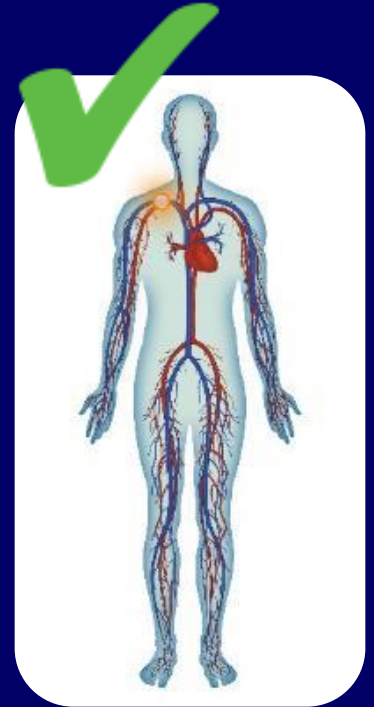


CLABSI: Adult and Pediatric ICUs and Wards

Figure 4. Oregon SIRs for CLABSI in adult and pediatric ICUs: 2009–2016



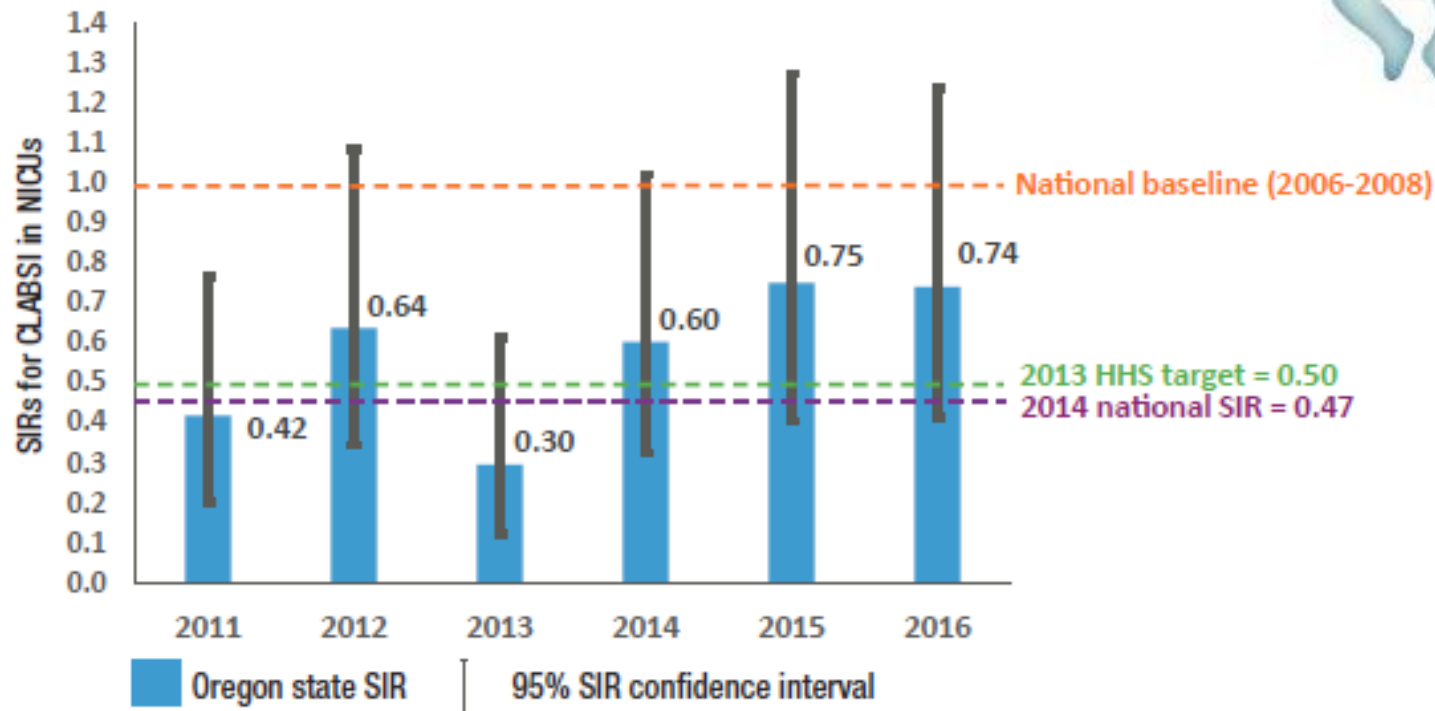
Note: Figure 4 does not include data for non-ICU wards.



CLABSI: Neonatal ICUs

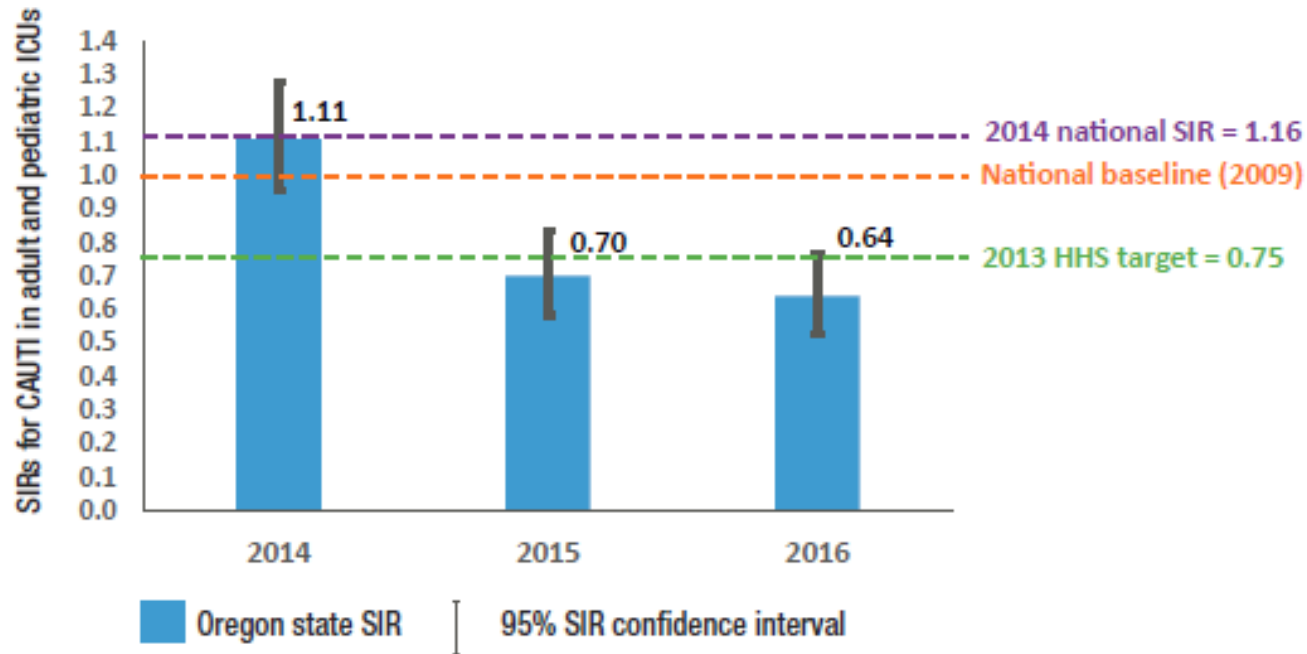


Figure 5. Oregon SIRs for CLABSI in NICUs: 2011–2016

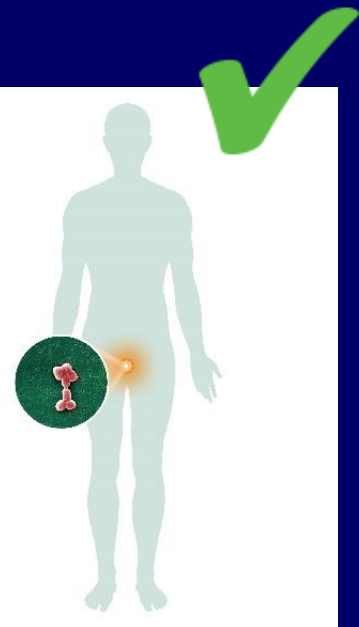


CAUTI: Adult and Pediatric ICUs and Wards

Figure 6. Oregon SIRs for CAUTI in adult and pediatric ICUs: 2014–2016

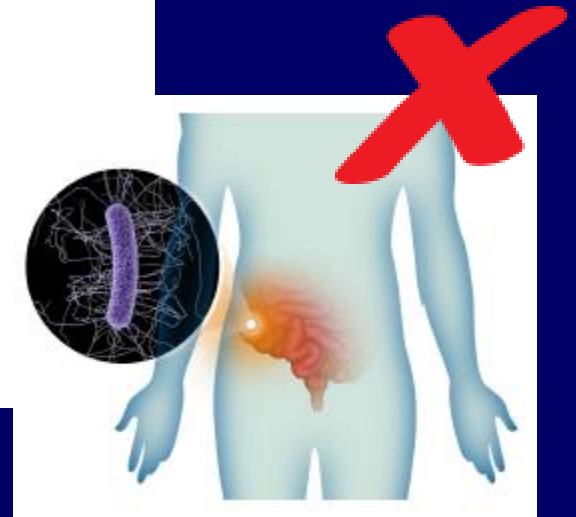
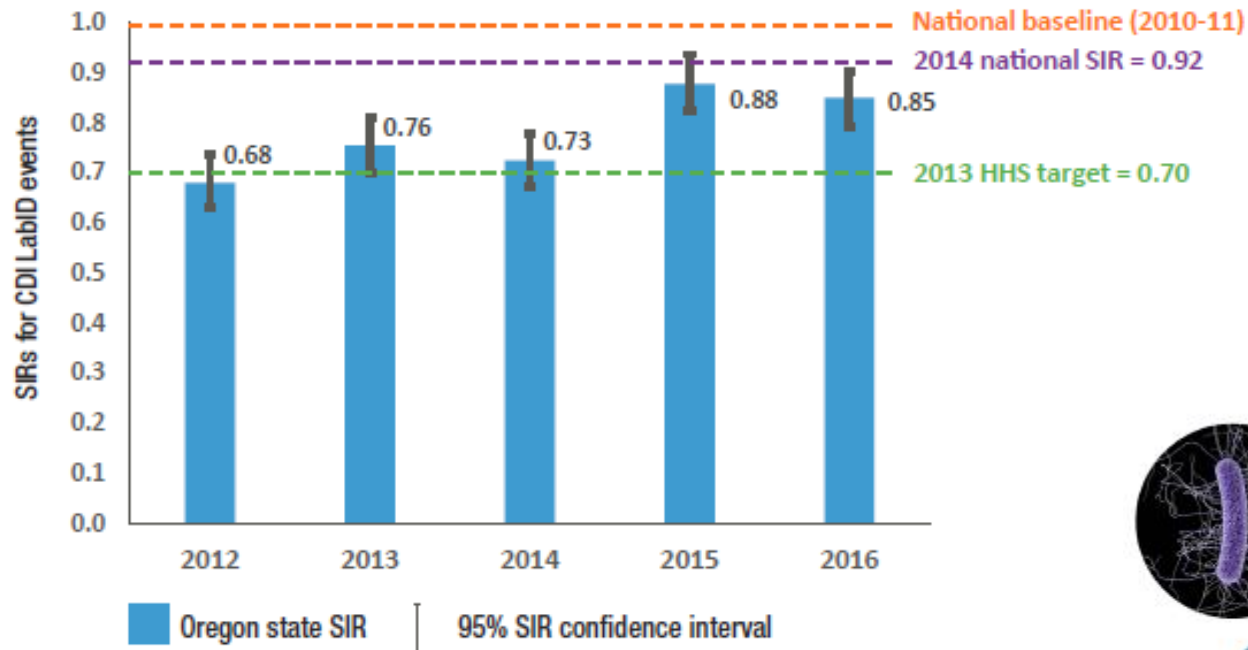


Note: Figure 6 displays SIRs for ICUs only.



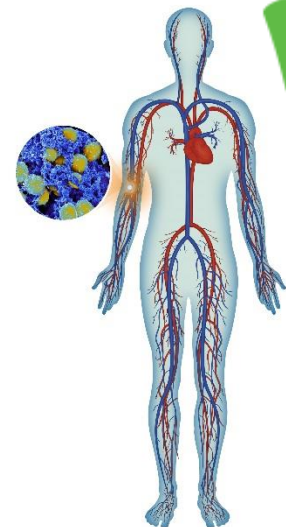
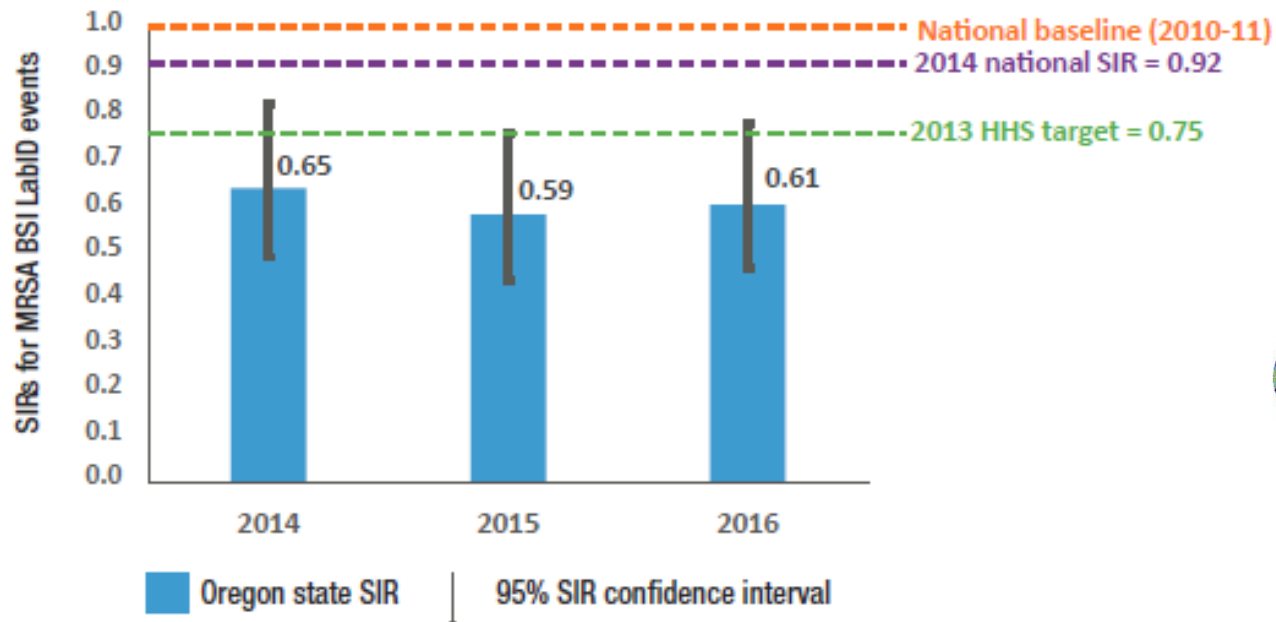
CDI LabID Events

Figure 7. Oregon SIRs for CDI LabID events: 2012–2016



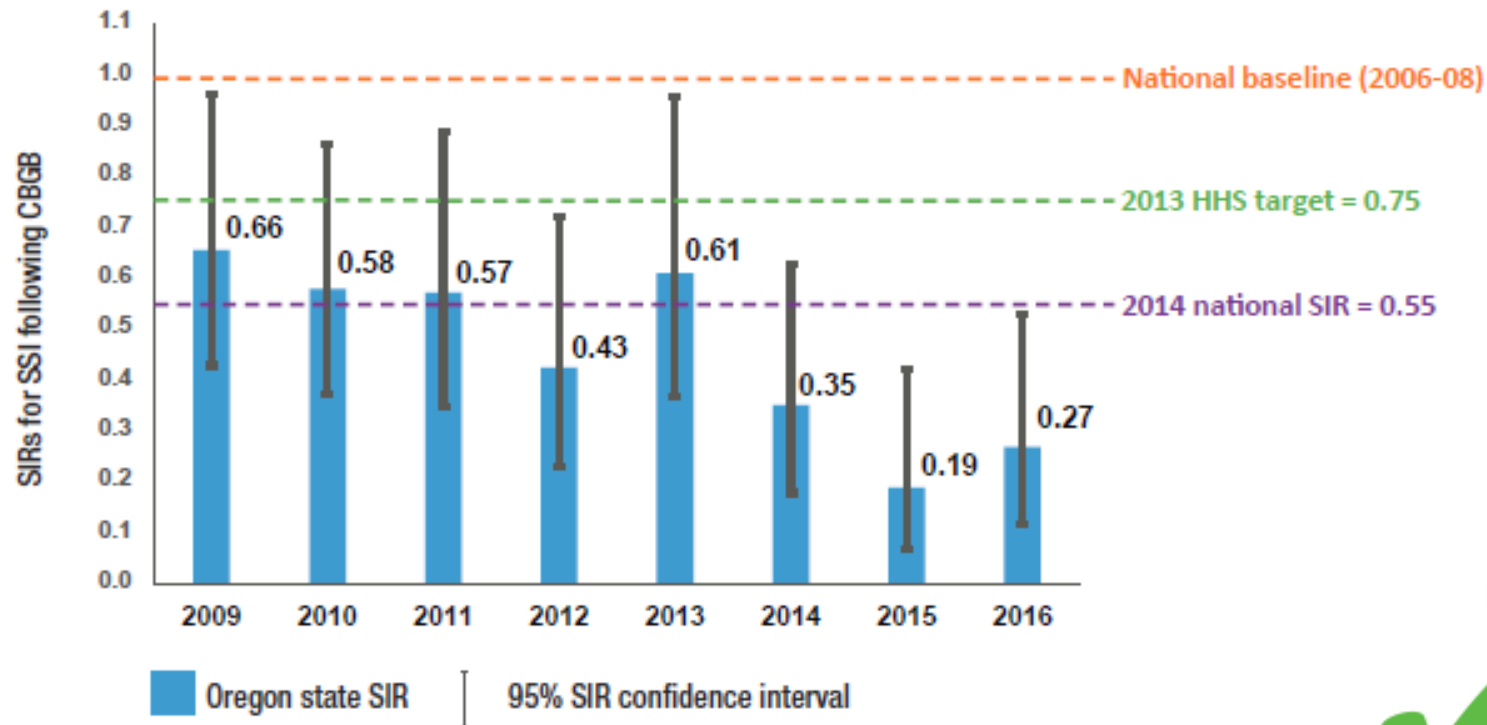
MRSA BSI LabID Events

Figure 8. Oregon SIRs for MRSA BSI LabID events: 2014–2016



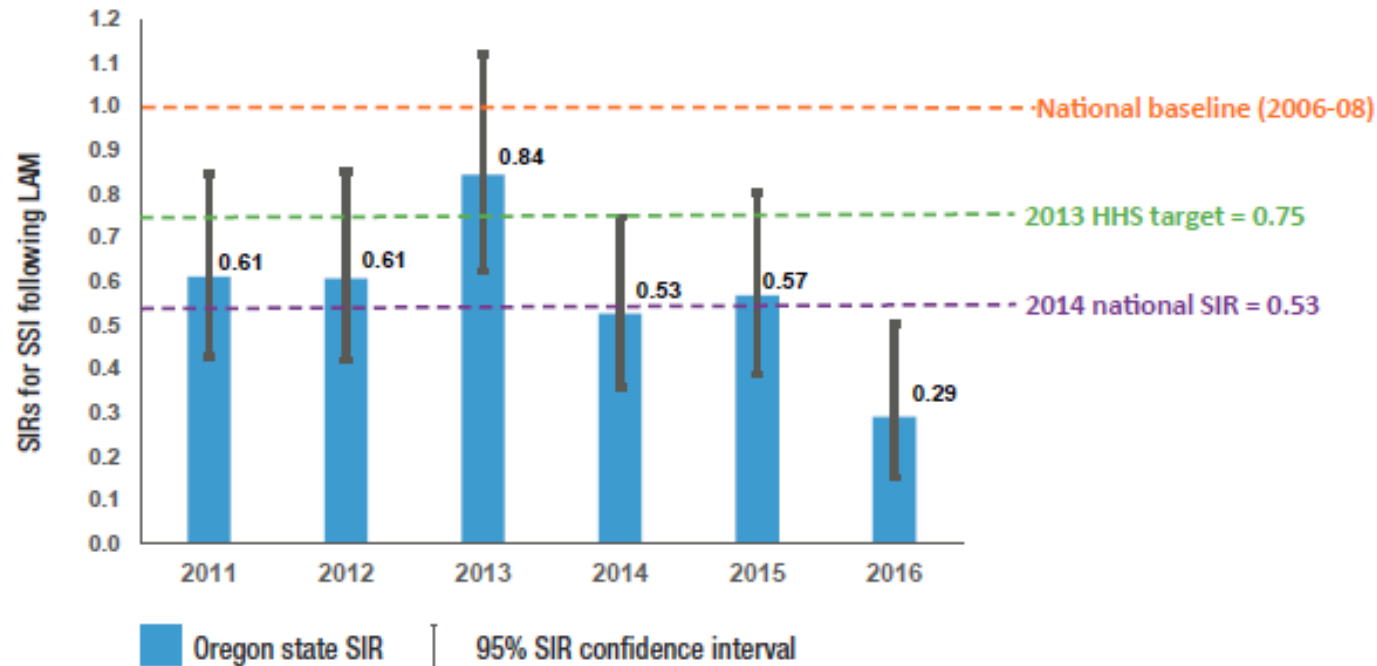
SSIs following CBGBs

Figure 9. Oregon SIRs for SSI following CBGB: 2009–2016



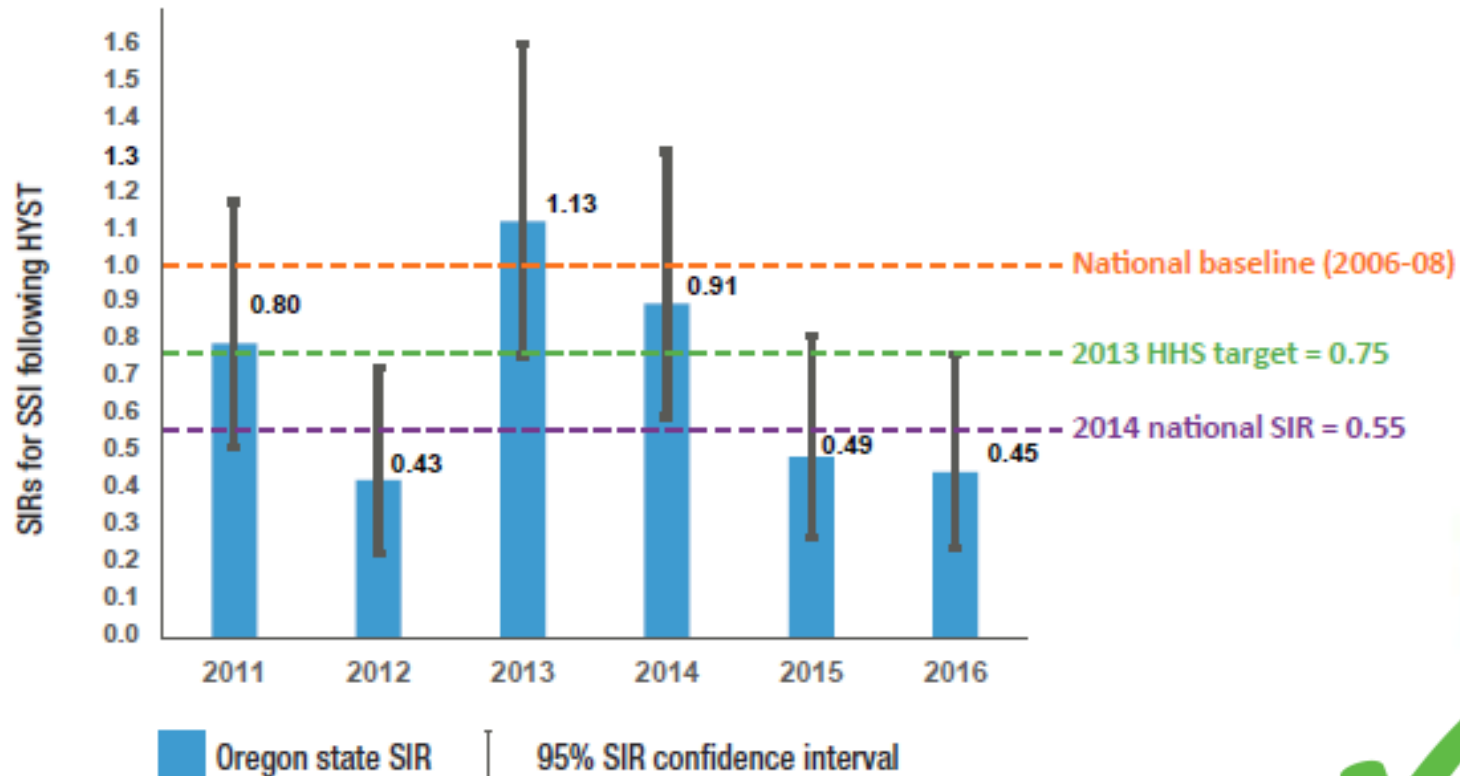
SSIs following LAM

Figure 10. Oregon SIRs for SSI following LAM: 2011–2016



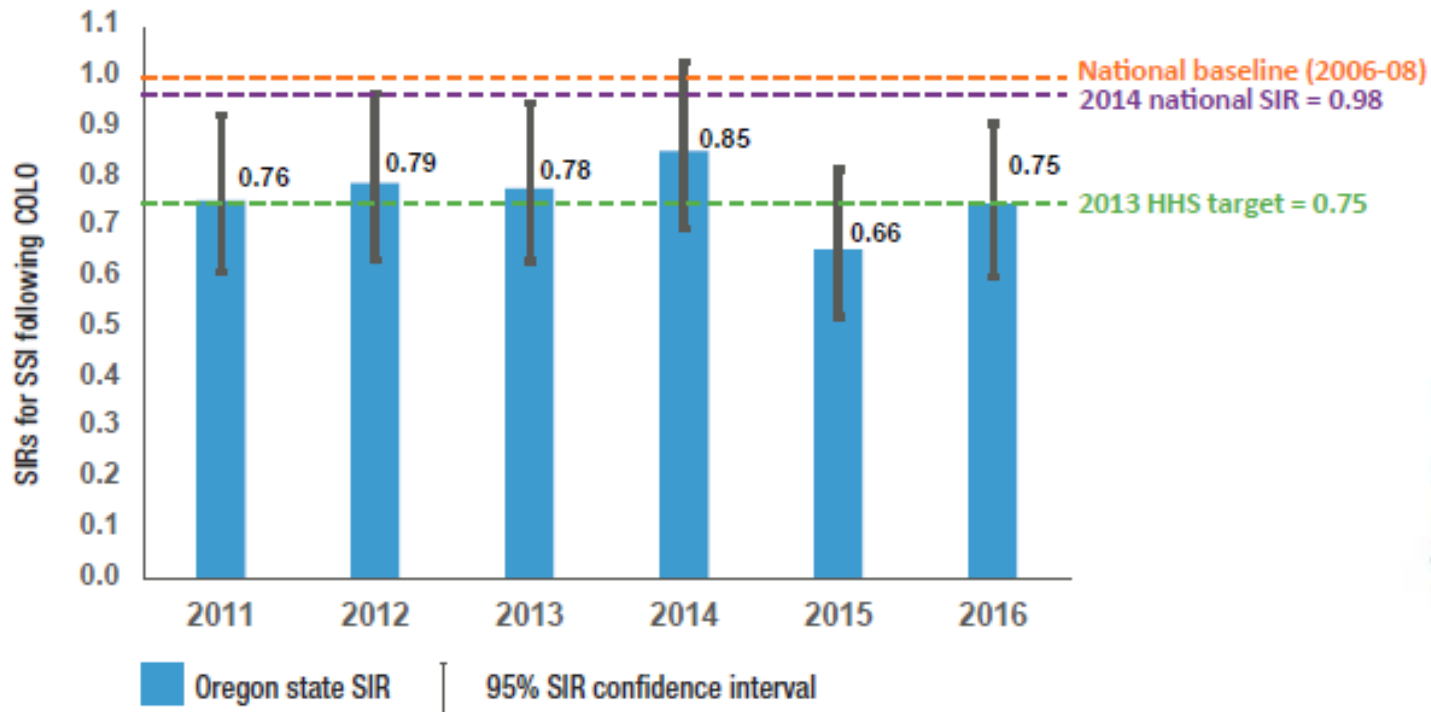
SSIs following HYST

Figure 11. Oregon SIRs for SSI following HYST: 2011–2016



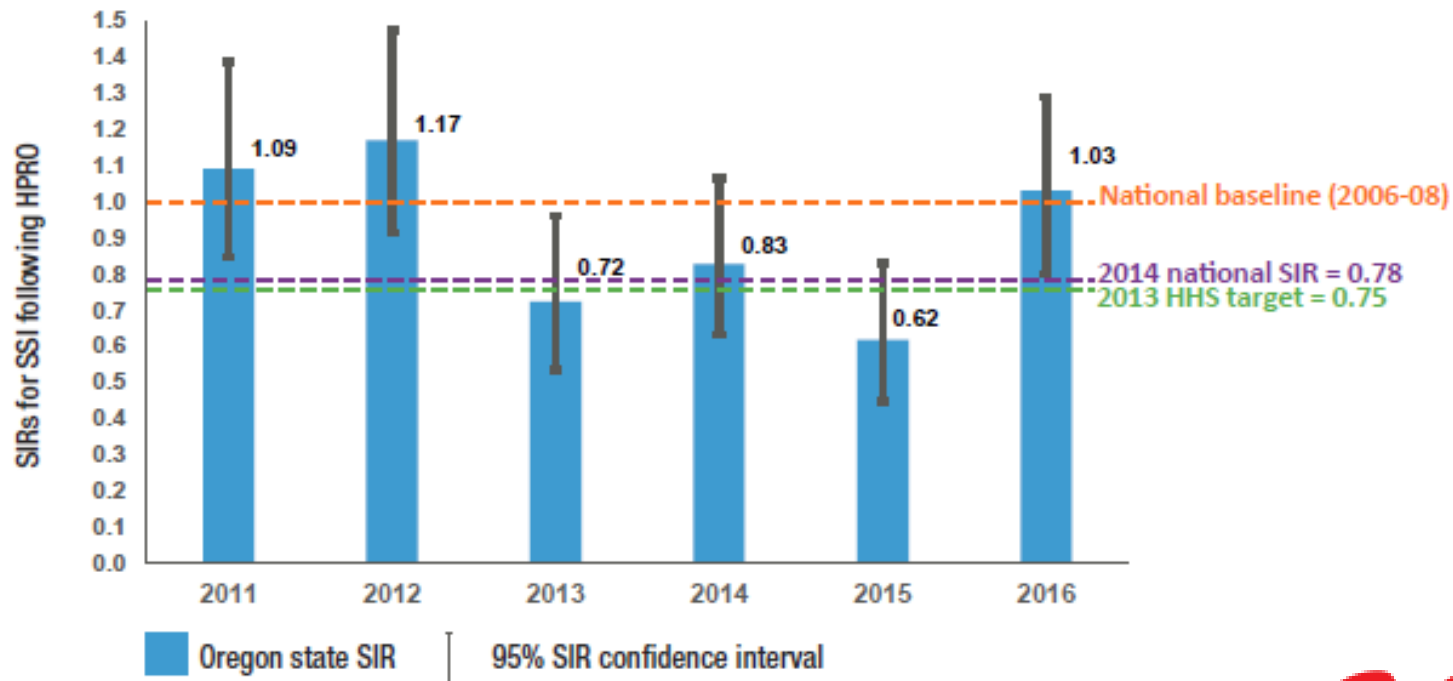
SSI following COLO

Figure 12. Oregon SIRs for SSI following COLO: 2011–2016



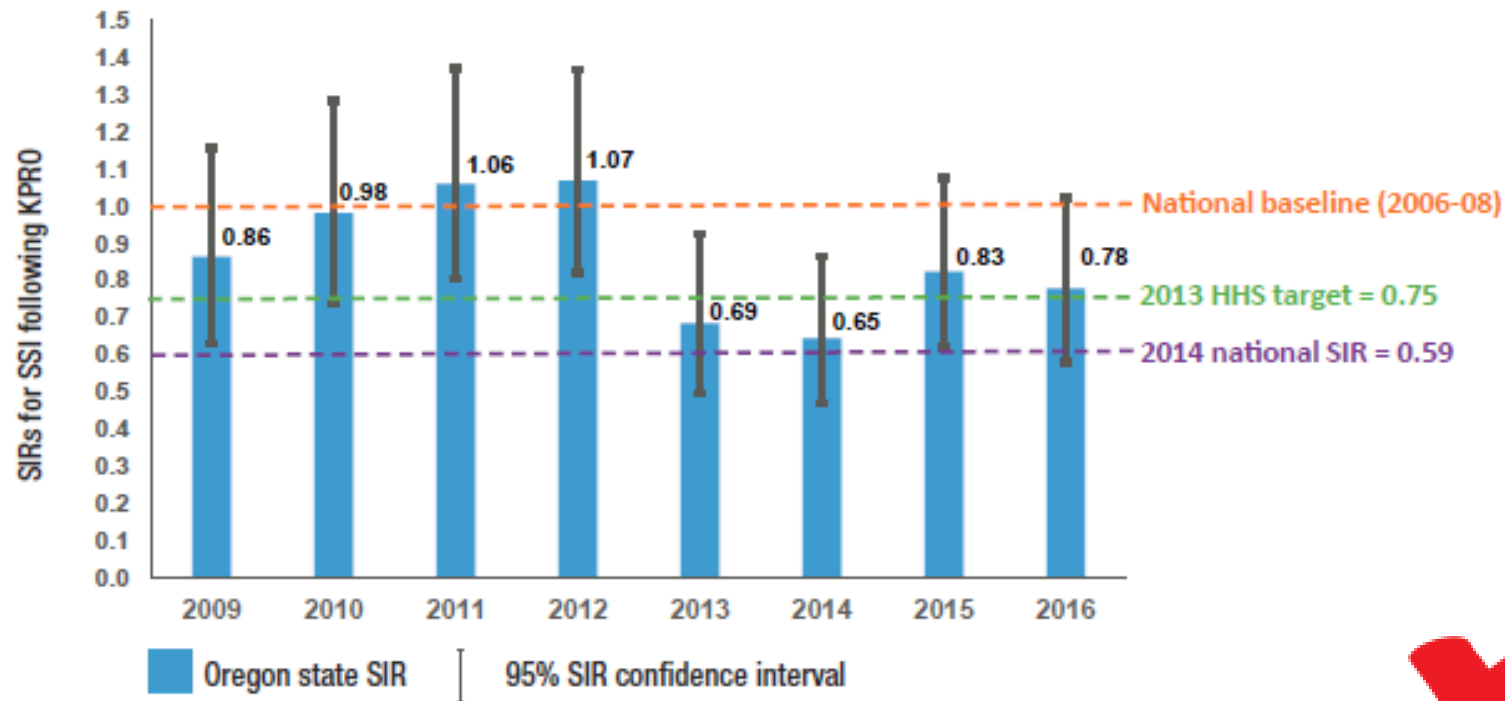
SSI following HPRO

Figure 13. Oregon SIRs for SSI following HPRO: 2011–2016



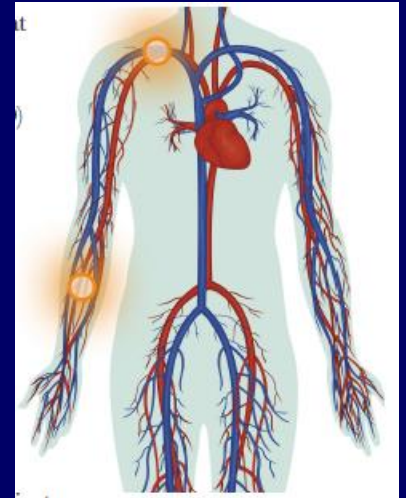
SSI following KPRO

Figure 14. Oregon SIRs for SSI following KPRO: 2009–2016



Dialysis Events

- 39% fewer dialysis-related BSIs per 100 patient-months than the national average in 2016
- 48% fewer access-related BSIs per 100 patient-months than the national average in 2016



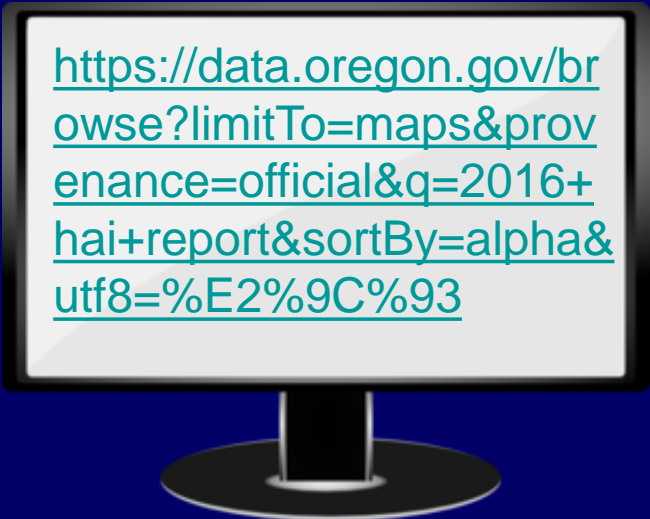
Summary of findings

- In 2016, most of Oregon's reportable HAIs in hospitals were both statistically better than predicted based on national data and met national reduction targets for HAIs
 - CLABSIs in adult and pediatric ICUs and wards
 - MRSA BSI LabID Events
 - CAUTIs in adult and pediatric ICUs and wards
 - SSIs following CBGB, LAM, COLO, and HYST
- Oregon dialysis facilities performed favorably for both dialysis-related BSIs and AR-BSIs
- A few of Oregon's reportable HAIs in hospitals highlight the need for continued infection prevention efforts
 - CLABSIs in neonatal ICUs
 - SSIs following HPRO and KPRO
 - CDI LabID Events

Facility-specific data (original baseline)

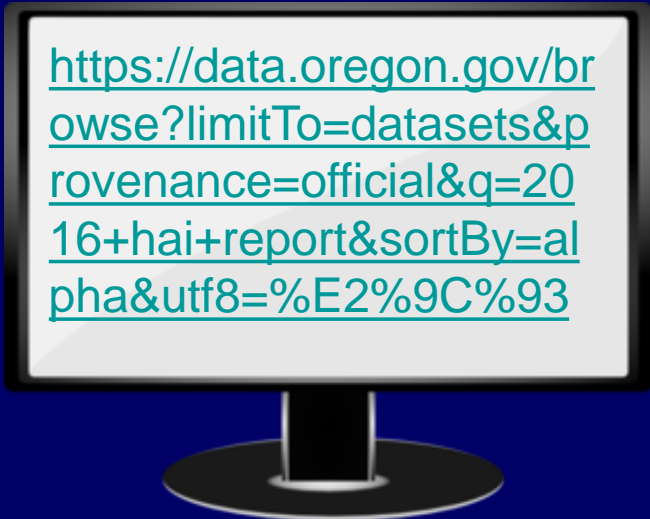
Facility-specific tables and maps using original baselines now available

Maps



<https://data.oregon.gov/browse?limitTo=maps&provenance=official&q=2016+hai+report&sortBy=alpha&utf8=%E2%9C%93>

Tables



<https://data.oregon.gov/browse?limitTo=datasets&provenance=official&q=2016+hai+report&sortBy=alpha&utf8=%E2%9C%93>

Note: After clicking on the table you would like to view, please select “Explore Data” and then “View Data” in order for all visual elements of these tables and maps to display correctly.

Facility-specific maps

Figure 1. Examples of interactive maps available for high-level or specific searches



Map of hospital performance on HO-CDI



Example of facility-specific detail on HO-CDI, available by clicking on facility

Facility-specific tables

Figure 2. Example of an online facility-specific table with national benchmarks included

Patient days	Observed	Predicted	2016 SIR	SIR 95% CI	SIR icon	SIR interpretation (2010–11 U.S. baseline)	2013 HHS targets	Percentile on 2014 national SIR distribution
37,983	15	26.48	0.566	0.329, 0.913	▼	Statistically fewer infections	SIR target (<0.7) met	31–35%
4,212	2	2.69	0.744	0.125, 2.459	▼	Fewer infections	Target not met	46–50%
3,610	2	1.81	1.102	0.185, 3.642	▲	More infections	Target not met	71–75%
1,608	1	0.6	*	*		#s too small to calculate		*
69,406	51	59.33	0.86	0.647, 1.121	▼	Fewer infections	Target not met	56–60%
23,753	10	18.41	0.543	0.276, 0.968	▼	Statistically fewer infections	SIR target (<0.7) met	31–35%
2,696	0	1.26	0	, 2.386	▼	Fewer infections	SIR target (<0.7) met & zero infections	0–10%
94,364	46	72.14	0.638	0.472, 0.843	▼	Statistically fewer infections	SIR target (<0.7) met	36–40%
42,046	23	30.28	0.76	0.493, 1.122	▼	Fewer infections	Target not met	46–50%
31,836	16	20.59	0.777	0.460, 1.235	▼	Fewer infections	Target not met	46–50%

OREGON.GOV

Open

2016 Catheter-Associated Urinary Tract Infections (CAUTI) Table (Original Baseline)

Oregon hospitals report CAUTIs from adult and pediatric intensive care units, and adult and pediatric medical, surgical, medical/surgical, and inpatient rehabilitation wards as part of Oregon's mandatory healthcare-associated infections reporting program. Note: Blue Mountain Hospital did not report CAUTI data for calendar

Hospital Name	Hospital Location	Catheter Days	Observed Infections	Predicted Infections	2016 SIR
1. All Oregon	Pediatric Medical/Surgical Wards	1,118	0	1.45	0
1. All Oregon	Adult Cardiac ICUs	3,559	1	7.12	0.14
1. All Oregon	Adult Medical/Surgical Wards	35,633	20	57.01	0.351
1. All Oregon	Adult Cardiothoracic ICUs	9,080	6	15.44	0.389
1. All Oregon	Pediatric Medical/Surgical ICUs	1,787	2	5	0.4
1. All Oregon	Adult Medical Wards	25,193	21	47.87	0.439
1. All Oregon	Adult Surgical ICUs	9,065	12	23.57	0.509
1. All Oregon	All Adult/Ped ICUs & M/S/IMS Wards Combined*	191,073	184	350.03	0.526
1. All Oregon	Adult Medical ICUs	4,949	6	10.57	0.568
1. All Oregon	Adult Medical/Surgical ICUs	58,203	66	90.23	0.731
1. All Oregon	Adult Neurosurgical ICUs	4,284	16	18.85	0.849
1. All Oregon	Pediatric Medical Wards	612	0	0.98	*
1. All Oregon	Rehabilitation Wards	2,144	6	8.15	0.736
1. All Oregon	Adult Surgical Ward	35,446	28	63.8	0.439

Facility-specific data (2015 baseline)

In progress

- SIRs analyzed according to updated, 2015 baselines
 - Percentiles on the 2014 national baseline will not be included
- Benchmarked according to updated HHS target SIRs
- Don't include symbols showing SIR and HHS target progress
- Data presented in more granular categories
 - Facility type – ACH, CAH, LTAC, IRF (CLABI, CAUTI, MRSA, CDI)
 - Age of patient – adult or pediatric (SSI data only)
- Dialysis event data will be presented as an SIR for the first time

Communications

- Report published 11/1/17
 - Email notifications to our partners
 - Announcements via listservs: OSWAPIC, HAN
 - Social media posts: AWARE and OHA FB/Twitter
 - Posts on HAI Program and ACDP websites
 - Press releases: OAHHS, OHA
 - Included in partner newsletters/communications
 - CD Summary issue (in progress)
 - Press: Portland Business Journal

Discussion/questions

- How were you notified of this report?
- How do/will you use this report?
- Do you share this report with anyone?
Whom?

Thank you!

Roza Tammer, MPH, CIC

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Acute & Communicable Disease Prevention

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HAIAC

Alexia Zhang, MPH

Healthcare-Associated Infections Epidemiologist
Acute and Communicable Disease Prevention Program

Wednesday, Dec 13th, 2017



Outbreaks since 9/1/2017

Etiology	Count	Setting
Gastroenteritis		
Norovirus	15	LTCF (9) , DCC (3), School (2), Other (1)
Campylobacter	1	DCC (1)
<i>Salmonella</i>	1	Private Home (1)
Sapovirus	1	LTCF (1)
<i>E. Coli</i>	2	Restaurant (1), Other (1)
Unknown	4	LTCF (2) , School (1), Restaurant (1)
Respiratory		
Influenza B	4	LTCF (3) , Jail (1)
Pertussis	1	School (1)
Mumps	1	Clinic (1)
Strep Pyogenes	1	DCC (1)
Unknown	3	LTCF (3)
Rash	3	DCC (3)
Other	1	ASC (1)
Total	38	

Healthcare associated outbreaks 9/1/2017-12/1/2017

- Healthcare associated outbreaks account for 52% (n=20) of all outbreaks from June to September
- Majority of healthcare associated outbreaks occurred in long term care facilities (n=18, 90%)
- Most common etiology was norovirus or noro-like outbreaks

Facility type	Norovirus	Unknown-GI	Influenza	Sapovirus	Unknown-Respiratory	Total
Assisted Living Facility	6	2	0	0	1	9
Skilled Nursing Facility	2	0	2	1	1	6
Residential Care	1	0	1	0	1	3
Total	9	2	3	1	3	18

Salmonella Newport

- 2 OR cases; 17 WA cases
- No hospitalizations/deaths in OR cases
- 6 hospitalizations and 1 death in WA cases
- Onsets range from 10/29/2017-11/15/2017
- Pre-cut fruit implicated in this outbreak with Oregon distributor
 - Watermelon and/or cantaloupe
 - Fred Meyer, QFC, Rosauers and Central Market grocery stores in OR and WA



E. Coli O103

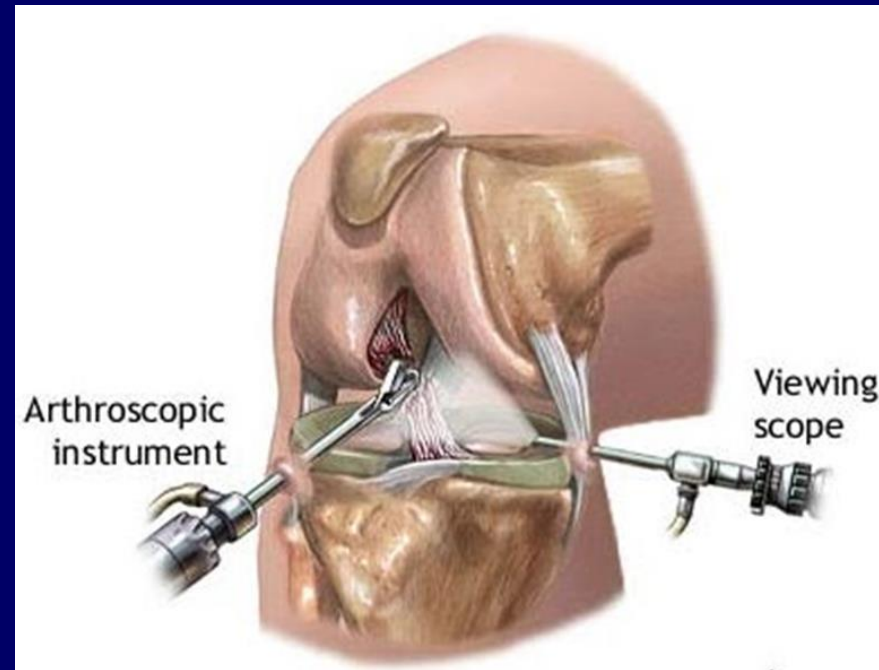
- Current case count; 10 confirmed and 25 presumptive cases
- 23 females
- Age range: 1-74 yo; onsets: 9/27-11/08
- Initially, 7 females with STEC O103 infection that match by PFGE.
 - 3 of the cases indicated that they ate Community Supported Agriculture (CSA) produce from the same farm (farm A)
 - 4 of the cases shopped at stores that sell produce from farm A
- State epidemiologist reached out to all CSA members to inquire about illness
 - Additional 24 cases with recent onset diarrhea
- No implicated produce through trace back
- ACDP, FDA and ODA visited the farm and took samples of produce, water, and environmental samples. Additional samples from produce sold at stores
 - All negative to date

***Peptostreptococcus magnus* in ACL repairs**

- IP at an ambulatory surgical center called to report 3 patients with ACL surgery sites infected with *Peptostreptococcus magnus*
- Sex: 2 males, 1 female
- Age range: 18 to 32 years
- Onsets: April 2016 to August 2017
 - Cases presented with septic arthritis, fever 17-34 days after surgery
 - All cases required multiple wash outs, 2-4 month antibiotic courses, 1 patient had graft removed.
- All cases otherwise healthy, apart from ACL surgery

Peptostreptococcus magnus in ACL repairs

- All 3 surgeries occurred in the same operating room on an ambulatory surgery center
 - ACL surgeries performed in all 4 OR at facility
 - Other surgeries also performed in this OR
- 2 different surgeons, no staff common to all 3 surgeries
- Autologous hamstring grafts in all 3 surgeries, arthroscopic equipment used



Peptostreptococcus magnus in ACL repairs

- ACDP epidemiologists observed 2 ACL surgeries and took environmental swabs
- Grafts prepared using a graft preparation tool (pictured)
 - Graft handled by bearded, masked surgical assistant for ~25 minutes
 - Tool was ~8 years old, has cannulated area in the center, white Teflon board, many dents and cuts in metal



Peptostreptococcus magnus in ACL repairs

- Awaiting test results from CDC
- Facility looks clean and well-run
- OR small, allowing some opportunity for close contact with sterile areas
- Decided not to swab staff because *P. magnus* part of normal nasal flora
- Grafting tool is most suspicious, given nooks and crannies where bacteria could hide – remember this is an ANAEROBE, so we wouldn't expect to find it living on tools exposed to the air or OR surfaces



Thank You

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

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Oregon
Health
Authority



Emilio DeBess DVM, MPH
State Public Health Veterinarian

ANIMAL-ASSISTED INTERVENTIONS IN HEALTH CARE FACILITIES

MANY HOSPITALS AND LONG-TERM CARE FACILITIES IN NORTH AMERICA CURRENTLY PERMIT ANIMALS TO VISIT WITH THEIR PATIENTS; HOWEVER, THE DEVELOPMENT OF RELEVANT INFECTION CONTROL AND PREVENTION POLICIES HAS LAGGED, DUE IN LARGE PART TO THE LACK OF SCIENTIFIC EVIDENCE REGARDING RISKS OF PATIENT INFECTION ASSOCIATED WITH ANIMAL INTERACTION

Resident Animal Programs

- Resident animals live in a facility full time
 - They are owned by the facility
 - Cared for by staff, volunteers and residents
 - Not necessarily therapy dogs
- Resident pets shown to enhance wellness, decrease pain medication intake, and decrease loneliness among elderly and long term care patients

Banks, 2002. J of Gerontology; Lust, 2007. Consultant Pharmacist

Animal Assisted Activities (AAA)

- Volunteers bring their therapy pets to hospitals, nursing homes, schools, and other facilities to enhance quality of life and to provide opportunities for socialization, motivation, education, etc.
- Not tailored to specific patients or medical conditions

Animal Assisted Therapy (AAT)

- Health care professionals or certified therapists use their own animal, or more commonly, work in partnership with a volunteer and the volunteer's therapy pet to promote improvement in physical, social, emotional, or cognitive function
- Specific activities are planned to achieve measurable goals for a specific patient

The Human-Animal Bond: Benefits of Pet Therapy

- **Interactions with animals can:**
 - **Facilitate communication between providers and patients**
 - **Increase verbal and social interaction among patients or residents**
 - **Improve emotional and physical health**
 - **Decrease anxiety through diversion**
 - **Decrease loneliness**
 - **Help to reinforce behaviors from reading to walking or throwing a ball**

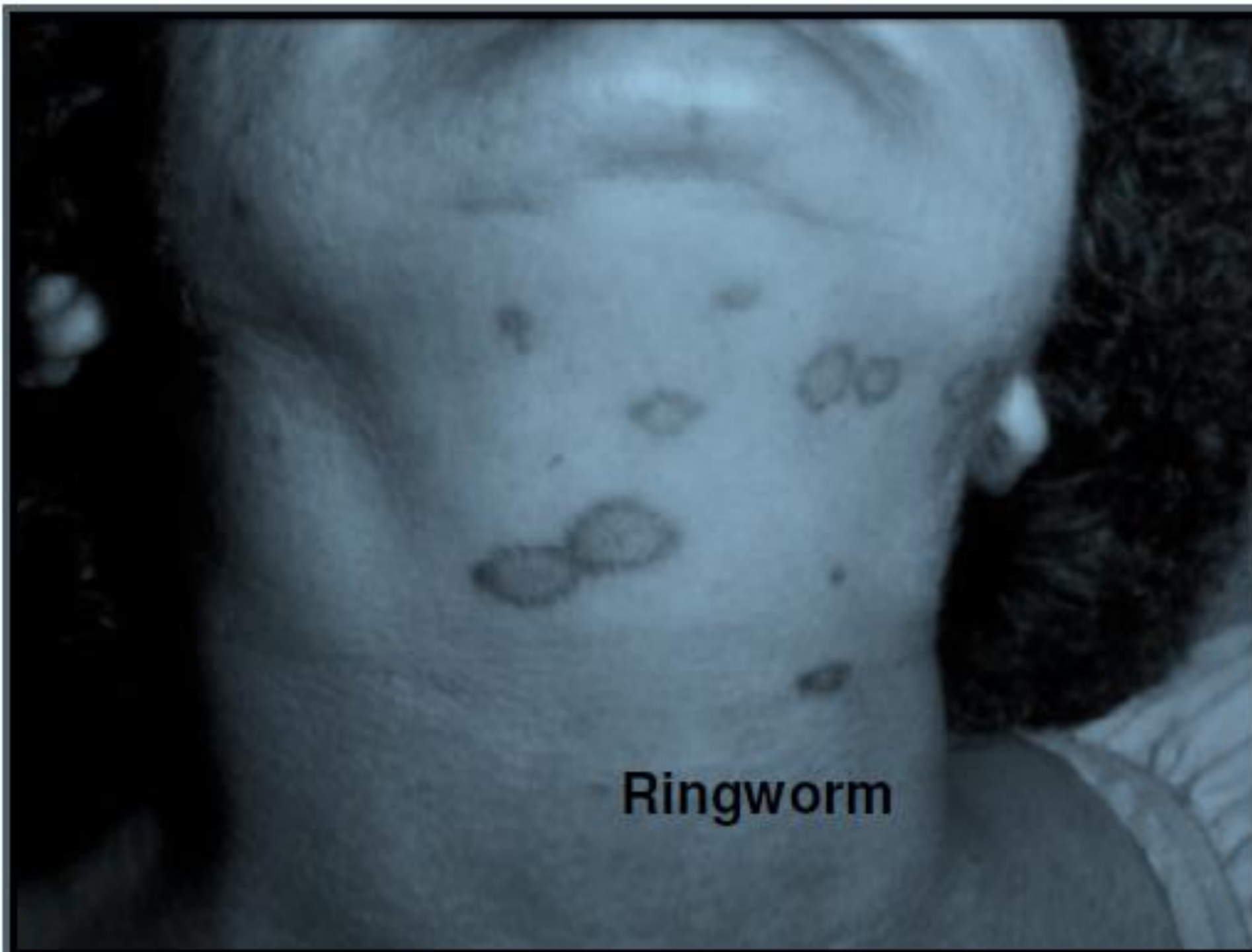
Benefits of Pet Therapy Are Well Established. What About the Risks?

- **Animal Allergies**
- **Trauma, including bites**
- **Opportunistic infections in severely immunocompromised patients**
- **Zoonotic infections**

Animal Allergies

- 15% of the human population is allergic to dogs or cats
- Very few allergic reactions seen in nursing homes with resident pets.
Thought to be due to decline in immune status with age
- Allergens can be minimized by bathing therapy animals within 2 days of a visit

**Zoonotic infections spread to humans
by direct contact with an infected
animal**



Ringworm



Campylobacter outbreak from puppies

BY SCOTT WEESE ON SEPTEMBER 11, 2017
POSTED IN DOGS, OTHER DISEASES



Cute. Frustrating. Cuddly.
Biohazardous

All of these apply to puppies. It's well recognized that puppies (and kittens) pose increased infectious disease risks, for a few reasons. These include a higher likelihood of shedding various pathogens, greater environmental contamination when they poop on the floor (or anywhere else) and a tendency to cause minor

bites and scratches. That's not meant to deter people from getting a puppy or a kitten, but it's important to understand risks to mitigate risks.

Clostridium difficile, hospital visitation and dog risk

BY SCOTT WEESE ON JULY 21, 2017

POSTED IN DOGS



A reader has been trying to post a question about an older post on *C. difficile* in visitation dogs. Here's the question and my answer:

Do the dogs have a risk of getting sick from the C. difficile bacteria? I understand from the post that they can ingest and shed it in their feces, but the post never states whether they can get sick from the bacteria or not!

Human Pathogens That May Be Transmitted from Therapy Animals to People in Hospitals or LTC Facilities

- Methicillin-Resistant *Staph aureus* (MRSA)
- *Clostridium difficile* (*C. difficile*)
- Pathogenic *E. coli* strains
- Vancomycin-resistant *Enterococcus faecium* (VRE)
- **Influenza H1N1**

**Incidence Rate of Isolation of Pathogens
from Fecal Samples (n= 1,130) Collected
Every 2 Months for 1 Year From 194 Therapy
Dogs During 2005-2006**

Agent	No. of Positive Dogs	IR* Hosp- Exposed	IR Unexpo sed	Incidence Rate Ratio
<i>C. difficile</i>	39	.31	.13	2.4
MRSA	9	.09	.02	4.7
AmpC <i>E. coli</i>	37	.26	.15	1.79
VRE	1	.01	0	Not calculated

*Incidence Rate

Lefebvre S. JAVMA Vol 234 (11) June 1 2009

Hospital Visitation Programs

- In Ontario, 201 (90%) of 223 hospitals permitted animal visitation
- Screening protocols required to participate in dog visitation programs (as reported by owners)
 - 93% routine vaccinations
 - 53% temperament testing or behavioral assessment
 - 18% annual check for internal parasites
 - 2% routine deworming

Hospital Visitation Programs (Dog-Human Interactions)

- **Majority of visits took place in the patient's room**
 - **79% of owners allowed dogs to lick patients**
 - **73% of owners permitted their dogs on the patient's bed**
- **0 of 75 healthcare workers washed their hands either before or after touching the dogs**

Study of Dogs Visiting Human Hospitals

- 102 dogs surveyed and sampled
- Zoonotic agents isolated from 80 of 102 dogs

Agent	n
<i>Clostridium difficile</i>	58
<i>Giardia</i>	7
ESBL <i>E. coli</i>	4
Round and hookworms	3
<i>Salmonella</i>	3
Ringworm	1



Raw Diets and Therapy Dogs



FDA/CDC/USDA (NARMS) Retail Meat Annual Report, 2007

2007	Chicken breast	Ground turkey	Ground beef	Pork chop
Bacteria	n (%)	n (%)	n (%)	n (%)
<i>Campylobacter</i>	475/1070 (44%)	34/1065 (3.2%)	5/1071 (0.5%)	4/1072 (0.4%)
<i>Salmonella</i>	99/1072 (9.2%)	190/1066 (17.8%)	13/1071 (1.2%)	18/1073 (1.7%)

Guidelines for Animal-Assisted Interventions in Healthcare Facilities

- **Suitable animals: species/temperament**
- **Hand hygiene before and after contact**
- **Patients' pets interact with patient and family only**
- **No staff pets unless certified**
- **No shelter, stray animals**
- **Adult animals**
- **Health screening including rabies vaccination, and external and internal parasites**

Am J Infection Control 2008; 36: 78-85

Guidelines for Animal-Assisted Interventions in Healthcare Facilities (Cont.)

- No visits while animal is ill (duh)
- No visits while animal^{is} being treated with antibiotics
- No animals fed raw diets or treats within 90 days
- Screening for MRSA, *C. difficile*, etc. generally not recommended
- Healthy handler -- flu vax

Guidelines for Animal-Assisted Interventions in Healthcare Facilities (Cont.)

- **Don't visit patients under contact precautions**
- **Don't visit patients while they are eating**
- **Prevent licking**
- **No high fives or shaking**
- **No treats unless shovel or spoon is used that is disinfected between patients**
- **Use a barrier sheet on the bed and discard after visit**

Am J Infection Control 2008; 36: 78-85

I think most people would agree that we need better education for high risk people about pets and zoonoses. How to actually get that done is the challenge.



Note: The following material may be protected by copyright law (Title 17, U.S. Code)

Guidelines for animal-assisted interventions in health care facilities

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Schaumburg and Elgin, Illinois; New York, New York; Anchorage, Alaska; Guelph, Burlington, Ottawa, Hamilton, London, and Toronto, Ontario, Canada

Many hospitals and long-term care facilities in North America currently permit animals to visit with their patients; however, the development of relevant infection control and prevention policies has lagged, due in large part to the lack of scientific evidence regarding risks of patient infection associated with animal interaction. This report provides standard guidelines for animal-assisted interventions in health care facilities, taking into account the available evidence. (*Am J Infect Control* 2008;36:78-85.)

The popularity of animal-assisted interventions (AAIs) in human health care has grown to the point where many hospitals and long-term care facilities in North America currently permit animals to visit with

patients and residents. But while the use of AAIs and the evidence supporting their many benefits for patients/residents has grown,¹⁻⁵ the development of applicable infection control policies has lagged. Consequently, current practices for animal health screening and infection prevention and control are highly variable both within and between health care facilities (HCFs). Patients' and others' pets are not held to the same standards as animals belonging to formal AAI programs, even though any of these animals can interact with patients and health care staff. Although general guidelines for animal visitors have been published by several expert groups,⁶⁻⁹ a collaborative document that captures the interests of most stakeholders while providing specific recommendations to minimize both injuries and the transmission of infectious organisms to and from animals is needed.

To address this demand, a Working Group of stakeholders in AAI assembled in Toronto, Ontario on January 9, 2007, with the aim of finalizing a draft set of guidelines that had been prepared by the project leaders (JSW and SL) and circulated for preliminary comments before the meeting. The participants included 29 individuals with expertise in AAI, infection control, public health, and veterinary medicine from Canada and the United States. Led by a professional facilitator, the Working Group reviewed all identified evidence regarding the risks of AAI,¹⁰⁻²⁵ then systematically debated each point in the draft document for its validity, considering both the evidence and expert opinion. Issues requiring further discussion were delegated to expert subcommittees for resolution. Subcommittee recommendations were subsequently circulated to all Working Group members for their approval.

From the Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada;^a American Veterinary Medical Association, Schaumburg, IL;^b NYC Veterinary Specialists, New York, NY;^c Alaska Department of Health and Social Services, Section of Epidemiology, Anchorage, AK;^d Sherman Hospital, Elgin, IL;^e Joseph Brant Community Health Centre, Burlington, Ontario, Canada;^f Canadian Veterinary Medical Association, Ottawa, Ontario, Canada;^g St John Ambulance Therapy Dogs, Hamilton, Ontario, Canada;^h Ottawa Therapy Dogs, Ottawa, Ontario, Canada;ⁱ St Joseph's Health Care, London, Ontario, Canada;^j and Public Health Division, Ontario Ministry of Health and Long-Term Care, Toronto, Ontario, Canada.^k

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Other Working Group members include Erica Bontovics, MD, CIC, and Sharon Calvin, DVM, MSc, Ontario Ministry of Health and Long-Term Care; Nora Boyd, RN, CIC, Bluewater Health, Sarnia, Ontario; Renee Freeman, RN, CIC, and Michael Hawkes, MDCM, The Hospital for Sick Children, Toronto, Ontario; Cindy Plante-Jenkins, MLT, CIC, Trillium Health Centre, Mississauga, Ontario; Joanne Laalo, RN, CIC, Community and Hospital Infection Control Association of Canada; Robert Franklin, DVM, Delta Society; Carol Jones, Jan Vallentin, and Don Lapierre, St John Ambulance Therapy Dogs; Judy Sauvé and Nancy Trus, Therapeutic Paws of Canada; David Waltner-Toews, DVM, PhD, University of Guelph, Ontario; and Richard Reid-Smith, DVM, DVSc and Rita Finley, MSc, Public Health Agency of Canada.

The Working Group meeting was sponsored by the Public Health Agency of Canada and the Centre for Public Health and Zoonoses, University of Guelph.

0196-6553/\$34.00

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Table 1. Rating categories for recommendations⁷

Category	Description
IA	Strongly recommended for implementation and strongly supported by well-designed experimental, clinical, or epidemiologic studies
IB	Strongly recommended for implementation and supported by certain experimental, clinical, or epidemiologic studies and a strong theoretic rationale
IC	Required by provincial/territorial, state, or federal regulation, or representing an established association standard
II	Suggested for implementation and supported by limited clinical or epidemiologic studies, or by a theoretic rationale
Unresolved issue	No recommendation is offered. No scientific consensus or insufficient evidence exists regarding efficacy.

Table 2. Level of consensus agreement among members of the Working Group

Rating	Explanation
Consensus	More than 80% agreement among Working Group members
Nonconsensus	Less than 80% agreement among Working Group members

The final recommendations were annotated according to 2 different classifications. The quality of evidence supporting each recommendation was ranked following the system used by the Centers for Disease Control and Prevention in other infection control guidelines (Table 1). In addition, the degree of consensus achieved by the Working Group, as defined in Table 2, was noted.

This report represents the final product of that meeting. Its purpose is to provide explicit and, whenever possible, evidence-based guidelines to mitigate risks associated with AAI. The intended audience is human health care workers (including those that provide AAIs themselves), although the responsibilities for carrying out many of the recommendations will rest with animal handlers, as well as external organizations that provide AAI services. Explicit guidelines for veterinarians, including rationales behind the recommendations relevant to animal selection and screening, will be published separately. Special circumstances related to resident animals (that also are used in AAI programs), service animals, laboratory animals, or animals

that are brought into human HCFs for veterinary diagnostics and treatment, are not addressed here for the sake of brevity. The guidelines herein are based on available evidence and may require updating in the future as other issues come to light.

Rather than recommending a rigorous screening protocol to identify animal carriage of specific pathogens, the guidelines place a major emphasis on all individuals (patients and staff) practicing hand hygiene before and after handling animals, as well as on other infection prevention and control strategies to minimize the spread of pathogens from or to animals. The need for facilities to delegate a single individual—an animal visit liaison—to be aware of all animals entering the premises is also identified. Similarly, a method to facilitate contact tracing in the event of potentially zoonotic patient infections (or handler/animal contact with contagious patients) is suggested.

Because animals may interact with various populations that may be at risk of infection or injury, certain restrictions on animal species, age, origin, behavior, diet, and health status are recommended for animals in formal AAI programs, whether these programs are run by the HCF itself or by an external agency. For visits by patients' pets, the emphasis is placed on animals meeting certain basic health and diet requirements, and also on limiting human contact during the visit to the relevant patient only (ie, no other patients or staff). Animal visitors falling outside of these 2 categories (eg, those brought in by well-meaning community members with no training in AAI) should be denied entry.

GUIDELINES FOR ANIMALS VISITING HEALTH CARE FACILITIES

I. Hand hygiene practices

1. Require that all patients, visitors *and* health care workers practice hand hygiene both before and after each animal contact.^{6,26} (IB, Consensus)
2. Require that animal handlers carry an alcohol-based hand rub product with them, and that they offer the product to anyone who wishes to touch the animal. Ideally, this product should be supplied by the HCF. (II, Consensus)
3. Require that animal handlers practice personal hand hygiene in accordance with the HCF's policy for volunteers and employees.²⁶ (II, Consensus)

II. Facility management of programs for animal visitation

1. Recommend that the HCF develop an animal visitation program or policies for patient-owned animals and for AAIs. (II, Consensus)
2. Recommend that the HCF designate an animal visit liaison (AVL) to provide support and facilitation to animal handlers visiting the facility. The

- AVL's duties should include keeping apprised of all animals entering the facility. (II, Consensus)
- III. Determining suitability of animals by species, age, and origin
1. Patients' animals
 - a. Restrict suitable animal species to domestic companion animals that are household pets. (IB, Consensus)
 - b. No age restriction is recommended, provided that the animal is under the control of a handler other than the patient at all times. (II, Consensus)
 - c. Do not allow patient-owned animals to visit other patients, visitors, staff, or animals. (II, Consensus)
 2. AAI animals
 - a. Restrict suitable animal species to domestic companion animals that are household pets. (IB, Consensus) Exclude those species identified as being of higher risk of causing human infection or injury, including:
 - Reptiles and amphibians (eg, lizards, turtles, frogs, salamanders)^{25,27-30} (IB, Consensus)
 - Nonhuman primates^{31,32} (IB, Consensus)
 - Hamsters, gerbils, mice, and rats^{33,34} (IB, Consensus)
 - Hedgehogs, prairie dogs, or any other recently domesticated animal species³⁵⁻³⁷ (IB, Consensus)
 - Other animals that have not been litter-trained or for which no other measures can be taken to prevent exposure of patients/residents to animal excrement³⁸ (II, Consensus)
 - b. Deny the entry of any animal directly from an animal shelter, pound, or similar facility.³⁹⁻⁴⁴ (IB, Consensus)
 - c. Require that an animal be in a permanent home for at least 6 months to be considered for visiting patients.⁴⁵ (II, Consensus)
 - d. Require that all AAI animals be adults, with cats being at least 1 year of age and dogs at least 1 year but ideally 2 years of age (the age of social maturity).⁴⁶ (IB, Consensus)
 - e. Admit an animal only if it is a member of a formal AAI program (whether run by the HCF or an external entity) *and* is present exclusively for the purposes of AAI. (II, Consensus)
- IV. Determining suitability of animals for AAI programs by temperament
1. Verify that the AAI program, whether run by the HCF or an external entity, requires a temperament evaluation for all participating animals.
 2. Require that every animal pass a temperament evaluation specifically designed to evaluate the behavior of AAI animals under conditions that they might encounter when in HCFs. Such an evaluation process should assess, among other factors:
 - a. Reactions toward strangers
 - b. Reactions to loud and/or novel stimuli
 - c. Reactions to angry voices and potentially threatening gestures
 - d. Reactions to being crowded
 - e. Reactions to being patted in a vigorous or clumsy manner
 - f. Reactions to a restraining hug
 - g. Reactions to other animals
 - h. Ability to obey handler's commands.⁴⁷ (IC, Consensus)
 3. Require all evaluators to successfully complete a course or certification process in evaluating temperament and to have experience in assessing animal behavior and level of training. (IC, Consensus)
 - a. Require all evaluators to have experience with animal visiting programs or, at the very least, appreciate the types of challenges that animals may encounter in the health care environment (eg, startling noises, crowding, rough handling).⁴⁷ (IC, Consensus)
 - b. If several animals need to be evaluated for behaviors other than reactions to other animals, require that the temperament evaluator assess each animal separately, rather than assessing several animals simultaneously. (II, Consensus)
 4. Require that animal-handler teams be observed by an AAI program representative at least once in a health care setting before being granted final approval to visit. (II, Consensus)
 5. Recommend that each animal be reevaluated at least every 3 years (Unresolved issue, Consensus). No recommendation is made regarding whether the reevaluation should consist of a formal temperament evaluation in a controlled setting or a spot check by AAI program representatives or AVLs during a routine visit; however, if the latter option is chosen, then annual reevaluation is suggested.
 6. Require that a handler suspend visits and have his or her animal formally reevaluated whenever he or she notices or is apprised (either directly or through the AVL) that the animal has demonstrated any of the following:
 - a. A negative behavioral change (as described in IV.2.a to h) since the time it was last temperament-tested (II, Consensus)
 - b. Aggressive behavior outside the health care setting (II, Consensus)
 - c. Fearful behavior during visitations (II, Consensus)

- d. Loss of sight or hearing and, consequently, an overt inclination to startle and react in an adverse manner (II, Consensus)
 7. Require that any animal be formally reevaluated before returning to AAls after an absence of 6 months or longer. (II, Consensus)
 8. Requiring that cats be declawed to prevent scratches is not recommended. (II, Consensus)
- V. Health screening of animals
1. Basic requirements for all animals
 - a. Require that dogs and cats be vaccinated against rabies as dictated by local laws. (IC, Consensus)
 - (1) Exemption of rabies vaccine-sensitive animals may be granted on a case-by-case basis and only in areas where the risk of exposure to rabies is considered very low. (II, Consensus)
 - (2) Serologic testing for rabies antibody concentration should not be used as a substitute for vaccination. (II, Consensus)
 - b. For the protection of both the animal and people, prevent the animal from entering the HCF starting from the onset of and until at least 1 week beyond the resolution of:
 - (1) Episodes of vomiting or diarrhea
 - (2) Urinary or fecal incontinence
 - (3) Episodes of sneezing or coughing of unknown or suspected infectious origin
 - (4) Treatment with nontopical antimicrobials or with any immunosuppressive doses of medications
 - (5) Open wounds
 - (6) Ear infections
 - (7) Skin infections or “hot spots” (ie, acute moist dermatitis)
 - (8) Orthopedic or other conditions that, in the opinion of the animal’s veterinarian, could result in pain or distress to the animal during handling and/or when maneuvering within the facility
 - (9) Demonstrating signs of heat (estrus). (II, Consensus)
 2. Scheduled health screening of AAI animals
 - a. Require that every animal receive a health evaluation by a licensed veterinarian at least once (optimally, twice) per year. (II, Consensus)
 - (1) Defer to the animal’s veterinarian regarding an appropriate flea, tick, and enteric parasite control program, which should be designed to take into account the risks of the animal acquiring these parasites specific to its geographic location and living conditions. (IB, Consensus)
 - (2) Temporarily withdraw any animal with fleas, ticks, or mange (mite infestation) and treat as directed by the animal’s veterinarian until the infestation has cleared, as determined by the veterinarian. (IB, Consensus)
 - b. Routine screening for specific, potentially zoonotic microorganisms, including group A streptococci, *Clostridium difficile*, vancomycin-resistant enterococci, and methicillin-resistant *Staphylococcus aureus* (MRSA), is not recommended.^{19,21,22} (IB, Consensus)
 - (1) Special testing may be indicated in situations where the animal has physically interacted with a known human carrier, either in the hospital or in the community, or when epidemiologic evidence suggests that the animal might be involved in transmission. Testing should be performed by the animal’s veterinarian, in conjunction with appropriate infection control and veterinary infectious disease/internal medicine personnel, if required. (II, Consensus)
 - (2) Special testing may be indicated if the AAI animal is epidemiologically linked to an outbreak of infectious disease known to have zoonotic transmission potential. Suspension of visitation pending results is recommended in these situations. (II, Consensus)
- VI. Dietary guidelines for all animals
1. Exclude any animal that has been fed any raw or dehydrated (but otherwise raw) foods, chews, or treats of animal origin within the past 90 days.⁴⁸⁻⁵⁰ (IA, Consensus)
- VII. Training and management of animal handlers
1. Handlers of patients’ animals
 - a. Ensure that the animal’s handler has been informed of the HCF’s policy for animal visits and has signed an agreement to comply with this policy. (II, Consensus)
 - b. Request that documentation of current rabies immunization be provided to the approving authority for patient-owned animal visits. (IC, Consensus)
 - c. Ensure that the visitor and the animal are escorted to their destination, as arranged by the AVL. (II, Consensus)
 - d. Ensure that every unleashed animal is carried in a clean carrier and not released until reaching the patient. (II, Consensus)
 - e. Ensure that a dog is leashed if not in a carrier and taken to the patient by the route least likely to expose other patients to the animal. (II, Consensus)
 - f. Advise the handler of a patient-owned animal that he or she should expect others (patients, health care workers, or visitors) to notice the

animal and want to interact with it. Instruct the handler to deny such requests and to avoid such interactions. (II, Consensus)

2. Handlers of AAI animals only

a. Require that every handler participate in a formal training program and an evaluation of that training, which includes modules on:

- (1) Zoonoses
- (2) Infection control practices (including proper cleanup and disposal of animal excrement)
- (3) Identifying appropriate contacts in the event of an accident or injury
- (4) Visual inspection for ectoparasites
- (5) Reading an animal's body language to identify signs of physical discomfort, stress, fear, or aggression
- (6) Patient confidentiality. (II, Consensus)

b. Require that each handler comply with the HCF's policy for influenza vaccination and any additional human health screening requirements in place for volunteers and employees. (II, Consensus)

c. Require that a handler use particular care in directing the visit to prevent patients from touching the animal in inappropriate body sites (eg, mouth, nose, perianal region) or handling the animal in a manner that might increase the likelihood of frightening or harming the animal or the animal harming the patient accidentally. (II, Consensus)

d. Restrict visiting sessions to a maximum of 1 hour, to reduce the risk of adverse events associated with animal fatigue. (II, Consensus)

- (1) Observe the animal for signs of fatigue, stress, thirst, overheating, or urges to urinate or defecate. (II, Consensus)
- (2) If taking a short break (or taking the animal outside to relieve itself) will not ease the animal's signs of discomfort, then terminate the session for that day. (II, Consensus)
- (3) Require that the handler comply with facility-defined restrictions for patient visitation and to be familiar with facility-specific signage regarding restricted areas or rooms. (II, Consensus)

3. Require that all animal handlers:

a. Self-screen for symptoms of communicable disease and refrain from visiting while ill.⁵¹ Such symptoms include, but are not limited to:

- (1) New or worsening coughing or sneezing
- (2) Nasal discharge
- (3) Fever (temperature > 38°C)
- (4) Diarrhea and/or vomiting
- (5) Conjunctivitis
- (6) Rash. (IC, Consensus)

b. Limit visits to 1 animal per handler. (II, Consensus)

c. Keep control of the animal at all times while on the premises. (II, Consensus)

- (1) Keep a dog leashed at all times unless transported within the facility by a carrier (as may be the case with smaller breeds). (II, Consensus)
- (2) Transport an off-leash animal in a clean carrier between rooms. (II, Consensus)
- (3) Refrain from using cell phones or participating in other activities that may divert the handler's attention away from the animal. (II, Consensus)

d. Approach patients from the side that is free of any invasive devices, such as intravenous catheters, and prevent the animal from contacting any insertion sites. (II, Consensus)

e. Prevent the animal from licking or bumping against medical devices. (II, Consensus)

f. Before entering an elevator with an animal, ask the other passengers for permission, and do not enter if any passenger asks that the animal not enter or if a passenger appears to be apprehensive around the animal. (II, Consensus)

- (1) For a patient's animal, prevent non-family members from handling the animal. (II, Consensus)
- (2) For an AAI animal, require that everyone who wishes to touch the animal practice hand hygiene before and after contact. (II, Consensus)

g. Do not visit with a patients while he or she is eating or drinking, and do not permit a patient to eat or drink while interacting with the animal. (II, Consensus)

h. Wear gloves to clean up any animal excreta (urine, vomitus, or feces), and dispose of the material according to the HCF's biowaste management policy. Report the incident to health care staff so that the area can be properly disinfected. (II, Consensus)

i. In the case of a urinary or fecal accident, immediately terminate the visit and take appropriate measures to prevent recurrence during future visits. (II, Consensus)

- (1) If submissive urination was involved, this will require suspending the animal's visiting privileges, having the handler address the underlying cause, and then formally reevaluating the animal's suitability before visiting privileges are restored. (II, Consensus)

- (2) In other situations, requiring that the handler be reeducated in attending to the animal's comfort may suffice. (II, Consensus)
- (3) If repeated incidents of this nature occur, permanently withdraw the animal's visiting privileges. (II, Consensus)
- (4) In the case of vomiting or diarrhea, terminate the visit immediately and withdraw the animal from visitation for a minimum of 1 week, as discussed in V.1.b.(1). (II, Consensus)
- j. Restrict the animal from patient lavatories. (II, Consensus)
- k. Report any scratches, bites, or any other inappropriate animal behavior to health care staff immediately so that wounds can be cleaned and treated promptly.⁶ Later, report the incident to the AVL and to public health or animal control authorities, as required by local laws. (II, Consensus)
 - (1) The visit should be immediately terminated after any bite or scratch. (II, Consensus)
 - (2) In the case of bites, intentional scratches, or other serious, inappropriate behavior, permanently withdraw the animal's visiting privileges. (II, Consensus)
 - (3) In the case of accidental scratches, consider the circumstances that contributed to the injury and take appropriate measures to prevent similar injuries from occurring in the future. If measures cannot be undertaken to reduce the risk of recurrence, then visitation privileges should be withdrawn. (II, Consensus)
 - (4) If it is determined that the handler's behavior was instrumental in the incident, then the handler's visitation privileges should be terminated until the AAI program manager has addressed the situation. (II, Consensus)
 - 1. Report any inappropriate patient behavior (eg, inappropriate handling, refusal to follow instructions) to the AVL. (II, Consensus)
- e. Clean the animal carrier before visits. (II, Consensus)
- f. Maintain animal leashes, harnesses, and collars visibly clean and odor-free. (II, Consensus)
- g. Use only leashes that are nonretractable and 1.3 to 2 m (4 to 6 feet) or less in length. (II, Consensus)
- h. Do not permit the use of choke chains or prong collars, which may trap and injure patients' fingers. (II, Consensus)
- i. Identify an animal belonging to an AAI program with a clean scarf, collar, harness or leash, tag or other special identifier readily recognizable by staff. (II, Consensus)
- j. Provide a dog with an opportunity to urinate and defecate immediately before entering the HCF. (II, Consensus)
 - (1) Dispose of any feces according to the policy of the HCF and practice hand hygiene immediately afterward. (II, Consensus)

IX. Managing appropriate contact between animals and people during visits

- 1. All animals
 - a. Obtain oral or, ideally, written consent from the patient or his or her agent for the visit. (II, Consensus)
 - b. Require the handler to obtain oral permission from other individuals in the room (or their agents) before entering for visitation. (II, Consensus)
 - c. Ensure that people who have been identified (or have identified themselves) beforehand as being allergic to animals, or resistant to or uncomfortable in the presence of animals, are pointed out to the handler, along with instructions to avoid these individuals. (II, Consensus)
 - d. Do not allow an animal to visit in rooms shared by people with known or suspected fears of animals or allergies to animal saliva, dander, or urine.⁶ (IC, Consensus)
 - e. Restrict all visiting animals from entering the following areas at all times:
 - (1) Food preparation areas or carts
 - (2) Medication preparation and storage areas or carts
 - (3) Operating rooms
 - (4) Neonatal nurseries
 - (5) Areas of patient treatment where the nature of the treatment (eg, resulting in pain for the patient) may cause the animal distress. This may be a particular concern for a patient's own animal.
 - (6) Other areas identified specifically by the HCF.⁸ (II, Consensus)
 - f. Restrict all animals from entering dialysis or burn units, except under special circumstances

VIII. Preparing animals for visits

- 1. Require that every handler do the following:
 - a. Brush or comb the animal's hair coat before a visit to remove as much loose hair, dander, and other debris as possible. (II, Consensus)
 - b. Keep the animal's nails short and free of sharp edges. (II, Consensus)
 - c. If the animal is malodorous or visibly soiled, bathe it with a mild, unscented (if possible), hypoallergenic shampoo and allow the animal's coat to dry before leaving for the HCF. (II, Consensus)
 - d. Visually inspect the animal for fleas and ticks. (II, Consensus)

and with the agreement of the patients' physician(s), the AVL, and the infection control staff. (II, Consensus)

- g. Require the handler to prevent the animal from coming into contact with sites of invasive devices, open or bandaged wounds, surgical incisions or other breaches in the skin, or medical equipment.^{52,53} (IB, Consensus)
- h. If the patient or agent requests that an animal be placed on the bed, require that the handler:
 - (1) Check for visible soiling of bed linens first. (II, Consensus)
 - (2) Place a disposable, impermeable barrier between the animal and the bed; throw the barrier away after each patient. (II, Consensus)
 - (3) If a disposable barrier is not available, a pillowcase, towel, or extra bed sheet can be used. Place such an item in the laundry immediately after use and never use it for multiple patients. (IB, Consensus)
2. AAI animals
 - a. Allow the animal to visit only with patients, visitors, and staff who clearly express an interest, or with patients on whose behalf an agent has expressed an interest. (II, Consensus)
 - b. Ensure that all potentially immunocompromised patients are assessed by their primary health care providers to determine whether visiting with an animal would be appropriate, and that this information is conveyed to the AVL, who will indicate to the handlers which patients are ineligible for visitation. (II, Consensus)
 - c. Restrict AAI animals from visiting patients who are in critical care or in isolation. (II, Consensus)
 - d. Instruct the handler to discourage patients and health care workers from shaking the animal's paw. (II, Consensus)
 - e. Require the handler to prevent the animal from licking patients and health care staff.^{22,52,53} (IB, Consensus)
 - f. The feeding of treats to animals by health care workers or patients is generally not recommended; however, if the act is believed to have a significant therapeutic benefit for a particular patient, then require that the handler:
 - (1) Ensure that the animal has been trained to take treats gently. (II, Consensus)
 - (2) Provide the patient with appropriate treats to give, avoiding unsterilized bones, rawhides and pig ears, and other dehydrated and unsterilized foods or chews of animal origin. (II, Consensus)
 - (3) Ensure that the patient practices hand hygiene before and after presenting the treat to the animal. (II, Consensus)

- (4) Instruct the patient to present the treat with a flattened palm. (Unresolved issue, Consensus)

3. Patient-owned animals

- a. Restrict a patient-owned animal from visiting the patient in a critical care or isolation unit except under special circumstances, with the agreement of the patient's physician, the AVL, and the infection control staff, and when arrangements can be made to control the visitation situation to minimize the risk of transmission of infectious organisms. (II, Consensus)

X. Contact tracing

1. The facility should develop a system of contact tracing that at a minimum requires animal handlers to sign in when visiting and ideally provides a permanent record of areas and/or room numbers where the animal has interacted with patients. (II, Consensus)

XI. Determining appropriate visit locations

1. Individual HCFs are in the best position to decide which locations are appropriate for animals interacting with patients, in consultation with the infection control practitioner. (II, Consensus)

XII. Environmental cleaning

1. Practice routine cleaning of environmental surfaces after visits.⁶ (II, Consensus)

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