

HEALTHCARE-ASSOCIATED INFECTIONS ADVISORY COMMITTEE

**December 17, 2014
1:00 pm to 3:00 pm**

**Portland State Office Building, Room 1A
800 NE Oregon Street
Portland, OR 97232**

MEMBERS PRESENT: Carlton Brown
Paul Cieslak, MD
Kelli Coelho, RN, CNOR
Julia Fontanilla, RN, MN (phone)
Jon Furuno, PhD (phone)
Jamie Grebosky, MD (phone)
Joan Maca, RN
Csaba Mera, MD
Nancy O'Connor, RN, BSN, MBA, CIC
Rachel Plotinsky, MD
Pat Preston, MS
Dana Selover, MD, MPH
Mary Shanks, RN, MSN, CIC
Diane Waldo, MBA, BSN, RN, CPHQ, CPHRM, LNCC
Bethany Walmsley, CPHQ, CPPS

MEMBERS EXCUSED: Jill Freeman
Laurie Murray-Snyder
Dee Dee Vallier

STAFF PRESENT: Kate Ellingson, PhD, Healthcare-Associated Infections Reporting Epidemiologist
Zintars Beldavs, MS, Healthcare-Associated Infections Program Manager
Monika Samper, RN, Healthcare-Associated Infections Reporting Coordinator
Ann Thomas, MD, MPH, Acute and Communicable Disease Medical Epidemiologist

ISSUES HEARD:

- Call to Order
- Approval of June and September Meeting Minutes
- 2013-2014 Healthcare Worker Influenza Vaccination Report
- 2012 CLABSI Validation Project: Results and Discussion
- 2013 CDI Validation Project: Overview and Discussion
- OAR Updates

- **Overview of OAR-Mandated Surveys to be Distributed in January 2015**
- **Making the 2014 HAI Annual Report More Actionable: Interactive Session on Proposed Metrics & Organization**
- **Standing Agenda: Committee Member Updates**
- **Integrating Reporting and Prevention**
- **Public Comment/Adjourn**

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

Item	Discussion	Follow-Up
Call to Order	The meeting was called to order at approximately 1:00 pm. There was a quorum.	
Approval of Minutes	Minutes for the June 25, 2014 and September 24, 2014 meetings were unanimously approved.	
2013-2014 Healthcare Worker Influenza Vaccination Report OHA Staff	<p>The 2013-2014 Healthcare Worker Influenza Vaccination Rates report, available on the Healthcare-Associated Infections Program website, examines hospital, long-term care facility (LTCF), and ambulatory surgery center (ASC) vaccination rates for workers that receive a paycheck directly from the facility, licensed independent practitioners, and unpaid workers (i.e., volunteers and students). For the employee category, while vaccination rates have increased across all facility types during the last four influenza seasons, long-term care facilities and ambulatory surgery centers will need to intensify efforts to meet the 75% vaccination rate goal set for 2015 by the U.S. Department of Health and Human Services Healthy People program. Only 49% of ambulatory surgery centers and 29% of LTCFs achieved the 2015 target. In contrast, employee immunization rates at hospitals surpassed the goal for the past two flu seasons. Moreover, vaccination rates for hospital employee rates rose from 77% last flu season to 82% this flu season; 30% of hospitals have already attained the 2020 Healthy People benchmark of a 90% vaccination rate. There is large variation in healthcare worker vaccination, exemplified by ambulatory surgery centers and long-term care facilities, whose vaccination rates range from 0% to 100%.</p> <p>Although most facilities offered no-cost immunization during the 2013-2014, some smaller</p>	

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	<p>long-term care facilities and ambulatory surgery centers did not offer vaccination to staff. Other delivery methods included mobile carts, vaccination in congregate areas, and peer vaccination. The top three reasons given by workers for declining a vaccination were:</p> <ul style="list-style-type: none"> • Other – 39% • Philosophical or religious beliefs – 21% • I am concerned about the side effects – 14% <p>OHA will begin sending congratulatory letters and certificates to organizations who achieved the 2020 HHS goal to commend their achievement. OHA is also considering distributing information, recently received from APIC, about a CDC toolkit that contains ideas and materials designed to increase vaccinations at long-term care facilities. To augment OHA'S efforts, attendees proposed:</p> <ul style="list-style-type: none"> • Prominently display immunization rates for all facilities to incentivize organizations to improve vaccination rates. (A link directly to facility vaccination rates has since been added to the HAI website.) • Find and publicize available studies that examine the relationship between healthcare worker influenza vaccination and nosocomial infection rates. • Use resources, such as newsletters and websites, of organizations represented by committee members to support OHA's immunization campaign. 	
<p>2012 CLABSI Validation Project: Results and Discussion OHA Staff</p>	<p>HAI Program staff used CDC's toolkit to validate 2012 Oregon hospital ICU central line-associated blood stream infections (CLABSIs) reported to the National Healthcare Safety Network (NHSN). The validation included examining hospital methods for collecting denominator data (patient and central line days). OHA selected 23 facilities, including 19 targeted and 4 randomly selected hospitals. Targeted facilities were selected by sampling hospitals with the highest expected number of 2012 CLABSIs. OHA staff requested a list of positive blood cultures from each participating hospital; a subset of pathogenic organisms was selected for medical review. The selection targeted organisms with an increased CLABSI-associated risk, including <i>Candida spp.</i>, <i>Escherichia coli</i>, <i>Staphylococcus aureus</i>, and</p>	

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	<p>coagulase-negative <i>Staphylococcus</i>. Cases were reviewed to verify correct application of the NHSN CLABSI definition, other NHSN definitions, and to assure complete case ascertainment.</p> <p>From patient medical record reviews, OHA identified 53 CLABSIs and facilities reported 44 CLABSIs. OHA and hospital infection preventionists reviewed, discussed, and agreed on correct ascertainment for all outstanding discrepancies in follow-up conference calls. After the adjudication process, OHA determined that 23% of CLABSIs were under-reported, which is consistent with a previous validation performed by OHA on 2009 reported CLABSI events. Common reasons for discrepancies included:</p> <ul style="list-style-type: none"> • Complicated gastrointestinal infections complicating CLABSI determination. • Incorrect hospital location attributed to CLABSI. <p>Interviews with hospital infection preventionists to obtain information about how denominator data is collected revealed:</p> <ul style="list-style-type: none"> • Most hospitals gather central-line day denominator data manually; patient days are usually provided by the accounting department. • One-third of hospitals do not verify electronic/manually collected data. • Counting port access, particularly for electronic systems, presents a challenge due to complexity of inclusion criteria: only 38% of facilities correctly tallied port access. <p>OHA concluded that:</p> <ul style="list-style-type: none"> • CLABSI surveillance has led hospitals to focus on generalized HAI related infection prevention efforts, since many of those efforts overlap. Oregon hospital ICU CLABSI rates per 1,000 central line days decreased from 1.54 per 1,000 central line days in 2009 to an estimated 1.25 (95% CI 0.97–1.60) per 1,000 central line days in 2012, despite relatively consistent central line usage in both periods. *Following the meeting, we offer this corrected statement: Because of the targeted sampling 	

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	<p>method used, it is not statistically appropriate to extrapolate beyond the sample of charts reviewed. Instead, comparing reported vs. validated CLABSIs, the rate of adult ICU CLABSIs from the sampled hospitals increased from 0.53 per 1,000 central line days to 0.74 per 1,000 central line days.</p> <ul style="list-style-type: none"> • Validation of reported CLABSIs is important for obtaining accurate infection data due to underreporting of events. From the blood cultures selected for review, OHA calculated a sensitivity of 77.4%, which is consistent with the 70-80% range reported by previous validation efforts. • Recommendations were offered to CDC regarding surveillance definitions, validation methods, and concern that states and facilities that do validate their data might be penalized for correctly reporting infections to NHSN. 	
<p>2013 CDI Validation Project: Overview and Discussion</p> <p>OHA Staff</p>	<p>In 2015, OHA will be performing a validation of 2013 facility-wide <i>Clostridium difficile</i> infection (CDI) NHSN data. Data for the project will be gathered from a random sample of patients from 19 hospitals in 5 counties. Corroboration of reported CDI is crucial because rates obtained from NHSN for CMS and Oregon published reports should accurately reflect actual incidence of hospital-onset CDI. Published statistics are used by consumers to decide where to receive healthcare and can incentivize facilities to reduce healthcare-associated infections.</p> <p>The validation project will investigate potential sources of systematic bias in categorization of CDI LabID events and in calculation of CDI rates:</p> <ol style="list-style-type: none"> 1. <u>Misclassification of LabID events</u> - Reviewers will confirm NHSN data by following the same CDC procedures used by hospital infection preventionists to identify and report CDI LabID events. NHSN defines LabID events as non-duplicate <i>C. difficile</i> toxin-positive lab results; duplicate events are CDI lab tests from the same patient and same location within 14 days. NHSN classifies recorded LabID events by healthcare association. The Oregon HAI report only includes incident healthcare facility-onset (HO) events. To be considered an incident hospital onset event, the specimen reported as a CDI LabID event must meet two criteria: 	

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	<ul style="list-style-type: none"> ○ Collected >3 days after hospital admission; specimens obtained on days 1-3 of hospital stay are classified as community-onset CDI ○ First specimen or collected >8 weeks after a previous CDI LabID event <p>2. <u>Exclusion of data from outside facilities</u> - OHA will identify community-onset (CO) CDI by reviewing patient medical records at 3 hospitals, surrounding long-term care facilities, and outpatient clinics. Reviewers will verify and document whether CDI status was communicated when patients transferred between facilities. Reviewers will compare rates/SIRs of validated data with NHSN data to establish whether NHSN-determined HO LabID events were biased by lack of information from surrounding facilities.</p> <p>3. <u>Inclusion of all patient days in denominator data</u>—inclusion of all patient days in the denominator of CDI rates and in the calculation of SIR denominators may distort results since patients are only at risk during specified times of their hospital stay. Positive CDI specimens for LabID events defined as hospital-onset incident must be collected more than three days after admission or more than 8 weeks following any prior CDI events. Consequently, usage of overall patient days rather than patient-days-at-risk may cause higher CDI rates/SIRS for hospitals with longer lengths-of-stay. To assess the impact of these variables, reviewers will compare CDI rates/SIRs calculated with patient days against rates/SIRS calculated with patient-days-at-risk. Patient discharge data will be used to approximate patient-days-at-risk. Patient-days-at-risk are considered day 3 of admission to discharge.</p>	
<p>OAR Updates</p> <p>OHA Staff</p>	<p>To align Oregon Administrative Rules (OARs) with current CMS mandates, OHA will be submitting a proposal to the state legislature next year requesting two modifications to OARs reporting requirements:</p> <ul style="list-style-type: none"> ● Elimination of 4 out of 6 Surgical Care Improvement Project (SCIP) measures(not reportable to CMS since 2011) 	

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	<ul style="list-style-type: none"> • Addition of rule mandating inpatient psychiatric facilities to report healthcare worker influenza vaccination numbers(required by CMS since October 2014) 	
<p>Overview of OAR-Mandated Surveys to be Distributed in January 2015</p> <p>OHA Staff</p>	<p>Posters containing information about an upcoming web-based survey are being distributed to facilities this month (pages 56-58 of meeting materials). The HAI program will mail instructions and a link to the questionnaire to hospital infection preventionists, laboratories performing bacteriology, and skilled nursing facilities in January 2015. The survey, which is mandatory for nursing facilities and optional for hospitals and labs, is due within 30 days of receipt. Responses from facilities will enable OHA to better understand how healthcare-facilities prevent and manage HAIs. Topics covered in the survey will include cabapenem-resistant <i>Enterobacteriaceae</i> (CRE), <i>Clostridium difficile</i> infections (CDI), and general resource questions.</p>	
<p>Making the 2014 HAI Annual Report More Actionable: Interactive Session on Proposed Metrics & Organization</p> <p>OHA Staff</p>	<p>OHA asked for feedback for methods to design the 2014 annual report to be more actionable, readable, and useful. This objective is challenging because Oregon mandates the reporting of a substantial amount of HAI data, which is increasing every year. Examples of new reporting requirements include:</p> <ul style="list-style-type: none"> • 2014 - MRSA bacteremia in inpatient units and CAUTI in hospital adult/pediatric ICUs. • 2015 - CAUTI in inpatient rehabilitation facilities and CLABSI in hospital wards. <p>To improve the report, OHA asked members to consider topics ranging from the scope of material to the type of graphics:</p> <ul style="list-style-type: none"> • <u>Scope</u>- should the information be comprehensive—include every reportable infection type and a variety of metrics – or should findings be summarized in an executive-style summary report and readers be directed to the OHA online interactive map and CMS Hospital Compare website for detailed data evaluation? To meet the needs of a diverse audience and to fulfill the objective of the report, the committee concluded that both a summary and an all-inclusive detail section are necessary. 	<p>OHA will present ideas for content and design of annual report at next meeting.</p>

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	<ul style="list-style-type: none"> • <u>Organization</u> - should separate reports be created for various settings, infections, and audiences? Attendees replied that information ought to be presented in multiple ways for different readers. Suggestions included: <ul style="list-style-type: none"> ○ Hospital audience - graphs stratified by bed size for each infection type to allow comparisons of infection rates, such as the number of <i>Clostridium difficile</i> infections per 10,000 patient days among similar facilities. ○ Varied audience - material ranging from short, simple explanations accompanied by illustrations to complex detailed information incorporating multiple statistical measures. • <u>Visual display</u> – how should data be presented? In the most recent annual report, HAI information is displayed in a variety of ways: data is sorted by facility name or SIR rank; directional arrows, forest plots, and bar charts show each organization’s SIR in relation to the national baseline; and line and bar graphs illustrate aggregate facility SIRs over time. OHA referred the committee to a 2-page summary of Oregon’s 2013 HAIs published by the CDC (pages 72-73 of meeting materials) as an example of an alternative approach. In the CDC report, percentages coupled with color-coded arrows are used to convey how a state’s SIR for each infection type compares to the national experience. Due to the simplicity of the charts and use of percentages, OHA proposed a similar format to summarize each hospital’s data for future reports. Opinions about these charts varied among members: <ul style="list-style-type: none"> ○ Would be instructive for hospital personnel but may not be appropriate for the public; ○ Might be a good option for readers favoring a simple graphic display of each facility’s infection rates. <p>OHA also presented CMS Hospital Compare and Tennessee’s SIRs and confidence intervals formatting (pages 74-78 of meeting materials). Format preferences differed among members, so no consensus was reached.</p>	

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	<ul style="list-style-type: none"> • <u>Metrics</u> – which statistical measures should be used in the annual report and how should they be applied? <ul style="list-style-type: none"> ○ SIR –is the observed number of infections/predicted number of infections. Predicted infections are derived from computations comprised of 3 components formulated specifically for each infection type: (1)the amount of exposure (e.g., number of procedures and device days), (2) the national baseline rate, and (3) adjustments for risk factors (e.g., facility bed size and patient age). Although calculations for each infection type take into account key differences between hospitals and patient populations, SIRs are best used for evaluating facility progress over time, rather than hospital comparisons. Nonetheless, facilities are ranked by SIR in the 2013 Oregon annual report thereby encouraging readers to compare hospitals. Should ordering by SIR be continued in the next report? If so, should context be provided to help readers interpret this data? Would promoting intra-facility comparisons over time be preferable? No decisions were reached by committee members regarding these questions. ○ Confidence intervals (CIs) –CIs are the range around the SIR estimate used to convey the level of confidence in the precision of an SIR estimate. OHA queried the usefulness of this metric. Committee responded affirmatively: while confidence intervals may not be of interest to most readers, they may be beneficial to healthcare professionals. ○ Cumulative attributable difference (CAD) –is the observed number of infections minus the predicted number of infections. CAD was introduced by the CDC as a way to assess a facility’s burden of infection, in other words, the number of preventable infections. Outcomes calculated with CAD show a different picture than SIR. For example, in 2013, one Oregon hospital with a high SIR of 3.38 could have a relatively low CAD of 5.6 whereas another facility with a moderate SIR of 1.35 could have a high CAD of 70.5. CAD offers 	

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	<p>an effective tool for setting HAI prevention goals, reporting facility achievements relative to HHS targets, ranking hospitals to spotlight low and high performers, and targeting facilities that would most benefit from guidance on how to reduce infections. Meeting attendees agreed, but noted that intervention efforts are beyond the purview of the committee. Nonetheless, CAD and other measures would be valuable when making recommendations to partner organizations involved with establishing programs aimed at lowering HAIs, such as the Oregon Patient Safety Commission.</p> <ul style="list-style-type: none"> • <u>Miscellaneous information</u> <ul style="list-style-type: none"> ○ Should these topics remain in the annual report? <ul style="list-style-type: none"> ▪ Surgical Care Improvement Project (SCIP) measures—committee decided these metrics could be eliminated because adherence to recommended care standards is high and hospital personnel, cognizant of their facility’s compliance rates, do not require this information. ▪ Summary of healthcare worker influenza vaccination report – no decision reached. ○ Should these topics be added to the annual report? (Proposed by OHA but no further discussion.) <ul style="list-style-type: none"> ▪ Overview of NHSN data validation efforts and findings. ▪ Acknowledgement of hospitals performing better than expected. 	
Standing Agenda: Committee Member Updates	There were no committee member updates.	

Item	Discussion	Follow-Up
Integrating Reporting and Prevention OHA Staff	Integrating reporting and prevention was briefly discussed during overview of CAD metric (see Making 2014 HAI Annual Report More Actionable item above).	
Public Comment / Adjourn	No public comments.	

Next meeting will be March 25, 2015, 1:00 pm to 3:00 pm, at the Portland State Office Building, Room 1B.

Submitted By: Diane Roy

Reviewed By: Kate Ellingson
Zintars Beldavs
Genevieve Buser

EXHIBIT SUMMARY

A – Agenda

B – September 24, 2014 Minutes

C – June 25, 2014 Minutes

D – 2013-2014 Healthcare Worker Influenza Vaccination Rates

E – Validation of NHSN-Reported Central Line-Associated Blood Stream Infections – Oregon, 2014

G – 2013 *C. difficile* Validation Project Overview & Discussion

H – 2015 Healthcare-Associated Infection Surveys

G – Feedback & Planning for Oregon’s 2014 Annual HAI Report: Scope, Organization, and Metrics

G – Cumulative Attributable Difference (CAD)