

Protocol for Validation of Mandatory Reporting of Coronary Artery Bypass Graft Surgical Site Infections

INTRODUCTION

Objective

The objectives of the Oregon Public Health Division Acute and Communicable Disease Prevention Program (ACDP) in validating the mandatory reporting of Surgical Site Infection (SSI) data are to:

1. Determine the reliability and consistency of surveillance definitions,
2. Evaluate current surveillance methods used to detect infections,
3. Assess completeness of reporting to the Centers for Disease Control (CDC) National Healthcare Safety Network (NHSN), and
4. Based on the findings of this exercise, provide guidance to hospitals on surveillance definitions, reporting methods, and use of NHSN.

Background

Healthcare-associated infections (HAI) are a significant cause of morbidity and mortality. They are among the top ten leading causes of death in the US, accounting for an estimated 1.7 million infections and 99,000 deaths in hospitals alone in 2002ⁱ. The annual cost to hospitals for these HAI was recently estimated at \$33 billion.ⁱⁱ HAI are not limited to acute care hospitals, but have also been reported in same day surgical centers, dialysis facilities, outpatient ambulatory clinics, and in long-term care facilities, such as nursing homes and rehabilitation facilities.ⁱⁱⁱ Hospital stays for methicillin-resistant *Staphylococcus aureus* (MRSA) have more than tripled since 2000 and increased nearly ten-fold between 1995 and 2005.^{iv} The CDC's Emerging Infections Program (EIP) invasive MRSA surveillance system estimated that 94,360 invasive MRSA infections occurred in 2005, resulting in 18,650 deaths.^v

In 2007, the Oregon state legislature passed House Bill 2524 with the intent of creating a mandatory HAI reporting program. The Oregon HAI Reporting Program initially published rules on July 1, 2008, and the National Healthcare Safety Network (NHSN) was chosen as the reporting system to be used for inpatient HAI outcome measures.^{vi} Quarterly inpatient reporting to NHSN began January 1, 2009 and includes central line-associated bloodstream infections (CLABSI) in ICUs and surgical site infections (SSI) associated with three procedures: coronary artery bypass graft surgery with both chest and graft incisions (CBGB); coronary artery bypass graft surgery with chest incision only (CBGC); and knee prosthesis procedures (KPROs). Beginning on January 1, 2011, infections associated with laminectomy, hip prosthesis, colon surgery, and abdominal hysterectomy were included as reportable conditions. These infection types were selected based on their public health importance and measurability.

Need for Validation

A method to validate data must be considered in any mandatory reporting system to ensure that HAIs are being accurately and completely reported. Comprehensive validation of SSIs within the US is relatively uncharted territory but drawing from the literature on previous international SSI validation efforts as well as other US HAI validation efforts, there is reason to indicate validation is necessary to ensure accurate reporting.

The most attention to HAI validation in the US has probably been with CLABSI, possibly as the relatively simple NHSN definitions for CLABSI point to clear methods both for surveillance and validation. These efforts have provided indication of the importance of data validation. For example, in 2008, the New York State Health (NYS) Department reported on their CLABSI data validation process^{vii}. Their findings indicated that the hospitals reported inconsistent infection data because they interpreted the HAI case definitions differently. Of the 168 CLABSI cases identified by the NYS HAI validation study, 43 (25.6%) had not been reported by the hospitals to NHSN. Of the 921 non-CLABSI cases identified by the NYS HAI validation study, 44 (4.8%) had been reported by the hospitals to NHSN as a CLABSI case.

More recently, the Connecticut Department of Public Health conducted a validation project of all CLABSI reported from ICU patients of thirty acute care hospitals in the fourth quarter of 2008. Of the 49 CLABSI cases identified by the Connecticut DPH validation study, 26 (53.1%) had not been reported by the hospitals to NHSN. Of the 427 non-CLABSI cases identified by Connecticut DPH, 4 (.09%) had been reported by the hospitals to NHSN as CLABSI cases.

Though there is considerable variance in published studies of CLABSI validation, as stated previously, the literature on SSI validation is even less conclusive with most published studies conducted outside of the US and demonstrating a wide range of sensitivity values from 75%^{viii} to 96.7%^{ix} for reported data. The apparent variation in SSI validation efforts might be a result of the current lack of comprehensive studies of the validity of SSI reported data and might also reflect the complicated case definitions for NHSN-defined SSIs, particularly in regard to post discharge surveillance and sampling methodology. Unlike the definition for CLABSI, NHSN-defined SSIs do not necessarily require positive microbiology cultures, and infections involving implants can be identified up to one year following surgery.

METHODS

Objectives of study

The objective of this study is to validate reporting of coronary artery bypass graft (CABG) surgical site infections in 2009 and 2010 for all hospitals performing this procedure in Oregon. This procedure and time frame is chosen to establish a baseline for comprehensive validation of Oregon's reportable HAI data. Data from the pilot validation of June 2011 will be included in analysis and further implementation of the full validation of Oregon acute care facilities will take place between September 2011 and June 2012.

Facility selection

Data will be validated for all 14 hospitals required to report CABGs statewide.

Selection of patients within hospitals

We will validate the data for all patients who had CABG surgery between January 1, 2009 and December 31, 2010. As procedures with implants can have NHSN defined infections up to a year out and sternal wires used in CABGs are defined as implants, we will request data for each record from January 1, 2009 through December 31, 2011. The data collection period for the pilot project will be June 1, 2011 – June 30, 2012. We will validate all records for procedures associated with reported infections and a sample of 40 procedures which were not reported as infections.

Sampling of procedures

Along with the census of all reported infections, a total of 40 other procedures will be sampled with 20 from 2009 and 20 from 2010. The total sample is convenience based to allow for a maximum of two days of record review with two reviewers for each hospital. To increase the likelihood of sampling potential infections, records will be sampled based on reported procedure duration. Procedures will be sorted by duration and the 20 procedures with longest duration from each year that were not reported as associated with infections will be included in the sample. These procedures will then be randomized with all procedures associated with reported infections. Reviewers will be blinded as to which records were reported as infections.

Data collection

We will request a list all patients who had coronary artery bypass graft surgery in 2009 or 2010 (request letter found in Appendix A). We will also request that the following information for each surgery, which should be readily available via NHSN, be included in the report sent to OPHD ACDP:

- Hospital Name (for epidemiology)
- Medical record number (for hospital identification & de-duplication)
- NHSN procedure number (for de-duplication and validation)
- Whether procedure was associated with NHSN reported infection (for over-reporting)
- Procedure Date (for validation)
- Procedure Duration (for sampling)

Once the list of surgeries has been received by ACDP, we will create a final patient list using the sampling scheme defined above. We will then request access from the medical record department of each hospital to the complete medical records for all patients on the final patient list. Some facilities have electronic medical records and a special password might be needed to access the patient's record. This issue will be resolved by the medical records department of each facility.

A retrospective chart review methodology will be used. The chart abstractor(s) will be blinded as to whether or not a healthcare associated infection was reported to NHSN. Medical records and hospital admission data will be reviewed using a standardized form (appendix B, "Surgical Site Infections Reporting") to determine if an NHSN defined surgical site infection occurred within the study time frame. Validator ratings of ease of access for different pieces of information will be recorded using the "SSI validation post-review form" found in Appendix C.

The study time frame will include surgical procedures completed between January 1, 2009 and December 31, 2010. NHSN-defined SSIs can happen up to 30 days following non-implant surgery and up to one year following surgery if an implant is used. To account for this time frame, we will examine all relevant data between January 1, 2009, the start of the period under study, and December 31, 2011, one year following the last day of the period under study, potentially including readmissions to the same facility, to determine whether any surgery evinced an NHSN-defined SSI. All definitions used for determining the presence of an infection will follow the CDC NHSN Surveillance Protocol^x.

Validation of denominator data

In order to validate whether all surgeries are entered into NHSN we will compare the number of CABG surgeries reported to the NHSN database with number of CABG surgeries found in an independent hospital discharge database managed by Oregon Public Health Division. We will also examine the data using descriptive statistical methods to identify any anomalous patterns or outliers that might indicate potential problems with the reporting of denominator data. The forms found in Appendix D (“Denominator validation pre-audit summary report template” and “Post-review denominator validation form”) will be used to collect this data.

Analysis and Follow-up

Any discrepancies found by the validators will be discussed in a follow-up phone call or in-person meeting. The meeting will be composed of hospital infection prevention staff, OPHD validators, and an OPHD physician with infectious disease experience. Any questionable case that needs clarification regarding NHSN eligibility will be reviewed with CDC NHSN consultants for final determination regarding NHSN SSI case criteria. Data from the standardized data collection form will be entered into an electronic database at OPHD ACDP. The “SSI validation adjudication form” found in Appendix E will be used to record the process and outcome of adjudication.

Staff training

At the pilot sites, medical record review will be performed by ACDP staff or contractors, who have, at a minimum, completed self-directed training in NHSN data entry, management, and analysis through webinar sessions (all required modules) and review of the Patient Safety Component manual.

Data management and security

All information and identifiers (both electronic and hard copy) will be kept confidential. Validation data will be abstracted onto standardized reporting forms during the on-site hospitals visits and chart reviews. Paper copies of abstracted data will be kept in locked briefcases and not left unattended in vehicles. In situations in which ACDP staff are unable to return to the Portland State Office Building on the same day as the data are collected, all hard copies will be sent via US mail to ACDP. Once returned to ACDP, all paperwork will be maintained in locked file cabinets in ACDP. Data from these forms will be entered by ACDP staff into a secure password protected electronic database. Two years after the data validation project has ended, all confidential information will be destroyed.

Data analysis and reports

The data from the validation study will be electronically matched by medical record number to the dataset containing the NHSN SSI cases reported by the respective hospital for the same time period. The NHSN SSI cases reported by the hospital surveillance system will be compared to the true SSI cases determined by the retrospective analysis. The dataset match will yield cases that fall into 4 categories:

1. Cases reported by hospital to NHSN and identified by ACDP staff as SSI cases (“true positives”)
2. Cases not reported by hospital and ruled out as SSI cases by ACDP staff (“true negatives”)

3. Cases reported by hospital to NHSN but ruled out as SSI cases by ACDP staff (“false positive”)
4. Cases not reported by the hospital but identified as SSI cases by ACDP staff (“false negatives”)

Use of project data

The purpose of the data validation project is to monitor the accuracy of data submitted by hospitals to NHSN, and assess the hospital’s surveillance system and use of NHSN definitions. Any unreported case(s) will be analyzed individually to determine why the case(s) went undetected and what action is necessary to correct the problem. ACDP staff will review and follow-up with each hospital that have been identified as having reported data inaccuracies or data irregularities. Cases determined to have been reported but not meeting NHSN criteria will also be reviewed and discussed with hospital surveillance personnel to correct any misinterpretation of criteria. The reviews with hospital staff will serve to provide on-site education on the definitions, surveillance mechanisms, and use of NHSN. The final report on this validation study will present all facilities’ data in aggregate form.

Participants

ACDP Participants:

Zintars Beldavs, MS, HAI Program Manager, Principal Investigator for Project
Paul Cieslak, MD, Infectious Disease Consult for project, ACDP Section Manager
Margaret Cunningham, MPH, HAI Epidemiologist
Valerie Ocampo, BSN, MPH, Public Health Nurse
Jennifer Tujo, MSN, Infection Preventionist

September 15, 2011

«CEO_or_admin»
«Hospital_Name»
«Address»
«City», OR «ZIP»

Dear ,

Oregon law mandates the reporting of surgical site infections (SSIs) associated with coronary artery bypass grafts (CABGs) to the National Healthcare Safety Network (NHSN). To validate the completeness and accuracy of this reporting during 2009 and 2010, we ask your assistance. Specifically, we need a list of all coronary artery bypass grafts performed in your facilities during 2009 and 2010. We will review a sample of medical records and compare reported data with data from the statewide database of hospital discharges. This validation of data is required by House Bill 2524, enacted in 2007; it is not research.

Please forward a list of all coronary artery bypass surgeries reported to NHSN by your facility during January 1, 2009, through December 31, 2010, including the following data:

- Hospital Name
- Medical record number (for de-duplication)
- NHSN procedure number (for de-duplication and validation)
- Whether the procedure was associated with an NHSN-reported infection (to assess for possible over-reporting)
- Procedure Date (for validation)
- Procedure Duration (for sampling)

Most of these data are reported to NHSN and should be available to personnel responsible for such reporting (most commonly Infection Preventionists) in your facility. For a sample of these procedures, our staff will also request access to charts or electronic medical records for review in «review_in».

Please submit the list by «submit_list_date» , to:
Zintars Beldavs, MS, Manager Healthcare-Associated Infections
800 NE Oregon St, Suite 772
Portland OR 97232
Fax: 971-673-1100 E-mail: zintars.g.beldavs@state.or.us

Appendix A Letter to Facilities

If you need assistance in compiling this list of patients, please contact Zintars with the above contact information, and he will make arrangements to provide support. Once the list of surgical procedures has been submitted, our staff will schedule visit to your facility with your hospital's Infection Prevention staff to review medical records using standard NHSN surveillance definitions for surgical site infections.

Should you require additional information or have questions, please do not hesitate to contact Zintars. Thank you very much for helping to assure the accuracy and completeness of reporting.

Sincerely,
Katrina Hedberg, MD, MPH
State Epidemiologist, Oregon Public Health Division
CC: «IP», «dir_quality», «others»

Appendix B: Case Report Form

Surgical Site Infections Reporting

Hospital: _____

MR #: _____ Procedure Date: _____ Age: _____ Sex: _____ Height: _____ Weight: _____ BMI: _____

Date of Hosp Admit: _____ Hosp Disch/Exp Date: _____

Admitting Diagnoses:

Discharge / Final Diagnoses:

Discharge Status: Alive Deceased

Procedure type: CBGB (donor site) CBGC (chest incision only)

Type of graft used:

Left internal mammary/thoracic (LIMA or LITA) Right internal mammary Great saphenous Radial Other: _____

Anaesthesia start time: _____ Surgery start time: _____ Surgery end time: _____

UNDERLYING CONDITIONS: check all that apply	
<input type="checkbox"/> DM	<input type="checkbox"/> Current smoker or smoking within past year
<input type="checkbox"/> CHF	<input type="checkbox"/> Cancer: _____
<input type="checkbox"/> CAD	<input type="checkbox"/> Other underlying condition: _____
<input type="checkbox"/> Dialysis	_____
Notes: _____	

ASA classification: <input type="checkbox"/> 1 – Normally healthy patient <input type="checkbox"/> 2 – Patient with mild systemic disease <input type="checkbox"/> 3 – Patient with severe systemic disease that is not incapacitating <input type="checkbox"/> 4 – Patient with an incapacitating systemic disease that is a constant threat to life <input type="checkbox"/> 5 – Moribund patient not expected to survive for 24 hours with or without the operation <input type="checkbox"/> EMERGENCY	Wound classification (at time of operation): <input type="checkbox"/> Class I [Clean] <input type="checkbox"/> Class II [Clean Contaminated] <input type="checkbox"/> Class III [Contaminated] <input type="checkbox"/> Class IV [Dirty-Infected]
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Does the case meet NHSN case definition for SSI?

- YES** (Fill out appropriate table below)
- NO If not, why?**
 - No infection detected
 - No re-admission notes at this hospital
 - Infection detected does not meet criteria of an NHSN operative procedure (i.e. not a closed incision)
 - Infection detected past reportable time frame
 - Infection detected was unrelated to surgical site
 - Infection detected is a non-reportable infection
 - Other: _____
- UNSURE** (Requires further discussion)

Notes:

CRITERIA for Superficial Incisional SSI [SUP INC]: <input type="checkbox"/> PRIMARY (SIP) <input type="checkbox"/> SECONDARY (SIS); Site: Occurs within 30 days after operative procedure, AND involves only skin and subcutaneous tissue of the incision, AND		
At least one of the following:	Date observed	Where documented (e.g. nurses notes, vitals, lab, etc.)
<input type="checkbox"/> a. Purulent drainage from the superficial incision		
<input type="checkbox"/> b. Organisms isolated* from an aseptically obtained culture of fluid or tissue from the superficial incision		
<input type="checkbox"/> c. At least one of the following signs/symptoms: <ul style="list-style-type: none"> <input type="checkbox"/> pain <input type="checkbox"/> tenderness <input type="checkbox"/> localized swelling <input type="checkbox"/> redness <input type="checkbox"/> heat <input type="checkbox"/> superficial incision deliberately opened by surgeon AND is either culture (+) or not cultured 		
<input type="checkbox"/> d. Diagnosis of superficial incisional SSI by surgeon or attending physician		

*Please complete microbiology table

Appendix B: Case Report Form

Surgical Site Infections Reporting

Hospital: _____

CRITERIA for Deep Incisional SSI [DEEP INC]: <input type="checkbox"/> PRIMARY (DIP) <input type="checkbox"/> SECONDARY (DIS); Site: Occurs within 30 days of operative procedure if no implant is left in place (or within one year if implant in place and infection appears related to the operative procedure), AND involves deep soft tissues of the incision, AND		
At least one of the following:	Date observed	Where documented (e.g. nurses notes, vitals, lab, etc.)
<input type="checkbox"/> a. Purulent drainage from the deep incision but not from the organ/space component of the surgical site		
<input type="checkbox"/> b. Deep incision spontaneously dehisces or is deliberately opened by a surgeon and is culture (+) or not cultured and the patient has at least one of the following signs or symptoms: <input type="checkbox"/> fever (>38°C) <input type="checkbox"/> localized pain <input type="checkbox"/> tenderness		
<input type="checkbox"/> c. An abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination		
<input type="checkbox"/> d. Diagnosis of a deep incisional SSI by a surgeon or attending physician		

CRITERIA for Organ/Space SSI [ORGAN/SPACE]: Please indicate site: <input type="checkbox"/> BONE <input type="checkbox"/> JNT <input type="checkbox"/> CARD <input type="checkbox"/> ENDO <input type="checkbox"/> MED <input type="checkbox"/> VASC <input type="checkbox"/> OTHER: _____ (refer to appendix) Occurs within 30 days after operative procedure if no implant is left in place (or within one year if implant is in place and the infection appears to be related to the operative procedure), AND infection involves any part of the body, excluding the skin incision, fascia, or muscle layers, that is opened or manipulated during the operative procedure, AND		
At least one of the following:	Date observed	Where documented (e.g. nurses notes, vitals, lab, etc.)
<input type="checkbox"/> a. Purulent drainage from a drain that is placed through a stab wound into the organ/space		
<input type="checkbox"/> b. Organisms isolated* from an aseptically obtained culture of fluid or tissue in the organ/space		
<input type="checkbox"/> c. An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination		
<input type="checkbox"/> d. Diagnosis of an organ/space SSI by a surgeon or attending physician.		

*Please complete microbiology table

CASE AUDITED BY:	Date
Was case entered by hospital into NHSN? <input type="checkbox"/> YES <input type="checkbox"/> NO	NHSN EVENT ID #
If not, explain	
<input type="checkbox"/> Reviewed with facility staff (Name/Title):	<input type="checkbox"/> no follow-up call Date
Outcome of call: <input type="checkbox"/> Case IS SSI <input type="checkbox"/> Case IS NOT SSI <input type="checkbox"/> More information needed (explain below)	Reasons for discrepancies: check all that apply <input type="checkbox"/> Key data unavailable to OPHD validators <input type="checkbox"/> Data available but missed by OPHD validators <input type="checkbox"/> Case definition interpretation issue <input type="checkbox"/> Other (explain below)
CALL NOTES:	

DATA ENTRY BY:

DATE:

Appendix C: Post review facility review form

SSI Validation Post-Review

Facility Name _____ **Visit date** _____

Validator name _____ Facility staff present _____

Total time spent reviewing records _____ Number of records reviewed _____

Types of records reviewed (check all that apply):

Paper chart Electronic medical record system (name _____) Other

Computer terminals available? YES NO

Necessary logins provided? YES NO

Did review start on time? YES NO

Rate availability of the following data elements (1 = easily accessible, 5 = unavailable)

		Best location to find relevant data? Any issues w/ accessing the data?
Admit – Discharge – Transfer	1 2 3 4 5	
Microbiology results	1 2 3 4 5	
Vitals	1 2 3 4 5	
Discharge summary	1 2 3 4 5	
Operative Procedure notes	1 2 3 4 5	
ASA/Wound classification	1 2 3 4 5	
Progress notes	1 2 3 4 5	
Histopathology/Radiology notes	1 2 3 4 5	

Should anything be changed in the form design to make it easier for data collection?

Thoughts on how to target actual infections based on the experience of reviewing the record?

Comments (including any obstacles, factors that contributed to success of the validation visit, notes for future validation teams, etc)

Template (populate with merge fields)

Pre-visit denominator report for Hospital X –for ACDP use *PRIOR* to visit

2009 procedure counts by month

	Reported to NHSN			Per HDI	Possible missing procedures? (dates)
	CBGB	CBGC	Total		
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

Observed denominator statistics for 2009

	CBBG		CBGC	
	Hospital X	State	Hospital X	State
Procedure duration				
mean				
median				
range				
sd				
Proportion of procedures with wound class:				
I (Clean)				
II (Clean- contaminated)				
III (Contaminated)				
IV (Dirty- Infected)				
Unknown				
Proportion of procedures with ASA score :				
1				
2				
3				
4				
5				

Appendix D: Denominator Data Collection Forms

Observed denominator statistics for 2010

	CBBG		CBGC	
	Hospital X	State	Hospital X	State
Procedure duration				
mean				
median				
range				
sd				
Proportion of procedures with wound class:				
I (Clean)				
II (Clean- contaminated)				
III (Contaminated)				
IV (Dirty- Infected)				
Unknown				
Proportion of procedures with ASA score :				
1				
2				
3				
4				
5				

Major procedure time outliers/ possible errors

Missing and otherwise anomalous data:

Appendix D: Denominator Data Collection Forms

Post-review SSI denominator validation form --for ACDP use *FOLLOWING* visit

	Chart review findings (MRN: _____)	Per NHSN data (proc ID _____)
Admission date		
Procedure date		
Discharge date		
Anaesthesia start time		
Surgery start time		
Surgery end time		
ASA	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
Wound class	<input type="checkbox"/> I (C) <input type="checkbox"/> II (CC) <input type="checkbox"/> III (CO) <input type="checkbox"/> IV (D) <input type="checkbox"/> Unk	<input type="checkbox"/> I (C) <input type="checkbox"/> II (CC) <input type="checkbox"/> III (CO) <input type="checkbox"/> IV (D) <input type="checkbox"/> Unk
Notes on discrepancies:		
Date of review:	Reviewer name:	Hospital :

	Chart review findings (MRN: _____)	Per NHSN data (proc ID _____)
Admission date		
Procedure date		
Discharge date		
Anaesthesia start time		
Surgery start time		
Surgery end time		
ASA	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
Wound class	<input type="checkbox"/> I (C) <input type="checkbox"/> II (CC) <input type="checkbox"/> III (CO) <input type="checkbox"/> IV (D) <input type="checkbox"/> Unk	<input type="checkbox"/> I (C) <input type="checkbox"/> II (CC) <input type="checkbox"/> III (CO) <input type="checkbox"/> IV (D) <input type="checkbox"/> Unk
Notes on discrepancies:		
Date of review:	Reviewer name:	Hospital :

Appendix E: Adjudication form

SSI Validation: post-visit adjudication form (facility name) _____

Dear _____ (mailmerge field),

Thank you for your cooperation and assistance with the Oregon Public Health Division (OPHD)'s validation of surgical site infection (SSI) data reported by your facility for 2009 and 2010. We would like to schedule a conference call to discuss our team's findings.

We recommend that call participants include those responsible for NHSN reporting (typically Infection Control Practitioners) and, when available, a physician associated with your facility who is knowledgeable in regards to infectious diseases.

A summary of our staff's questions, including a list of cases for adjudication is listed below. If you have any questions or comments prior to the scheduled call date, please contact Diane Roy at 971-673-1093.

Please indicate your staff's availability:		
Date	Time	Available?
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> YES <input type="checkbox"/> NO

Please provide a number where OPHD can reach you for this call:
 (____) ____ - ____
 or check here if you prefer to call in to OPHD's conference line
 (number and instructions will be sent)

Names and roles of staff to participate in call:

Please fax the completed form to Diane Roy at **971-673-1100** or call **971-673-1093**.

Summary of validation team findings

Visit date(s):
 Facility staff present:

Validation team member(s) present:

Specific cases for discussion

MRN	comments

Other notes and questions:

SSI Validation: post-visit adjudication for *(facility name)* _____

Page 2: For ACDP use

Date of follow-up call/ meeting : _____

OPHD Participants:

Facility Participants:

Specific cases discussed

MRN	NHSN procedure ID	Nature of discrepancy or question	Outcome of discussion	comments
		<input type="checkbox"/> possible SSI under-report (FN) <input type="checkbox"/> possible SSI over-report (FP) <input type="checkbox"/> procedure/ denominator data issue <input type="checkbox"/> other:	Case is NHSN SSI yes <input type="checkbox"/> no <input type="checkbox"/> Case should be reported yes <input type="checkbox"/> no <input type="checkbox"/> <input type="checkbox"/> infection other facility/community <input type="checkbox"/> NHSN defined infection but not SSI	
		<input type="checkbox"/> possible SSI under-report (FN) <input type="checkbox"/> possible SSI over-report (FP) <input type="checkbox"/> procedure/ denominator data issue <input type="checkbox"/> other:	Case is NHSN SSI yes <input type="checkbox"/> no <input type="checkbox"/> Case should be reported yes <input type="checkbox"/> no <input type="checkbox"/> <input type="checkbox"/> infection other facility/community <input type="checkbox"/> NHSN defined infection but not SSI	
		<input type="checkbox"/> possible SSI under-report (FN) <input type="checkbox"/> possible SSI over-report (FP) <input type="checkbox"/> procedure/ denominator data issue <input type="checkbox"/> other:	Case is NHSN SSI yes <input type="checkbox"/> no <input type="checkbox"/> Case should be reported yes <input type="checkbox"/> no <input type="checkbox"/> <input type="checkbox"/> infection other facility/community <input type="checkbox"/> NHSN defined infection but not SSI	
		<input type="checkbox"/> possible SSI under-report (FN) <input type="checkbox"/> possible SSI over-report (FP) <input type="checkbox"/> procedure/ denominator data issue <input type="checkbox"/> other:	Case is NHSN SSI yes <input type="checkbox"/> no <input type="checkbox"/> Case should be reported yes <input type="checkbox"/> no <input type="checkbox"/> <input type="checkbox"/> infection other facility/community <input type="checkbox"/> NHSN defined infection but not SSI	
		<input type="checkbox"/> possible SSI under-report (FN) <input type="checkbox"/> possible SSI over-report (FP) <input type="checkbox"/> procedure/ denominator data issue <input type="checkbox"/> other:	Case is NHSN SSI yes <input type="checkbox"/> no <input type="checkbox"/> Case should be reported yes <input type="checkbox"/> no <input type="checkbox"/> <input type="checkbox"/> infection other facility/community <input type="checkbox"/> NHSN defined infection but not SSI	

Other comments/feedback on validation process:

ⁱ Klevens RM, Edwards J, Richards C, Horan T, Gaynes R, Pollock D, Cardo D. Estimating healthcare-associated infections and deaths in U.S. hospitals, 2002. *Public Health Reports* 2007; 122:160-166.

ⁱⁱ Scott R, Douglas. The direct medical costs of healthcare-associated infections in US hospitals and the benefits of prevention. March 2009. http://www.cdc.gov/ncidod/dhqp/pdf/Scott_CostPaper.pdf

ⁱⁱⁱ Thompson ND, Perz JF, Moorman AC, et al. Nonhospital healthcare-associated hepatitis B and C virus transmission: united States, 1998-2008. *Ann Intern Med* 2009;150:33-9.

^{iv} Elixhauser A and Steiner C. Infections with methicillin-resistant *Staphylococcus Aureus* (MRSA) in U.S. hospitals, 1993–2005. *AHRQ Healthcare Cost and Utilization Project Statistical Brief* 2007; 35:1-10.

^v Klevens RM, Morrison MA, Nadle J, et al. Invasive methicillin-resistant *Staphylococcus aureus* infections in the US. *JAMA* 2007;298:1763-1771.

^{vi} ⁷The text of HB 2524 can be accessed at: http://www.oregon.gov/OHPPR/docs/HCAIAC/Reporting/HB_2524.pdf

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^{viii} Huotari, K, Agthe, N., and Lyytikäinen, O. Validation of surgical site infection surveillance in orthopedic procedures. *AJIC* 2007;35(4); 216-221.

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