



*Office for*  
**Oregon Health Policy and Research**

**Clostridium Difficile Infection (CDI) Laboratory and  
Prevention Practices Survey  
Oregon Hospitals**

**December 2011**

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**Clostridium *difficile* Infection (CDI) Laboratory and Prevention Practices Survey**  
**Oregon Hospitals**  
**Office for Oregon Health Policy and Research**  
**December 2011**

**Purpose**

The purpose of this survey was to evaluate training needs for reporting and prevention practices, as the state prepares to begin reporting of CDI in January 2012 using the National Healthcare Safety Network (NHSN). The information from this survey will be submitted to providers and to the Healthcare Acquired Infections (HAI) Advisory Committee.

Summary results and graphs are provided for the two sections of the survey: laboratory practices and prevention practices. The original survey tool is presented in *Appendix A*.

**Response Rate**

- 100% response rate: all 60 hospitals responded.

**Laboratory Practices**

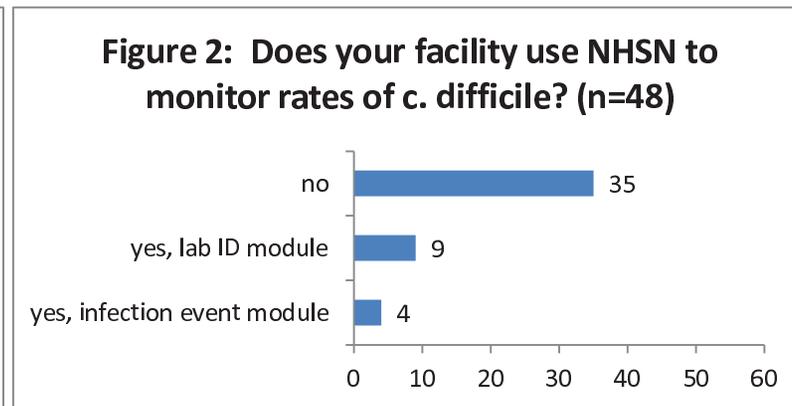
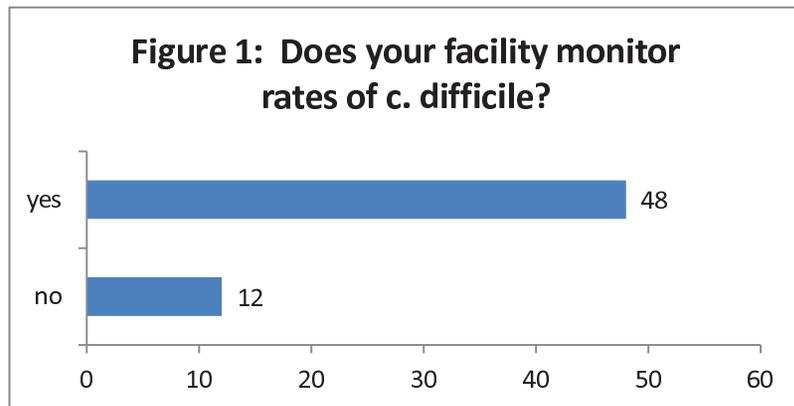
- 80% (48) track rates of CDI. Of these, 27% (13) use NHSN to track CDI, and 29% (14) use definitions from the National Health and Safety Network (NHSN)/The Centers for Disease Control and Prevention (CDC).
- 70% (42) perform CDI testing in house; 30% (18) send specimens for CDI testing to private or community laboratories.
- 62% (37) do not performed CDI testing on formed stool specimens.
  - Note: CDI testing should not be performed on formed stools unless ilieus due to CDI is suspected.<sup>1</sup>

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<sup>1</sup> Cohen, SH et. Al. Clinical practice guidelines for Clostridium difficile infection in adults: 2010 update by the society for healthcare epidemiology of America (SHEA) and the infectious diseases society of America (IDSA). Infect Control Hosp Epidemiol. 2010 May;31(5):431-55. [www.cdc.gov/HAI/pdfs/cdiff/Cohen-IDSA-SHEA-CDI-guidelines-2010.pdf](http://www.cdc.gov/HAI/pdfs/cdiff/Cohen-IDSA-SHEA-CDI-guidelines-2010.pdf). Accessed 12/10/2011.

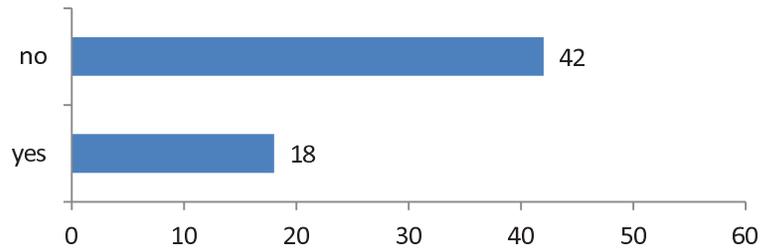
- 57% (34) facilities have a rejection policy for duplicate stool samples.
  - Note: Repeat testing during the same episode of diarrhea is of limited value and should be discouraged.<sup>1</sup>
  - Note: NHSN Lab ID CDI defines a unique specimen as a positive culture with at least 14 days between the last positive culture for the same patient.<sup>2</sup>
- 52% (31) facilities either have a lab generated multi-patient list or an infection control data mining program (e.g., MedMined, Safety Surveillor, Theradoc, Quality Compass) to provide CDI results.
- 75% (45) indicate retrospective CDI results are easily available.
- For the primary CDI testing method, 60% (36) use Toxin A/B test, 25% (15) use polymerase chain reaction (PCR), and 15% (9) use glutamate dehydrogenase (GDH) test methods. Of the 9 using GDH, 7 use GDH as part of a testing algorithm that included Toxin A/B testing with 4 of those that included cytotoxin testing as well. Two hospitals reported using GDH as primary and PCR as secondary test methods.
- 53% (32) use PCR as either a primary (15) or secondary (17) CDI testing method. Four additional facilities reported it had plans to change its CDI testing to include PCR in the near future.

**Additional Graphs on Laboratory Practices (n = 60, unless noted otherwise)**

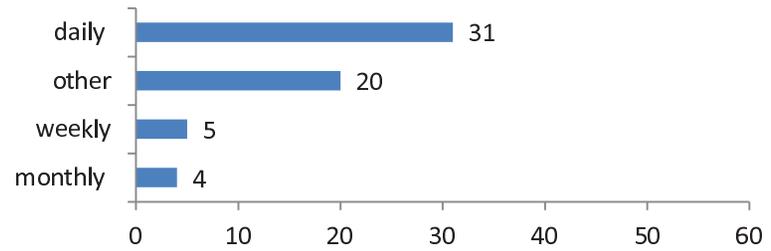


<sup>2</sup> National Healthcare Safety Network (NHSN). C. difficile Infection Surveillance and C. difficile Lab ID reporting. [http://www.cdc.gov/nhsn/mdro\\_cdad.html](http://www.cdc.gov/nhsn/mdro_cdad.html). Accessed 12/10/2011.

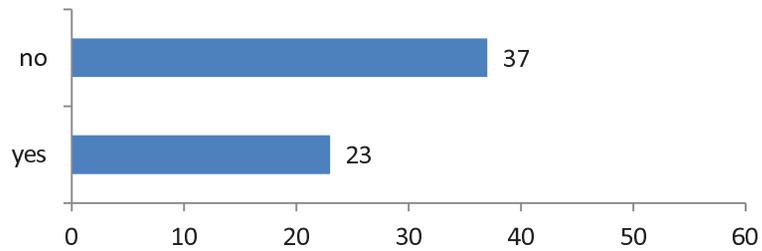
**Figure 3: Is your C. difficile testing outsourced to a laboratory?**



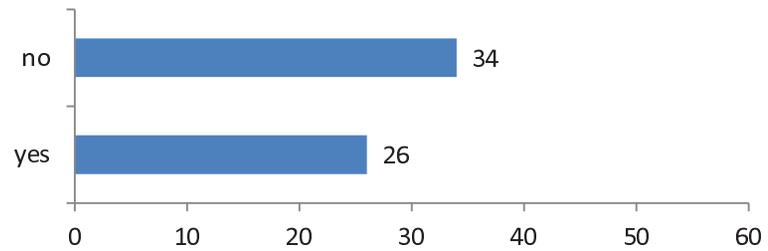
**Figure 4: How frequently do you receive inpatient C. difficile tests from lab?**



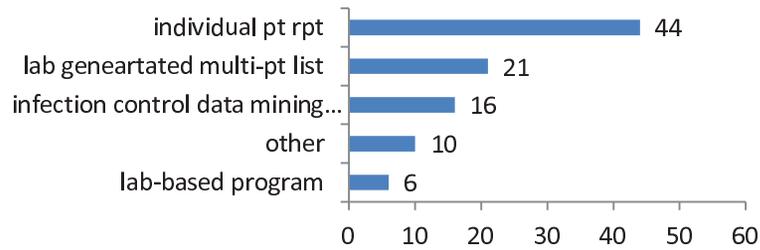
**Figure 5: Does the lab perform C. difficile tests on formed stool?**



**Figure 6: Does your lab have a rejection testing policy for duplicates?**



**Figure 7: C. difficile test results provided as: (check all that apply)**

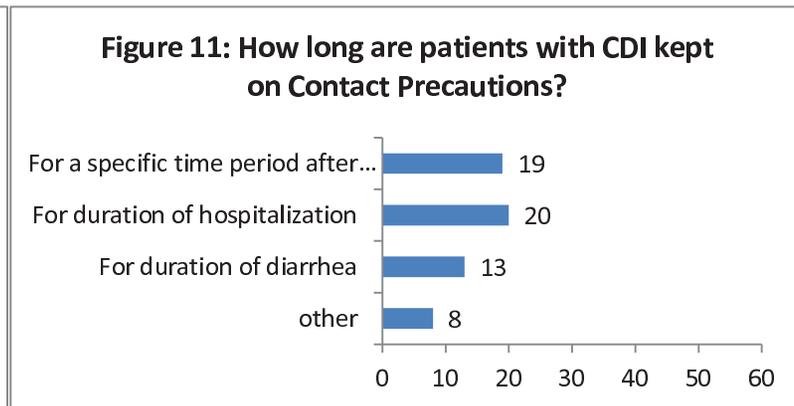
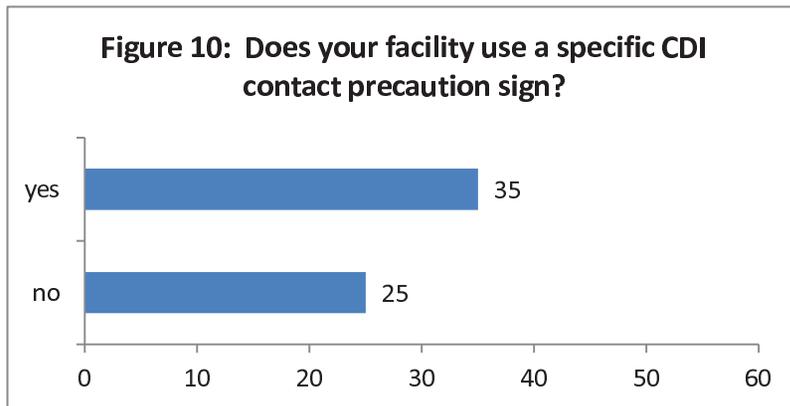
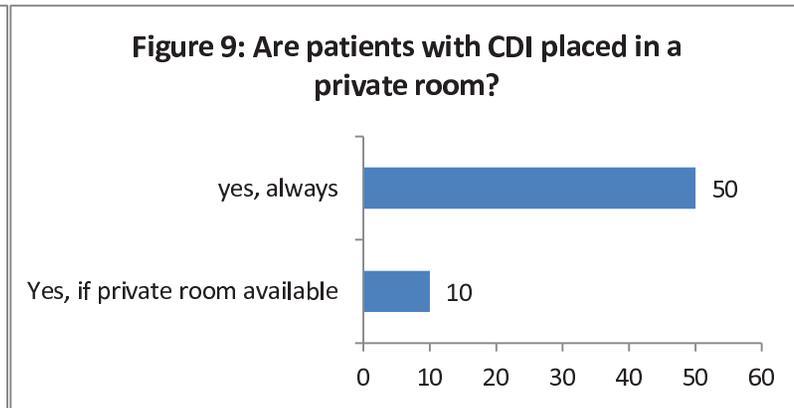
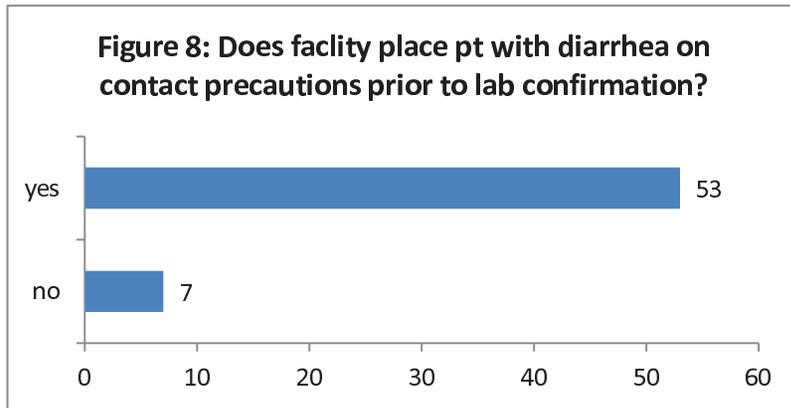


### **Prevention Practices**

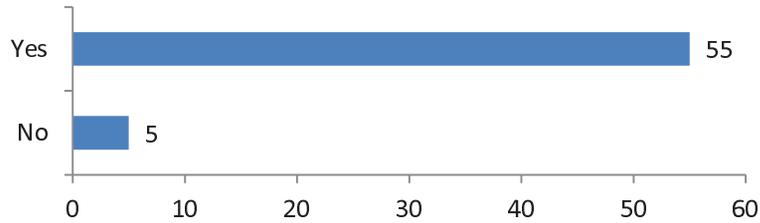
- 88% (53) place patients with diarrhea on contact precaution prior to lab confirmation.
- 58% (35) use a specific CDI contact precaution sign.
- Reported length of time patients with CDI were placed on contact precautions included: 33% (20) for duration of hospitalization, 32% (19) for specific time after diarrhea resolves, and 22% (13) for duration of diarrhea. The other category included until treatment completed and diarrhea resolves, until culture comes back negative, duration of stay, and additional policies to get patient out of isolation.
- 87% (52) use soap and water as the hand hygiene method for CDI patients.
- 87% (52) routinely use bleach-product for environmental disinfection at their facility.
- 63% (38) have specific person(s) responsible for antibiotic use.
- 28% (17) restrict the use of antibiotics. Of the 17 facilities that restrict antibiotics, 71% (12) have the pharmacy approve antibiotic use, 53% (9) the infectious disease specialist, and 24% (4) noted others, which included the Pharmacy and Therapeutics Committee and the Infection Control Committee.
- 55% (33) have an education program to reduce CDI transmission. Of the 33 facilities with an education program, 46% (26) conduct it annually, 40% (24) upon hire, and 15% (9) when job duties change to include direct patient care. For the 33

facilities with an education program, all of them trained nursing and other staff providing direct care, 94% (31) trained cleaning staff, 52% (17) staff responsible for sterilization/high-level disinfection, and 45% (15) medical staff.

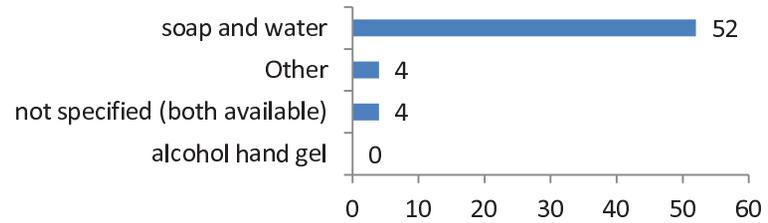
**Additional Graphs on Prevention Practices (n = 60, unless noted otherwise)**



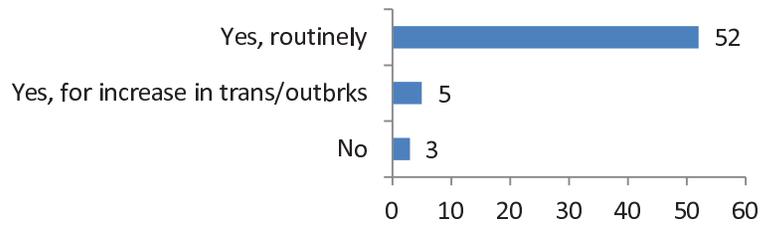
**Figure 12: Does your facility use dedicated noncritical medical items for patients with CDI?**



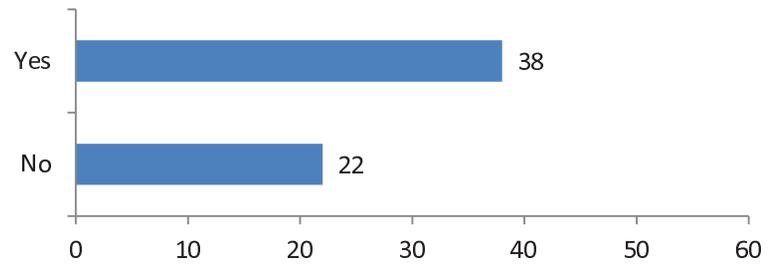
**Figure 13: For CDI patients, what is the recommended method of hand hygiene in your facility?**



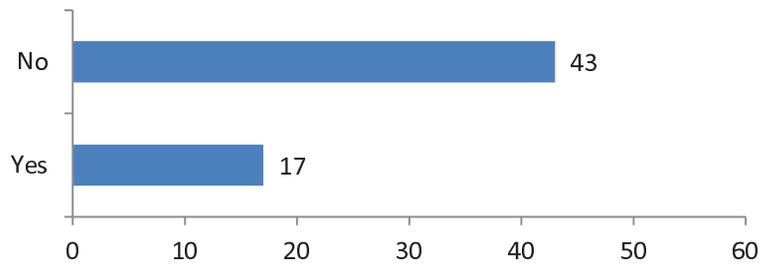
**Figure 14: Is bleach-product used for environmental disinfection for CDI pt at your facility?**



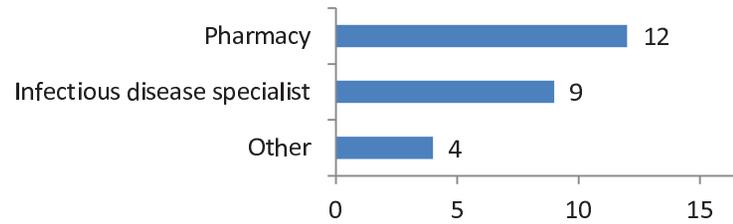
**Figure 15: Does your facility have specific person(s) responsible to review antibiotic use?**



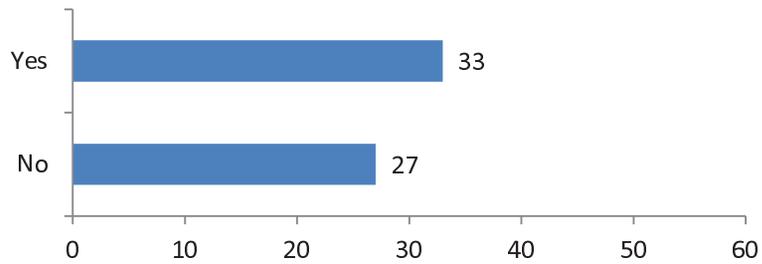
**Figure 16: Does your facility restrict use of antibiotics?**



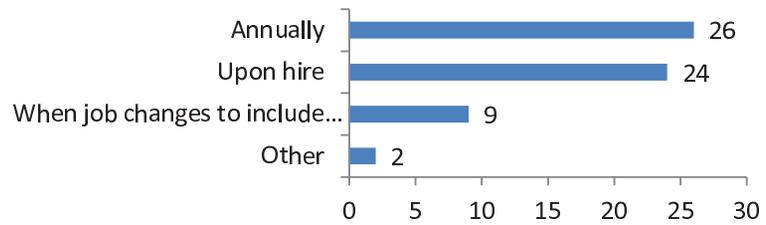
**Figure 17: If you restrict use of antibiotics, who approves use of restricted antibiotics? (check all that apply, n = 17)**



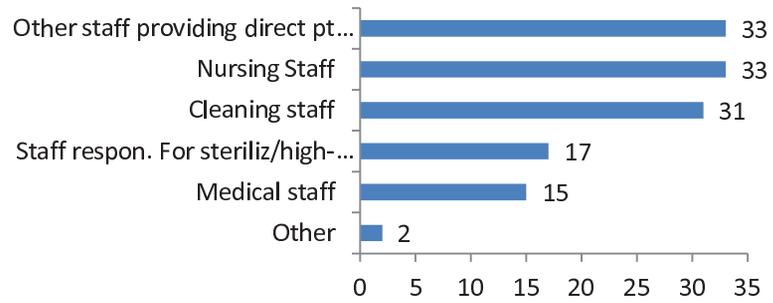
**Figure 18: Does your facility have education program on reducing transmission of CDI?**



**Figure 19: If you have an education program on CDI, how often is it given? (check all that apply, n=33)**



**Figure 20: If you have an education program on CDI, which staff are included?  
(check all that apply, n=33)**



## **Appendix A**

### **Clostridium Difficile Survey Tool**

**Oregon Healthcare Associated Infections Program**  
***C. difficile* Reporting Survey – 2011**

Hospital ID: \_\_\_\_\_ Hospital Name: \_\_\_\_\_ Survey Date: \_\_\_\_\_

1. Does your facility monitor rates of *C. difficile* infections (CDI)?  
 Yes  No
  - a. If yes, does your facility use the National Healthcare Safety Network (NHSN) *C. difficile* associated disease (CDAD) module to monitor rates of CDI?  
 Yes, we use the infection event module to track *C. difficile*  
 Yes, we use the LAB ID event module to track *C. difficile*  
 No, we do not use NHSN to track *C. difficile*
    - i. If no, do you use a standardized definition?  
 Yes, please specify definition  
source: \_\_\_\_\_  
 No
2. Is your *C. difficile* testing outsourced to a laboratory:  Yes  No
  - a. If yes, Name of Laboratory: \_\_\_\_\_
3. How frequently do you receive inpatient *C. difficile* positive test results from the laboratory?  
 Daily  Weekly  Monthly \_\_\_\_\_ Other

**Review questions 4 through 11 with the microbiology laboratory manager (these questions apply to both in-house and outsourced labs).**

4. How frequently does the laboratory perform *C. difficile* testing?  
 daily  weekdays only  3days a week  other(specify) \_\_\_\_\_
5. Does the laboratory perform *C.difficile* tests on formed stool specimens?
  - a.  Yes  No
  - b. If answered Yes, is this noted or documented on the lab report you receive?  
 Yes  No
  - c. If answered Yes, do you enter positive test results on formed stools into NHSN?  
 Yes  No
6. Does your laboratory have a rejection testing policy for duplicate stool specimens?  
 Yes  No

7. The *C. difficile* test results provided as: (check-✓-all that apply)
- Individual patient report found on daily laboratory reports
  - Laboratory generated multi-patient list
  - Generated from infection control data mining program (e.g, Medmined™/Theradoc™)
  - Generated by infection control from a laboratory based program (e.g., Meditech™/Cerner™)
  - Other (describe) \_\_\_\_\_
8. What is the primary test method your laboratory uses to detect *C. difficile*?
- Toxin A antigen only (ELISA or EIA)
  - Toxin A and B antigen (ELISA or EIA)
  - Anaerobic microbiology culture
  - Cytotoxin (CTX) assay (toxin B)
  - glutamate dehydrogenase (GDH) or Common Antigen: Date began using: \_\_\_/\_\_\_/\_\_\_
  - PCR/ Date began using \_\_\_/\_\_\_/\_\_\_
9. Which confirmatory test is performed for equivocal (ambiguous) test results? (check- ✓-all that apply).
- None
  - Repeat primary test method
  - Tissue culture: Date began using: \_\_\_/\_\_\_/\_\_\_
  - PCR Date began using: \_\_\_/\_\_\_/\_\_\_
  - Other: describe: \_\_\_\_\_
10. If you do not currently use PCR as the primary test method, is your Laboratory considering using PCR as the primary test method?  NO
- a. If YES, date to start: \_\_\_/\_\_\_/\_\_\_ or  unknown
11. Is the *C. difficile* retrospective information easily retrievable from laboratory information system?
- Yes
  - No If NO Explain challenges or barrier:  
 \_\_\_\_\_  
 \_\_\_\_\_
- The following are questions (12-23) assessing *C. difficile* (CDI) Prevention Practices currently in place in your hospital.
12. Indicate how much you agree or disagree with the following statement: **The control and prevention of CDI is a priority at my facility.**
- Strongly agree
  - Agree
  - Neither agree or disagree
  - Disagree
  - Strongly disagree
13. Does your facility routinely place patients with unexplained diarrhea on Contact Precautions prior to laboratory confirmation?
- Yes
  - No. If not, why not? \_\_\_\_\_
14. In your facility, are patients with CDI placed in a private room?
- Yes, Always
  - Yes, if private room available
  - No, per isolation policy
  - No, no private rooms available

15. If your facility does **not** have a sufficient number of private rooms available, what does your facility do with patients who are identified with CDI (please check all that apply)?
- Cohort with other CDI patients and share bathroom
  - Cohort with other CDI patients but use separate commodes/bathrooms
  - Create a private room by blocking off a bed in a semi-private room
  - Place with other non-CDI patients but use separate commodes/bathrooms
  - Place with other non-CDI patients sharing bathrooms
  - Other (please specify: \_\_\_\_\_)
  - Not Applicable
16. Does your facility use a specific CDI contact precaution sign?
- Yes
  - No
17. How long are patients with CDI kept on Contact Precautions?
- For duration of diarrhea
  - For duration of hospitalization – until discharge
  - For a specified time period after diarrhea resolves (please specify time period: \_\_\_\_\_)
  - Other (please specify: \_\_\_\_\_)
18. Does your facility use dedicated noncritical medical items (such as blood pressure cuffs or stethoscopes) for patients with CDI? (Note: this means the medical items are not used on any other patient)
- Yes
  - No
19. For CDI patients, what is the recommended method of hand hygiene in your facility?
- Soap and water
  - Alcohol hand gel
  - Not specified (i.e., both available but neither preferred)
  - Other (please specify: \_\_\_\_\_)
20. Is a bleach-product used for environmental disinfection for CDI patients at your facility?
- Yes, routinely
  - Yes, but only for suspected increase in transmission or outbreaks
  - No
- a. If YES, when is it used (please check all that apply)?
- For terminal cleaning
  - For daily cleaning
  - Other (please specify: \_\_\_\_\_)
21. Does your facility have a specific person (or people) responsible for reviewing antibiotic utilization with the goal of promoting the judicious use of antimicrobial agents?
- Yes
  - No
22. Does your facility currently restrict the use of any antibiotic?
- Yes
  - No
- a. If yes, who approves the use of restricted antibiotics?
- Pharmacy

- Infectious disease specialist
- Intensivist
- Hospitalist
- Other: \_\_\_\_\_

23. Does your facility have an education or training program for staff on reducing the transmission of CDI (the program may deal with other issues but must specifically review your facility's program to control CDI and include topics such as the transmission of CDI and measures to prevent transmission)?

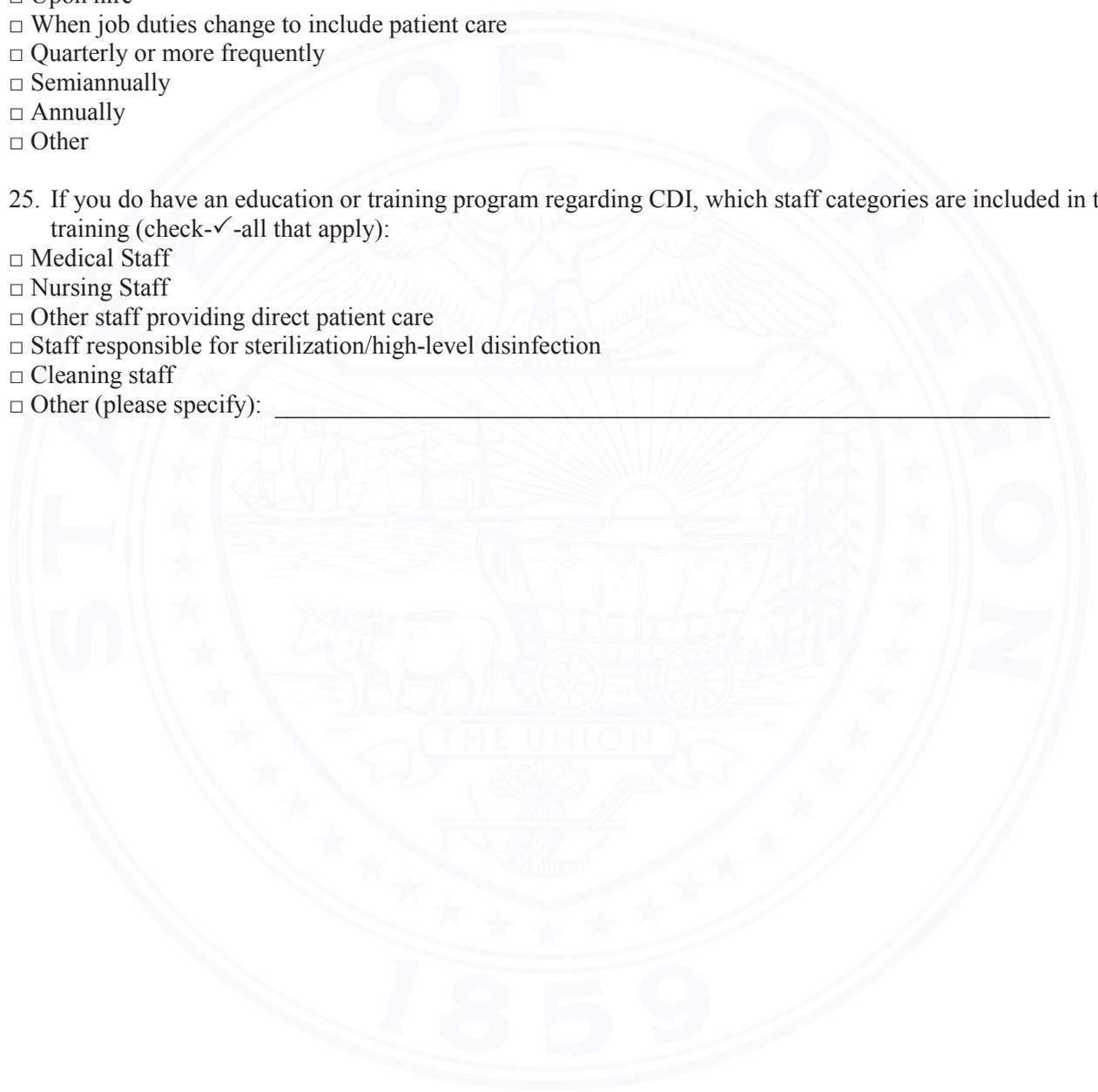
- Yes
- No

24. If you do have an education or training program regarding CDI, how often is it given (check-✓ -all that apply):

- Upon hire
- When job duties change to include patient care
- Quarterly or more frequently
- Semiannually
- Annually
- Other

25. If you do have an education or training program regarding CDI, which staff categories are included in the training (check-✓ -all that apply):

- Medical Staff
- Nursing Staff
- Other staff providing direct patient care
- Staff responsible for sterilization/high-level disinfection
- Cleaning staff
- Other (please specify): \_\_\_\_\_





***Office for***  
**Oregon Health Policy and Research**

**Healthcare Acquired Infection  
Reporting Program  
Healthcare Worker Influenza  
Vaccination Rates**  
*2010-2011 Season*

**December 2011**



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**EXECUTIVE SUMMARY**  
**HEALTHCARE ACQUIRED INFECTION REPORTING PROGRAM**  
**HEALTHCARE WORKER INFLUENZA VACCINATION RATES**  
**2010-2011 SEASON**

Infection with influenza virus is a significant cause of morbidity and mortality, especially in the elderly, young children, and persons with underlying medical conditions. It is well documented that healthcare workers (HCW) can acquire influenza from patients or transmit influenza to patients and other staff.<sup>1,2,3</sup> This research brief presents the results of the second year of reporting on HCW influenza vaccination rates for 60 Oregon hospitals and 141 long-term care skilled nursing facilities (“long-term care facilities”) during the 2010 – 2011 influenza season.

Report highlights include:

- In contrast to the 2009-2010 survey which had one broad definition of healthcare worker, OHPR replaced this single, broad definition with three categories of HCW to align with developing federal reporting requirements. For the 2010-2011 survey, it was found that the majority of hospitals and long-term care facilities could only consistently report on one category of HCW, the employee category. OHPR identified that the category of employee appeared to represent the majority of workers and the data appeared to be comparable to the previous seasons’ HCW counts. Thus, for the 2010-2011 season, *HCW vaccination rates were calculated based on the employee category only.*
- One-hundred percent (60) of hospitals provided sufficient data to calculate a HCW influenza vaccination rate. Hospitals improved their vaccination rate from 62% in 2009-2010 season to 69% in 2010-2011 season.
- Ninety-one percent of 141 long-term care facilities provided data to calculate a HCW influenza vaccination rate. This represents an increase from 81% of facilities that provided data for the 2009-2010 season. The HCW vaccination rate for long-term care facilities decreased from 55% in the 2009-2010 season to 52% in the 2010-2011 season. The decreased rate appears attributable to the noted increase in reporting.
- Additional data will be collected for the 2011-2012 season. OHPR will require the reporting of denominators for all three categories of HCW, so the impact of the additional categories of HCW on vaccination rates can be assessed and the calculation of HCW vaccination rates will reflect all three categories of workers. OHPR will add collection of HCW influenza vaccination data from ambulatory surgical centers starting with the 2011-2012 season.
- The data for this program will also be used by the Healthcare Worker Vaccination Legislative Workgroup<sup>4</sup> for its work to promote patient safety through an annual healthcare worker vaccination program.

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<sup>1</sup> Talbot TR, Bradley SF, Cosgrove SE, Reuf C, Siegel JD, Weber DJ. Influenza vaccination of healthcare workers and vaccine allocation for healthcare workers during vaccine shortages. *Infect Control Hosp Epidemiol* 2005; 26:882-90.

<sup>2</sup> Talbot TR, Dellit TH, Hebden J, Sama D, Cuny J. Factors associated with increased healthcare worker influenza vaccination rates: results from a national survey of university hospitals and university medical centers. *Infect Control Hosp Epidemiol* 2010;31: 456-62.

<sup>3</sup> Pavia AT. Mandate to protect patients from health care-associated influenza. *CID* 2010; 50:465-67.

<sup>4</sup>Oregon Legislative Workgroup on Health Care Worker Influenza Vaccination.  
<http://flu.oregon.gov/articles/Pages/HCWInfluenzaWorkgroup.aspx>. (Accessed 7/26/2011.)

# HEALTHCARE ACQUIRED INFECTION REPORTING PROGRAM HEALTHCARE WORKER INFLUENZA VACCINATION RATES 2010 – 2011 SEASON

## Background

Infection with influenza virus is a significant cause of morbidity and mortality, especially in the elderly, young children, and persons with underlying medical conditions. It is well documented that healthcare workers (HCW) can acquire influenza from patients or transmit influenza to patients and other staff.<sup>1,2,3</sup> Research indicates that vaccination is the single most effective preventive measure available against influenza and can prevent many illnesses, deaths, and losses in productivity.<sup>1,4</sup> HCW influenza vaccination may be more important than patient vaccination with elderly patients.<sup>5</sup>

The Oregon state legislature passed House Bill 2524 in 2007 to create a mandatory healthcare acquired infection (HAI) reporting program in an effort to raise awareness, promote transparency for healthcare consumers, and motivate hospitals to prioritize prevention. HB 2524 assigned responsibility for the HAI Reporting Program<sup>6</sup> to the Office for Oregon Health Policy and Research (OHPR), within the Oregon Health Authority (OHA), and created a 16-member committee to advise OHPR.

This research brief presents the results of the second year of reporting on HCW influenza vaccination rates for 60 Oregon hospitals and 141 long-term care skilled nursing facilities (“long-term care facilities”) during the 2010 – 2011 influenza season.

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<sup>1</sup> Talbot TR, Bradley SF, Cosgrove SE, Reuf C, Siegel JD, Weber DJ. Influenza vaccination of healthcare workers and vaccine allocation for healthcare workers during vaccine shortages. *Infect Control Hosp Epidemiol* 2005; 26:882-90.

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<sup>3</sup> Pavia AT. Mandate to protect patients from health care-associated influenza. *CID* 2010; 50:465-67.

<sup>4</sup> Fiore AE, Shay DK, Broder K, Iskander JK, Uyeki TM, Mootrey G, Bresee JS, Cox, NJ. Prevention and control of seasonal influenza with vaccines: recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009. *MMWR Recomm Rep* 2009; 58 (RR08);1-52.

<sup>5</sup> Wendelboe, AM, Avery C, Andrade B, Baumbach, J and MG Laden. Importance of employee vaccination against influenza preventing cases in long-term care facilities, 2011. *Infect Control Hosp Epidemiol* 2011 Oct; 32(10) 990-7.

<sup>6</sup> The Healthcare Acquired Infection (HAI) reporting program is promulgated in ORS 442.851, Notes Following, and OARs 409-023-0000 through 409-023-3500.

## Methods

HCW vaccination rates were collected using a survey created by OHPR. During this second year of data collection, OHPR revised its data collection process to align with recommendations from the National Center for Immunization and Respiratory Diseases at the Centers for Disease Control and Prevention (CDC). The CDC is working with the National Quality Form (NQF) to develop the HCW influenza vaccination metric for its Hospital Inpatient Quality Reporting Program. This revision added reporting of HCW vaccinations that were received outside of the reporting facility. In addition, in contrast to the 2009-2010 survey that included a single, broad definition of healthcare worker<sup>7</sup>, the definition for the 2010-2011 season included three HCW categories:

- Employees: all persons who receive a paycheck from the healthcare institution, whether or not they have direct patient care duties.
- Non-employees, credentialed: licensed practitioners affiliated with the healthcare institution who do not receive a paycheck from the institution. These include physicians or other midlevel providers (includes nurses) with clinical or admitting privileges at the healthcare institution, or technicians or therapists with professional credentialing.
- Non-employees, other: non-credentialed persons affiliated with the healthcare institution who do not receive a paycheck from the institution. These include students or trainees, volunteers, resident physicians or fellows (if not paid by the institution), or non-clinical agency staff or contract laborers (if paid directly by their contracting agency).

Consistent with the 2009-2010 survey, OHPR included questions to evaluate a facility's delivery and promotion methods from the National Healthcare Safety Network (NHSN) Facility Surveys for Influenza Programs<sup>8</sup>. OHPR also added questions to include reasons HCW refuse vaccination, as requested by the Oregon Immunization Division (OID). A copy of the OHPR survey is presented in Appendix A.

The survey was entered into Survey Monkey and sent to the 60 hospitals and 141 long-term care facilities in the state via email. The survey was sent to hospital human resource directors and infection control professionals and to long-term care facility administrators and nursing directors. Facilities were given 30 days to complete the survey. Follow-up

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<sup>7</sup> Office for Oregon Health Policy and Research. August 2011. Healthcare Worker Influenza Vaccination Rates: Hospitals and Long-Term Care Facilities 2009-2010 [http://www.oregon.gov/OHA/OHPR/docs/HCAIAC/Reports/August2011\\_Report/Final\\_HAI\\_Report\\_082411.pdf](http://www.oregon.gov/OHA/OHPR/docs/HCAIAC/Reports/August2011_Report/Final_HAI_Report_082411.pdf). (Accessed 10/26/2011.)

<sup>8</sup> National Healthcare Safety Network (NHSN) Pre-Season Survey on Influenza Vaccination Programs for Healthcare Personnel (OMB No. 0920-0666 Exp. Date: 09-30-2012). [http://www.cdc.gov/nhsn/forms/57.211\\_FluVaccSurveyPRE\\_BLANK.pdf](http://www.cdc.gov/nhsn/forms/57.211_FluVaccSurveyPRE_BLANK.pdf) (Accessed 7/26/2011.) NHSN Post-Season Survey on Influenza Vaccination Programs for Healthcare Personnel (OMB No. 0920-0666 Exp. Date: 09-30-2012). [http://www.cdc.gov/nhsn/forms/57.212\\_FluVaccSurveyPOST\\_BLANK.pdf](http://www.cdc.gov/nhsn/forms/57.212_FluVaccSurveyPOST_BLANK.pdf)

was conducted via phone and email to obtain a survey from each facility and to address inconsistencies reported in the surveys.

OHPR received surveys from 100% of both the 60 hospitals and 141 long-term care facilities. All 60 hospitals provided sufficient data to calculate a vaccination rate. Of the 141 long-term care facilities, 12 did not have sufficient data to calculate a vaccination rate. Before publication, facilities were provided the opportunity to verify their vaccination data.

## **Results**

Results are summarized as follows:

- **Reporting Ability:** The reported ability to provide data for all categories of staff covered in the HCW definition.
- **Staff Vaccination Counts:** Counts of total staff, staff vaccinated, staff with documented contraindication, and staff with documented refusal.
- **Healthcare Worker's Attitudes toward Vaccination:** A summary of reported reasons why workers declined vaccination.
- **Promotion, Delivery, and Formal Education:** Flu vaccination promotion and delivery methods and existence of formal education program(s) regarding HCW vaccination.

### Reporting Ability

The ability of facilities to report HCW vaccination data was evaluated by three means: (1) determining the percentage of facilities that could report data for all three categories of the HCW definition, (2) comparing the counts of facilities that reported vaccination data for the 2009-2010 and 2010-2011 seasons, and (3) calculating the percentage of HCW that did not have a documented vaccination status (as either vaccinated or unvaccinated).

Survey results indicated that facilities were generally able to report vaccination rates for the employee category, but less able to report rates for other two categories of workers (Table 1). All hospitals (60) and 91% (129) of long-term care facilities were able to report vaccination rates for employees. In contrast, 30% of hospitals (18) and 19% (27) of long-term care facilities were able to report data for the non-employees, credentialed category; and 33% (23) of hospitals and 13% (18) of long-term care facilities were able to report vaccination data for the non-employees, other category. The limited data we have for the two categories outside of employees, as provided by some hospitals, suggests that the employee category represents that largest volume of workers for both hospitals and long-term care facilities. OHPR will be able to better test this assumption when data are collected for the 2011-2012 season, during which counts for all three healthcare worker categories will be required.

**Table 1:  
Reporting Ability for Three Categories of Healthcare Workers  
2010-2011 Season**

	Facility Count	Employees			Non-Employees, Credentialed			Non-Employees, Other		
		Count	%	Avg.	Count	%	Avg.	Count	%	Avg.
<b>Hospitals</b>										
2010-2011	60	60	100%	1,194	18	30%	130	23	38%	207
<b>Long-Term Care Facilities</b>										
2010-2011	141	129	91%	100	27	19%	21	18	13%	11

Although it was determined that most facilities could only report data for the employee category, the HCW counts reported for the hospital employee category in 2010-2011 were similar to that reported for the single worker category reported in 2009-2010 (Table 2). For long-term care, the count of HCW and count of reporting facilities both increased. These data suggest that hospitals have maintained their ability to report HCW vaccinations rates from last season and long-term care facilities have increased their ability to report.

**Table 2:  
Ability to Report Vaccination Rate  
2009-2010 and 2010-2011 Seasons**

	Hospitals			Long-Term Care		
	Facility Count	% Facility Reporting	HCW Counts	Facility Count	% Facility Reporting	HCW Counts
2009-2010	60	100%	73,193	113	81%	10,288
2010-2011*	60	100%	71,679	129	91%	12,875

Note: \* Data is for employee category only.

A third method to gauge a facility's ability to report vaccination data is to calculate the percentage of workers with a documented vaccination status (i.e., those that are documented as either vaccinated or unvaccinated). Because facilities were only able to consistently report data for the employee category, the employee category was used to represent HCW for the 2010-2011 season. The percentage of HCW with documented status remains at about two-thirds, with hospital rates of 70% and 72% and long-term care rates of 69% and 67% for the 2009-2010 and 2010-2011 seasons, respectively (Table 3). Healthcare workers with undocumented vaccination status are counted as unvaccinated and represent an opportunity for facilities to increase their rates.

**Table 3:  
Healthcare Workers with Undocumented Influenza Vaccination Rates  
2009-2010 and 2010-2011 Seasons**

	Sum of HCW	Sum of HCW with documented vaccination status	Sum of HCW without documented vaccination status	Percentage with documented status
<b>Hospitals</b>				
<b>2009-2010</b>	73,193	50,909	22,284	70%
<b>2010-2011*</b>	71,679	51,347	20,323	72%
<b>Long-Term Care Facilities</b>				
<b>2009-2010</b>	10,288	7,106	3,182	69%
<b>2010-2011*</b>	12,875	8,665	4,210	67%
<b>Note: * Data for 2010-2011 season represents "employee" only category.</b>				

By requiring reporting of all HCW counts for all three categories for the 2011-2012 season, OHPR will be able to provide more complete information regarding HCW with no documented influenza vaccination status and the impact on the overall vaccination rates for facilities.

Furthermore, OHPR identified a potential relationship between reported vaccination rate and percentage of HCW with documented vaccination status, which is likely related to a facility's policy to require HCW to complete a declination. In the 2011-2012 survey, OHPR will ask facilities if they require completion of declination forms.

#### Staff Vaccination Counts

The survey included questions on how many HCW were vaccinated at the facility and elsewhere, how many declined for medical contraindications, and how many refused to be vaccinated. Vaccination rates were calculated by adding HCW vaccinated at the facility to those vaccinated outside the facility and dividing by total HCW workers excluding workers with medical contraindications. For the 2010-2011 season, the employee category was used to calculate facility vaccination rates (Table 4). Appendix B provides influenza vaccination rates per facility for 2010-2011.

**Table 4:  
Calculation of Influenza Vaccination Rates  
2009-2010 and 2010-2011 Seasons**

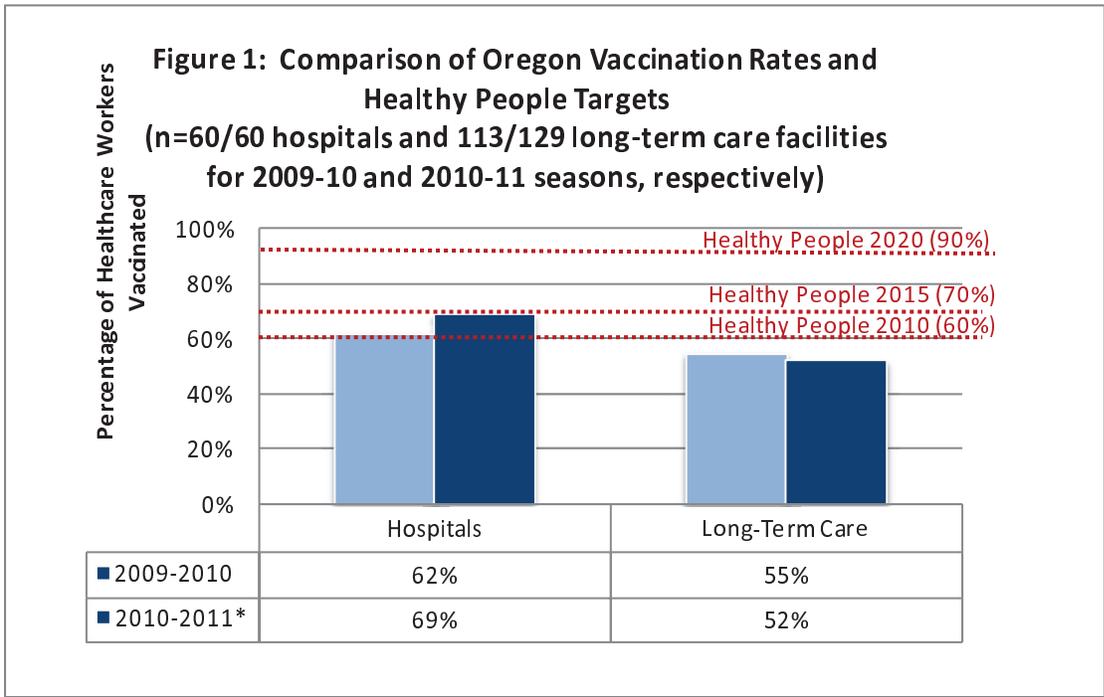
	Count of facilities	HCW vaccinated at facility	HCW vaccinated elsewhere	Sum of HCW (10/1/2010 through 3/31/2011)	HCW with medical contra-indication	% vaccinated **
<b>Hospitals</b>						
<b>2009-2010</b>	60	44,955	Not Available	73,193	476	62%
<b>2010-2011*</b>	60	47,862	1,355	71,679	775	69%
<b>Long-Term Care Facilities</b>						
<b>2009-2010</b>	113	5,581	Not Available	10,288	116	55%
<b>2010-2011*</b>	129	6,065	546	12,875	85	52%

**Notes:** \* Data for 2010-2011 season represents “employee” only category.  
 \*\* Percentage vaccinated = (HCW vaccinated at facility + HCW vaccinated elsewhere)/(sum of HCW – HCW with medical contraindication)

The vaccination rates were compared to the benchmarks sets by the Healthy People program. A program of the US Department of Health and Human Services (HHS), Healthy People provides 10-year national objectives for improving the health of all Americans. The Healthy People 2010 goal for healthcare worker influenza vaccination was 60%. For 2020, the goal is 90%. Given the challenge of meeting the 2020 goal, the US HHS has convened a federal workgroup to develop strategies to increase the vaccination rate, and this workgroup has set an interim goal of 70% vaccination coverage by 2015.<sup>9</sup>

As noted in Figure 1, hospitals increased the reported vaccination rate from 62% to 69% and long-term care facilities decreased from 55% to 52% for the 2009-2010 and 2010-2011 seasons, respectively. These trends are also reflected in the counts of facilities that are able to meet or exceed each of the three Healthy People targets (Table 5). While the vaccination rate for long-term care appears slightly lower this year, this difference appears to be attributable to the 13% increase of long-term facilities reporting a vaccination rate.

<sup>9</sup> The US HHS Action Plan to Prevent Healthcare Associated Infections: Influenza Vaccination of Healthcare Personnel: [http://www.hhs.gov/ash/initiatives/hai/tier2\\_flu.html#\\_ftn5](http://www.hhs.gov/ash/initiatives/hai/tier2_flu.html#_ftn5). (Accessed 10/28/2011.)



The percentage of hospitals meeting or exceeding the Healthy People targets increased between the two data collection periods (Table 5). For long-term care facilities, the count of facilities meeting the 60% target remained the same and the count meeting the 70% target increased, but the percentage of facilities decreased in both categories due to the noted increase of long-term care facilities reporting.

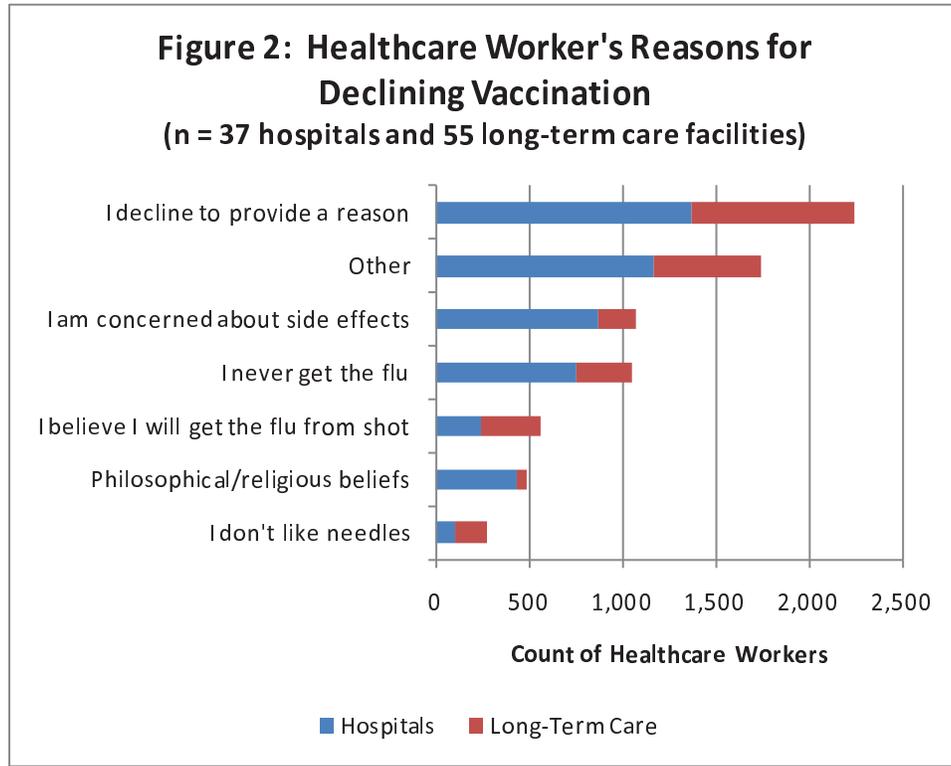
**Table 5:  
Facilities Meeting Healthy People Targets  
2009-2010 and 2010-2011 Seasons**

	Count of facilities	60% or greater vaccination rate		70% or greater vaccination rate		90% or greater vaccination rate	
		Count	%	Count	%	Count	%
<b>Hospitals</b>							
2009-2010	60	40	67%	21	35%	0	0%
2010-2011*	60	44	73%	29	48%	4	7%
<b>Long-Term Care Facilities</b>							
2009-2010	113	48	42%	32	28%	8	7%
2010-2011*	128	48	38%	35	27%	3	4%

Note: \* Data for 2010-2011 season represents “employee” only category.

## Healthcare Worker's Attitudes toward Vaccination

As requested by the Oregon Immunization Division, OHPR added questions to evaluate why HCW declined vaccination. Sixty-seven percent (37) of hospitals and 39% (55) of long-term care facilities provided data on HCW declination reasons (Figure 2). Most often HCW declined to provide a reason for refusing vaccination. About 1,000 HCW indicated concern about side effects or that they never got the flu. Five hundred or fewer workers cited the belief that they would get the flu from the shot, philosophical/religious beliefs, or dislike of needles.



The second most frequent reason for influenza vaccination declination was “other,” and included statements such as I have already had the flu; I don’t want it; I have concerns regarding mercury additives in vaccine; I don’t want to inject in my body and I don’t think it works; I believe building natural immunity is better than vaccination/use homeopathic methods/supplements; I stay home when I get the flu, so I will not spread it to others; I don’t believe the vaccine is important; I believe I am immune to flu; and I work from home. HCW also noted the personal right to refuse in the other category.

## Promotion, Delivery and Formal Education

The fourth set of questions addressed what activities facilities were undertaking to promote, deliver and formally educate its workers regarding influenza vaccination. Figure 3 compares delivery methods for seasonal influenza vaccine during the 2009-2010 and 2010-2011 flu seasons.

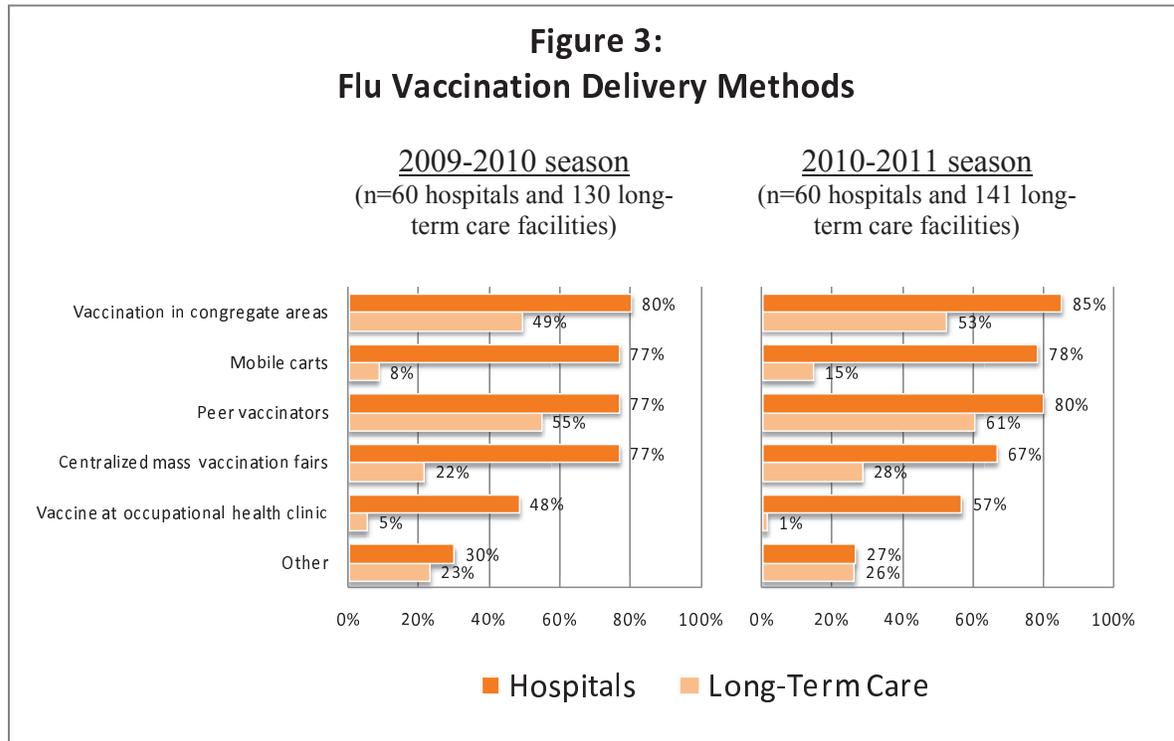


Figure 3 shows that hospitals continued to use more delivery methods than nursing homes. In comparing the two seasons, hospitals increased vaccination in congregate areas and at occupational health clinics and increased use of peer vaccinators. Long-term care facilities increased use of vaccination in congregate areas, mobile carts, peer vaccinators, and mass vaccination fairs.

For hospitals, the other category included offering vaccination by appointment, individual request, and in department units; working with pharmacy and public health programs; providing the vaccine at annual health risk appraisal fair; and offering staff points toward a wellness program for vaccination. For long-term care facilities, the other category included the use of staff meetings and handouts to educate workers and providing individual vaccination at nurses' offices. In addition, long-term care facilities noted the using student nurses and an outside agency to provide vaccinations and allowing employees to obtain free vaccinations at the local pharmacy.

Facilities also reported on activities to promote influenza vaccination (Figure 4).

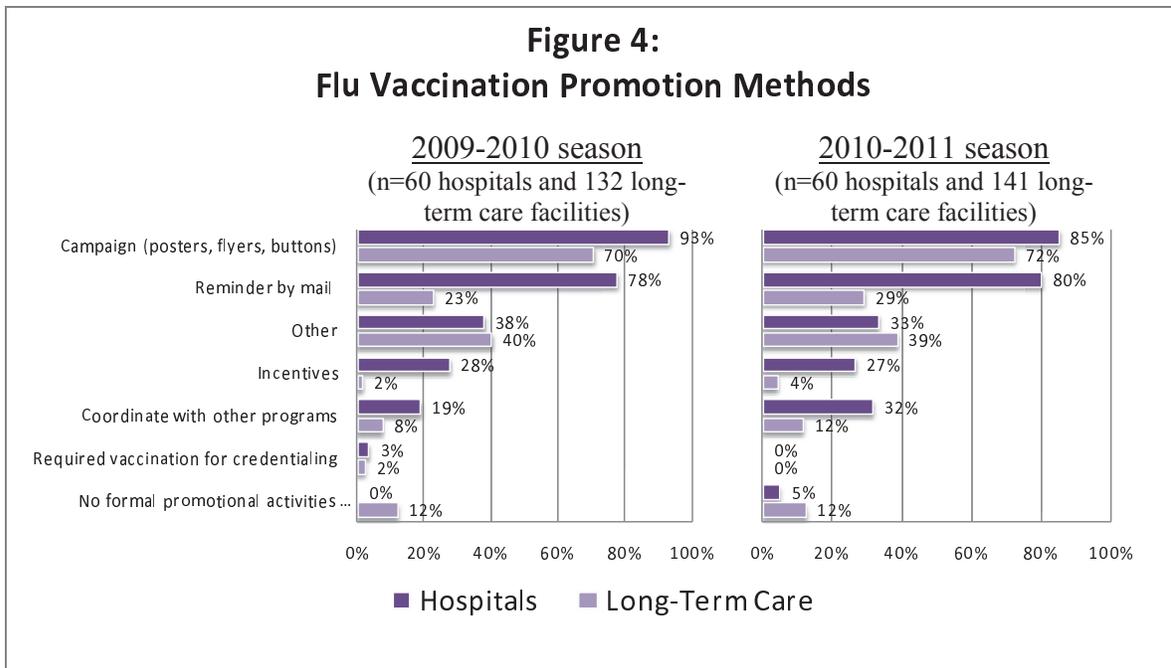


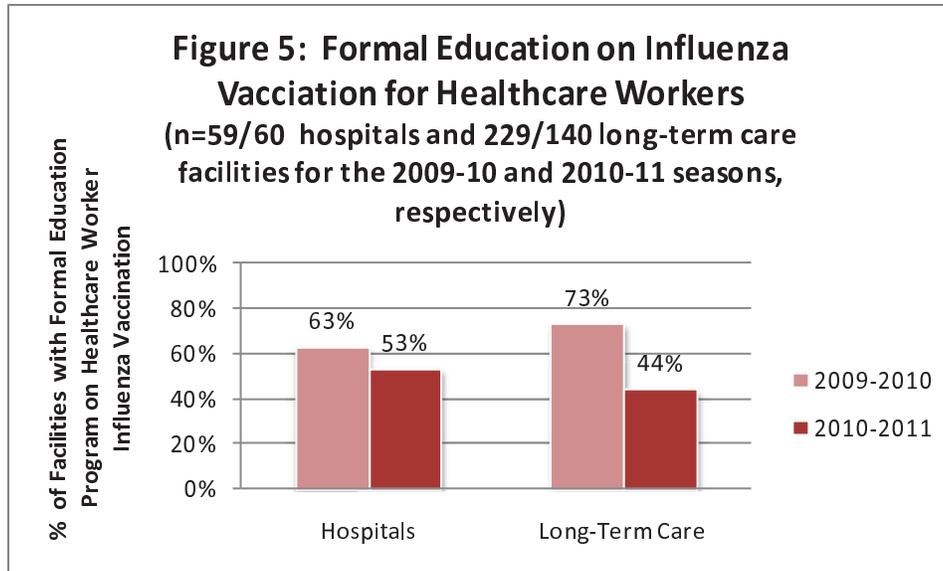
Figure 4 shows that both hospitals and long-term care facilities continue to select the methods of campaigns (including posters, flyers, buttons, fact sheets) and reminders by mail/email as their top two methods to promote HCW vaccination. Hospitals increased use of coordinating their flu promotion program with other programs, and long-term care facilities increased their use of campaigns and reminders by email.

Other promotional methods cited by hospitals included use of intranet and staff meetings (some mandatory) to promote vaccination, incorporating flu vaccination education in new hire orientation programs and annual skill competency trainings, and offering vaccination during daily rounding and employee health visits. Additional promotional efforts included the use of flu shot stickers, tattoos, pencils and bracelets; kick-off events with Starbucks flu champions; daily flu quizzes with coupon for winner for free lunch; a raffle for two flat screen TVs; and promoting a prize for all staff if the facility achieved an 80% vaccination rate.<sup>10</sup>

Other promotion methods for long-term care facilities included announcements and in-service trainings conducted during staff meetings (some mandatory); information delivered via intercom, electronic charting programs, time clocks, newsletters, and paycheck inserts; and posters in employee staff rooms and in the facility.

The final survey question asked if the facility had a formal educational program on influenza vaccination. As noted in Figure 5 below, fewer hospitals and long-term care facilities reporting conducting formal education programs compared to the 2009-2010 season.

<sup>10</sup> It was noted that the facility the reported promoting a prize for the entire facility did report an employee vaccination rate above 80%.



Seven hospitals reported having mandatory on-line HCW influenza vaccination training; an additional hospital noted it implemented an informal education program and formal vaccination policy.

### Limitations

The data reported here are subject to three important limitations:

1. Data are self-reported by the facility.
2. Surveillance methods and resources vary across facilities, which may affect a facility's ability to report vaccination rates. Lower rates may be due to more comprehensive surveillance activities rather than less employees being vaccinated.
3. The data collection method has changed to align with evolving federal standards for this measurement, which may affect the comparability of the data over time.

### Future Activities

OHPR has distributed data collection forms for HCW vaccination rates for the 2011-2012 flu season to hospitals, long-term care facilities, and ambulatory surgical centers. The data will be requested from the facilities in the spring of 2012 and will be released during 2012. The data for this program will also be used by the Healthcare Worker Vaccination Legislative Workgroup<sup>11</sup> for its work to promote patient safety through an annual healthcare worker vaccination program.

<sup>11</sup>Oregon Legislative Workgroup on Health Care Worker Influenza Vaccination.  
<http://flu.oregon.gov/articles/Pages/HCWInfluenzaWorkgroup.aspx>. (Accessed 7/26/2011.)

## APPENDIX A

Oregon Office for Health Policy and Research

John A. Kitzhaber, MD, Governor



1225 Ferry St. SE, 1<sup>st</sup> Floor

Salem, OR 97301

1-503-373-1779

503-378-5511

<http://www.oregon.gov/OHPPR/>

January 26, 2011

TO: Hospital and Long-Term Care Facilities

SUBJECT: Annual Survey on Influenza Vaccination of Staff for 2010-2011

**We are writing to provide you with the content for the 2010-2011 healthcare worker influenza survey, so you can prepare to collect this data for the survey.** For hospitals and long-term care facilities that participated in last year's survey, please note we have revised the survey to include some elements from a survey being developed by the Centers for Disease Control and Prevention (CDC). We plan to send you an electronic version of this survey in April 2011.

Healthcare facilities are required to report influenza vaccination, documented contraindication, and informed declination rates for staff in accordance with ORS 442.425 and OARs 409-023-0000 through 409-023-035.

We have attached three documents to assist you in collecting data during the 2010-2011 flu season:

- Attachment A represents the content of the annual healthcare worker influenza vaccination survey. At this time, we are sending you this form so you can understand the data that will be collected in the survey. In April 2011, we plan to send you an electronic version of this survey.
- Attachment B includes definitions for the data fields in the survey form (Attachment A).
- Attachment C is a **sample** influenza consent/declination form that can be used to support the data to be collected for the survey. Note that influenza vaccination, medical contraindication, and refusal of vaccination must be documented. In addition, if your staff members are vaccinated outside of your facility, you need to document this fact so that these staff can be counted as vaccinated. The sample form in Attachment C provides a means to document this information.

In addition to meeting the requirements of the reporting program reporting program cited above, the information collected in the survey will also be provided to the Public Health Division to inform public health policy and interventions to increase health care worker vaccination rates. Hospitals and long-term care facilities with strong health care worker vaccination rates will be highlighted on the Public Health Division's Health Facility Best Practice Honor Roll at [flu.oregon.gov](http://flu.oregon.gov).

If you have any questions about this survey, please contact Jeanne Negley, HAI Program Coordinator, at [Jeanne.Negley@state.or.us](mailto:Jeanne.Negley@state.or.us) or phone (503) 373-1793.

Sincerely,

A handwritten signature in black ink that reads "Elyssa B. Tran".

Elyssa Tran, MPA  
Health Systems Research and Data Manager  
Office for Oregon Health Policy and Research

**ATTACHMENT A**

**Influenza Vaccination/Declination Surveillance**

Collection Start Date: October 1, 2010; End Date: March 31, 2011

**Facility Name:** \_\_\_\_\_

**Facility Address/City:** \_\_\_\_\_

**Name and Title of Person Completing Form:** \_\_\_\_\_

**The undersigned certifies that the information in this form is accurate and true to the best of their knowledge.**

**Signature of Person Completing Form:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Contact Information: Email:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

Components	Counts		
	Employees	Non-Employees, Credentialed	Non-Employees, Other
<u>Denominator Information</u>			
1. Worked at this healthcare institution at least one day between October 1, 2010 and March 31, 2011.			
<u>Numerator Information</u>			
2. Received an influenza vaccine at this healthcare institute between October 1, 2010 and March 31, 2011.			
3. Have a documented influenza vaccine elsewhere			
4. Have a documented medical contraindication for the influenza vaccine			
5. Have a documented declination form to not receive the influenza vaccine for non-medical reasons			
6. Comments related to blank cells for questions 1 through 5: _____			
7. Which of the following methods did you use during the influenza season to deliver vaccine to your healthcare workers? (check all that apply)			
<input type="checkbox"/> Mobile carts <input type="checkbox"/> Centralized mass vaccination fairs <input type="checkbox"/> Peer vaccinators <input type="checkbox"/> Provided vaccination in congregate areas (e.g., conferences/meetings or cafeteria) <input type="checkbox"/> Provided vaccination at occupational health clinic <input type="checkbox"/> Other, specify: _____			
8. Which of the following strategies did you use to promote/enhance healthcare worker influenza vaccination at your facility? (check all that apply)			
<input type="checkbox"/> No formal promotional activities are planned <input type="checkbox"/> Incentives <input type="checkbox"/> Reminders by mail, email or pager <input type="checkbox"/> Coordination of vaccination with other annual programs (e.g., tuberculin skin testing) <input type="checkbox"/> Required receipt of vaccination for credentialing (if no contraindications) <input type="checkbox"/> Campaign including posters, flyers, buttons, fact sheets <input type="checkbox"/> Other, specify: _____			
9. Did you conduct any formal educational programs (i.e., a course or program) on influenza and influenza vaccination for your healthcare workers?			
<input type="checkbox"/> Yes <input type="checkbox"/> No			

10: For declinations other than for medical contraindication, input the following counts:	
Counts	Reason checked
	I believe I will get the flu if I get the shot
	I don't like needles
	I never get the flu
	My philosophical or religious beliefs prohibit vaccination
	I am concerned about side effects
	I decline to provide a reason.
	Other
List reasons for Other: _____ _____	
<b>Upon completion, please email this to <a href="mailto:ohpr.datasubs@state.or.us">ohpr.datasubs@state.or.us</a></b> <b>fax to Jeanne Negley at (503) 378-5511. For questions, contact Jeanne Negley (503) 373-1793.</b>	

## ATTACHMENT B

### Definitions for Influenza Vaccination/Declination Survey 2010-2011

#### Definitions for Denominator Information

- Employees: all persons who receive a paycheck from the healthcare institution, whether or not they have direct patient care duties.  
(Note: If your clinical agency staff receive a paycheck from your healthcare institution, count in “employee” category. If clinical agency staff receives their paycheck outside your healthcare institution, count in “non-employees credentialed” category.)
- Non-employees, credentialed: licensed practitioners affiliated with the healthcare institution who do not receive a paycheck from the institution. These include physicians or other midlevel providers (includes nurses) with clinical or admitting privileges at the healthcare institution, or technicians or therapists with professional credentialing. Examples of other midlevel providers include nurses, nurse midwives, physicians’ assistants and other clinicians.
- Non-employees, other: non-credentialed persons affiliated with the healthcare institution who do not receive a paycheck from the institution. These include students or trainees, volunteers, resident physicians or fellows (if not paid by the institution), or non-clinical agency staff or contract laborers (if paid directly by their contracting agency).

#### Instructions for Denominator Information

- No individual should be counted in more than one category
- Include all healthcare personnel at your institution, regardless of direct patient contact.
- Include both full-time and part-time personnel who worked at your institution for 1 or more days between October 1, 2010 and March 31, 2011, even if they do not work there anymore.
- Count healthcare personnel as individuals rather than full-time equivalents
- If you don’t know what category someone belongs in, determine first if they are an ‘employee’. If not, determine if they are a ‘non-employee, credentialed’. If not, include them as a ‘non-employee, other’

#### Instructions for Numerator Information

- No individual should be counted in more than one category
- Include all personnel who have received an influenza vaccine from October 1, 2010 through March 31, 2011.
- Personnel who declined the influenza vaccine because they received it elsewhere or because they have a medical contraindication to influenza vaccination should NOT be counted in the “declined to receive an influenza vaccine for non-medical reasons” category.
- If your institution does not keep track of declinations for non-medical reasons using a paper or electronic form, please report “0” in the category labeled “declined to receive an influenza vaccine for non-medical reasons”
- Do not include personnel with unknown vaccination status in the numerator information.

**SAMPLE INFLUENZA VACCINE CONSENT**

**Print name:** \_\_\_\_\_ **Department:** \_\_\_\_\_

**Response 1:**  **I request that the vaccine be given to me.**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Response 2:**  **I decline the vaccine today because I have already had a flu shot for the 2010-2011 flu season.**

Clinic where vaccinated: \_\_\_\_\_ Date vaccinated: \_\_\_\_\_ (Approximate is OK.)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Response 3:**  **I decline the vaccine today because I have a medical contraindication.**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Response 4:**  **I decline the vaccine today. If Response 4 is selected, complete the declination form below and page 2 of the declination form.**

Influenza vaccine declination

I acknowledge that I am aware of the following facts:

- Influenza is a serious respiratory disease that kills an average of 23,607 persons and hospitalizes more than 200,000 persons in the United States each year.
- Influenza vaccination is recommended for me and all other healthcare workers to protect our patients from influenza disease, its complications, and death.
- If I contract influenza, I will shed the virus for 24–48 hours before influenza symptoms appear. My shedding the virus can spread influenza disease to patients in this facility.
- If I become infected with influenza, even when my symptoms are mild or non-existent, I can spread severe illness to others.
- I understand that the strains of virus that cause influenza infection change almost every year, which is why a different influenza vaccine is recommended each year.
- I understand that I cannot get influenza from the influenza vaccine.
- The consequences of my refusing to be vaccinated could have life-threatening consequences to my health and the health of those with whom I have contact, including my patients and other patients in this healthcare setting, including my coworkers, my family, and my community.

I understand that I can change my mind at any time and accept influenza vaccination, if vaccine is available.

I have read and fully understand the information on this declination form.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

For Facility Use Only:

- Staff Type:  Employees (receives paycheck from healthcare facility)  
 Non-employees, Credentialed  
 Non-employees, Other

**If response 4 is selected, complete the following section. (Providers can store this information in a separate file to collate data at a later date):**

I decline the vaccination for the following reason(s). Please check all that apply:

- I believe I will get the flu if I get the shot
- I don't like needles
- I never get the flu
- My philosophical or religious beliefs prohibit vaccination
- I am concerned about side effects
- I decline to provide a reason.
- Other: \_\_\_\_\_

## APPENDIX B

### Hospital Healthcare Worker Flu Vaccination Rates, 2010-2011 Season

Hospital	Vaccination Rates				Count of reported vaccine delivery methods	Count of reported vaccine promotion methods	Formal education conducted?
	Employees	Non-Employees, Credentialed	Non-Employees, Other	Total			
Adventist Medical Center	60%	NR	42%	NA	5	4	No
Ashland Community Hospital	53%	NR	NR	NA	3	3	No
Bay Area Hospital	42%	NR	NR	NA	2	4	No
Blue Mountain Hospital	68%	NR	NR	NA	4	4	No
Columbia Memorial Hospital	96%	44%	40%	90%	5	5	Yes
Coquille Valley Hospital	42%	NR	22%	NA	3	3	No
Cottage Grove Community Hospital	92%	NR	NR	NA	2	3	Yes
Curry General Hospital	43%	0%	NR	NA	4	3	Yes
Good Samaritan Regional Medical Center	74%	NR	NR	NA	4	4	Yes
Good Shepherd Medical Center	91%	NR	NR	NA	4	2	Yes
Grande Ronde Hospital	78%	26%	69%	74%	5	4	Yes
Harney District Hospital	74%	22%	13%	61%	3	3	No
Kaiser Sunnyside Medical Center	62%	NR	NR	NA	5	4	Yes
Lake District Hospital	53%	NR	NR	NA	2	2	No
Legacy Emanuel Hospital	61%	NR	NR	NA	5	1	No
Legacy Good Samaritan Hospital and Medical Ctr	65%	NR	NR	NA	5	1	No
Legacy Meridian Park Hospital	61%	NR	NR	NA	5	2	No
Legacy Mt. Hood Medical Center	56%	NR	NR	NA	5	2	No
Lower Umpqua Hospital	36%	NR	NR	NA	2	3	No
McKenzie-Willamette Medical Center	69%	NR	79%	NA	4	3	No
Mercy Medical Center	60%	NR	84%	NA	5	5	Yes
Mid-Columbia Medical Center	42%	NR	NR	NA	6	5	Yes
Mountain View Hospital	60%	76%	NR	NA	4	3	No
OHSU Hospital	73%	0%	33%	69%	5	6	No
Peace Harbor Hospital	90%	NR	0%	NA	5	6	No
Pioneer Memorial Hospital (Heppner)	46%	NR	NR	NA	2	3	No
Pioneer Memorial Hospital (Prineville)	56%	63%	45%	55%	6	4	Yes
Providence Hood River Memorial Hospital	85%	NR	NR	NA	4	4	Yes
Providence Medford Medical Center	74%	NR	NR	NA	2	2	Yes
Providence Milwaukie Hospital	83%	NR	NR	NA	4	3	Yes
Providence Newberg Medical Center	79%	NR	NR	NA	4	4	Yes
Providence Portland Medical Center	70%	NR	NR	NA	4	3	Yes
Providence Seaside Hospital	86%	NR	NR	NA	4	5	Yes
Providence St. Vincent Medical Center	77%	NR	NR	NA	4	3	Yes
Providence Willamette Falls Medical Center	74%	NR	NR	NA	3	4	Yes
Rogue Valley Medical Center	66%	NR	67%	NA	5	4	Yes
Sacred Heart Medical Center at RiverBend	87%	21%	86%	81%	5	5	Yes
Sacred Heart Medical Center at University	83%	21%	56%	59%	5	5	Yes
Salem Hospital	59%	NR	NR	NA	4	4	No
Samaritan Albany General Hospital	81%	NR	NR	NA	5	5	Yes
Samaritan Lebanon Community Hospital	85%	NR	NR	NA	3	4	Yes
Samaritan North Lincoln Hospital	81%	NR	NR	NA	3	4	Yes
Samaritan Pacific Communities Hospital	73%	NR	NR	NA	5	4	Yes
Santiam Memorial Hospital	53%	NR	NR	NA	5	3	No
Shriner's Hospital for Children	80%	10%	22%	50%	4	5	No
Silverton Hospital	58%	NR	NR	NA	3	3	Yes
Sky Lakes Medical Center	63%	NR	NR	NA	3	3	No
Southern Coos Hospital and Health Center	74%	85%	100%	76%	1	2	No

## Hospital Healthcare Worker Flu Vaccination Rates, 2010-2011 Season

Hospital	Vaccination Rates				Count of reported vaccine delivery methods	Count of reported vaccine promotion methods	Formal education conducted?
	Employees	Non-Employees, Credentialed	Non-Employees, Other	Total			
St. Alphonsus Medical Center - Baker	76%	NR	NR	NA	2	3	No
St. Alphonsus Medical Center - Ontario	83%	33%	49%	71%	4	5	No
St. Anthony Hospital	67%	48%	NR	NA	4	4	No
St. Charles Medical Center (Bend)	53%	18%	28%	46%	5	4	Yes
St. Charles Medical Center (Redmond)	44%	22%	20%	39%	6	4	Yes
Three Rivers Community Hospital and Health Ctr	68%	43%	76%	68%	5	5	Yes
Tillamook County General Hospital	55%	NR	46%	NA	4	3	Yes
Tuality Healthcare	68%	NR	65%	NA	5	3	Yes
Vibra Specialty Care	79%	NR	NR	NA	1	4	No
Wallowa Memorial Hospital	53%	NR	38%	NA	3	1	No
West Valley Community Hospital	82%	33%	NR	NA	2	4	No
Willamette Valley Medical Center	65%	25%	72%	62%	4	4	Yes

NR = Not Reported. The facility did not report total count of HCW and count of HCW vaccinated.

NA = Not Available. If a facility did not provide data for all three categories of workers (employees; non-employees, (non-employees, credentialed; non-employees, other), the total vaccination rate could not be calculated.

### Vaccination delivery methods:

- Mobile Carts
- Centralized mass vaccination fairs
- Peer vaccinators
- Provided vaccination in congregate areas (e.g., conferences/meetings or cafeteria)
- Provided vaccination at occupational health clinic
- Other

### Vaccination promotion methods:

- No formal promotional activities are planned (was not counted as a method)
- Incentives
- Reminders by mail, email or pager
- Coordination of vaccination with other annual programs (e.g., tuberculin skin testing)
- Required receipt of vaccination for credentialing (if no contraindications)
- Campaign including posters, flyers, buttons, fact sheets
- Other

## Long-Term Care Facility Healthcare Worker Flu Vaccination Rates, 2010-2011

Long-Term Care Facility	Vaccination Rates				Count of reported vaccine delivery methods	Count of reported vaccine promotion methods	Formal education conducted?
	Employees	Non-Employees, Credentialed	Non-Employees, Other	Total			
Aidan Senior Living at Reedsport	37%	NR	NR	NA	1	1	No
Avamere at Three Fountains	69%	NR	NR	NA	3	2	Yes
Avamere Court at Keizer	85%	100%	32%	77%	3	2	No
Avamere Crestview of Portland	25%	NR	NR	NA	1	1	Yes
Avamere Rehabilitation of Beaverton	58%	100%	NR	NA	2	3	Yes
Avamere Rehabilitation of Clackamas	58%	67%	NR	NA	3	3	Yes
Avamere of Coos Bay	30%	NR	NR	NA	1	1	No
Avamere Rehabilitation of Eugene	10%	NR	NR	NA	2	1	No
Avamere Rehabilitation of Hillsboro	11%	NR	NR	NA	1	1	No
Avamere Rehabilitation of Junction City	38%	29%	NR	NA	2	1	Yes
Avamere Rehabilitation of King City	15%	0%	NR	NA	2	1	No
Avamere Rehabilitation of Lebanon	47%	NR	NR	NA	3	2	No
Avamere Rehabilitation of Newport	89%	NR	NR	NA	3	2	Yes
Avamere Rehabilitation of Oregon City	76%	NR	NR	NA	2	2	No
Avamere Rehabilitation of Salem	NR	NR	NR	NA	1	1	Yes
Avamere Riverpark of Eugene	49%	50%	60%	50%	1	3	Yes
Avamere Twin Oaks of Sweet Home	40%	NR	NR	NA	1	1	No
Baycrest Health Center	28%	NR	NR	NA	1	1	No
Blue Mountain Nursing Home	100%	NR	NR	NA	1	1	No
Care Center East Health & Specialty Care Center	95%	NR	NR	NA	4	2	Yes
Cascade Manor	NR	NR	NR	NA	1	1	Yes
Cascade Terrace Nursing Center	65%	NR	NR	NA	1	1	Yes
Cascade View Nursing Center	85%	NR	NR	NA	1	1	No
Chehalem Health and Rehab Center	87%	87%	NR	NA	2	1	Yes
Clatsop Care Center	NR	NR	NR	NA	2	1	No
Coast Fork Nursing Center	12%	NR	NR	NA	1	1	No
Wasco County Nursing Care	17%	NR	NR	NA	2	2	Yes
Columbia Care Center	67%	NR	NR	NA	1	1	Yes
Cornerstone Care Option	28%	NR	NR	NA	2	1	No
Corvallis Manor Nursing and Rehab	49%	NR	NR	NA	2	1	Yes
Creswell Health and Rehabilitation	51%	100%	NR	NA	3	3	Yes
Dallas Retirement Village Health Center	32%	20%	NR	NA	1	1	No
East Cascade Retirement Community	NR	NR	NR	NA	1	1	Yes
Fair View Transitional Care Center	31%	NR	NR	NA	3	2	No
Fernhill Estates	82%	80%	NR	NA	1	2	No
Forest Grove Rehab & Care Center	39%	50%	NR	NA	2	2	Yes
French Prairie Nursing & Rehabilitation Center	66%	NR	NR	NA	2	2	Yes
Friendship Health Center	58%	NR	NR	NA	1	1	No
Friendsview Manor	42%	NR	NR	NA	2	1	No
Gateway Care and Retirement Center	34%	NR	0%	NA	2	1	No
Glisan Care Center	85%	NR	NR	NA	2	2	Yes
Good Samaritan Society - Curry Village	25%	NR	NR	NA	2	2	No
Good Samaritan Society-Eugene Village	52%	NR	NR	NA	1	4	Yes
Good Samaritan Society - Fairlawn Village	77%	NR	NR	NA	2	1	Yes
Gracelen Terrace	27%	NR	NR	NA	2	1	Yes
Green Valley Rehabilitation Center	58%	0%	10%	49%	3	1	Yes
Gresham Rehab & Specialty Care	NR	NR	NR	NA	1	1	No

## Long-Term Care Facility Healthcare Worker Flu Vaccination Rates, 2010-2011

Long-Term Care Facility	Vaccination Rates				Count of reported vaccine delivery methods	Count of reported vaccine promotion methods	Formal education conducted?
	Employees	Non-Employees, Credentialed	Non-Employees, Other	Total			
Harbor Care Reedwood	NR	NR	NR	NA	1	2	No
Harmony House Nursing Home	71%	NR	NR	NA	1	3	Yes
Healthcare at Foster Creek	4%	NR	NR	NA	1	1	Yes
Hearthstone Nursing & Rehabilitation Center	89%	100%	100%	89%	2	1	Yes
Highland Home Nursing & Rehabilitation Center	77%	NR	NR	NA	3	2	Yes
Hillsboro Health and Rehabilitation Center	21%	NR	NR	NA	1	2	No
Hillside Heights Rehabilitation Center	NR	NR	NR	NA	1	2	No
Holladay Park Plaza	36%	NR	NR	NA	1	1	No
Hood River Care Center	50%	NR	NR	NA	1	1	No
Independence Health and Rehabilitation Center	29%	NR	NR	NA	1	2	Yes
LaGrande Post Health and Rehab	8%	8%	NR	NA	2	1	No
Lake Health District Long Term Care	58%	NR	NR	NA	3	3	No
Laurel Hill Nursing Center	57%	NR	NR	NA	1	1	Yes
Laurelhurst Village	NR	NR	NR	NA	2	2	Yes
Lawrence Convalescent Center	35%	NR	NR	NA	1	2	Yes
Life Care Center of Coos Bay	54%	NR	NR	NA	3	2	No
Lifecare Center of McMinnville	34%	NR	100%	NA	2	1	Yes
Lincoln City Rehabilitation Center	64%	NR	NR	NA	2	2	No
Linda Vista Nursing and Rehab.	82%	NR	NR	NA	3	2	Yes
Marian Estates	1%	1%	NR	NA	1	1	Yes
Marquis Care at Autumn Hills	33%	NR	NR	NA	2	2	Yes
Marquis Care at Centennial	42%	100%	0%	36%	1	2	Yes
Marquis Care at Forest Grove	94%	NR	NR	NA	1	1	Yes
Marquis Care at Hope Village	32%	NR	NR	NA	2	1	No
Marquis Care at Mt. Tabor	30%	NR	NR	NA	1	1	No
Marquis Care at Newberg	65%	100%	100%	86%	2	2	Yes
Marquis Care at Oregon City	67%	NR	NR	NA	1	1	No
Marquis Care at Piedmont	13%	NR	NR	NA	1	2	No
Marquis Care at Plum Ridge	53%	NR	NR	NA	2	1	Yes
Marquis Care at Powellhurst	58%	NR	NR	NA	2	1	Yes
Marquis Care at Silver Gardens	46%	NR	NR	NA	1	1	No
Marquis Care at Springfield	66%	20%	100%	64%	1	1	No
Marquis Care at Vermont Hills	59%	NR	NR	NA	1	1	No
Marquis Care at Wilsonville	22%	NR	NR	NA	1	2	No
Mary's Woods at Marylhurst	42%	NR	NR	NA	1	3	Yes
Maryville Nursing Home	52%	33%	50%	52%	3	3	Yes
Meadow Park Health and Speciality Care Center	41%	NR	NR	NA	2	1	Yes
Medford Rehabilitation and Healthcare Center	84%	NR	NR	NA	2	3	Yes
Menlo Park Health Care	79%	100%	100%	80%	3	2	Yes
Mennonite Home	46%	88%	NR	NA	2	2	Yes
Milton Freewater Health & Rehabilitation Center	83%	50%	67%	81%	1	2	Yes
Milwaukie Convalescent Center	79%	NR	NR	NA	2	3	Yes
Mirabella Portland	NR	NR	NR	NA	1	3	No
Molalla Manor Care Center	48%	NR	NR	NA	1	2	Yes
Myrtle Point Care Center	47%	NR	0%	NA	2	3	No

## Long-Term Care Facility Healthcare Worker Flu Vaccination Rates, 2010-2011

Long-Term Care Facility	Vaccination Rates				Count of reported vaccine delivery methods	Count of reported vaccine promotion methods	Formal education conducted?
	Employees	Non-Employees, Credentialed	Non-Employees, Other	Total			
Nehalem Valley Care Ctr.	54%	NR	83%	NA	1	2	No
Oakwood Country Place	86%	NR	NR	NA	1	1	Yes
Ochoco Care Center	52%	NR	NR	NA	2	2	Yes
Oregon City Health Care	42%	NR	NR	NA	1	1	No
Oregon Veterans' Home	78%	57%	58%	76%	5	3	Yes
Pacific Health and Rehabilitation	30%	NR	NR	NA	2	2	Yes
Park Forest Care Center	27%	NR	NR	NA	1	1	No
Pearl at Kruse Way, The	22%	NR	NR	NA	3	2	No
Pilot Butte Rehab Center	55%	NR	NR	NA	1	1	Yes
Pioneer Nursing Home Health District	53%	NR	50%	NA	2	1	Yes
Porthaven Healthcare Center	53%	17%	NR	NA	2	4	Yes
Portland Health and Rehabilitation	77%	NR	NR	NA	3	2	Yes
Presbyterian Community Care Center	76%	NR	NR	NA	2	1	Yes
Providence Benedictine Nursing Center	70%	NR	NR	NA	3	3	Yes
Providence Child Center	77%	NR	NR	NA	3	3	Yes
Providence Seaside Long-Term Care	80%	NR	NR	NA	4	3	Yes
Redmond Health Care Center	49%	NR	NR	NA	1	1	No
regency albanay	42%	NR	NR	NA	2	1	No
Regency Florence	32%	NR	NR	NA	2	1	No
Regency Gresham Nursing and Rehabilitation Center	51%	NR	NR	NA	1	2	Yes
Regency Hermiston Nursing and Rehabilitation Center	73%	NR	NR	NA	2	2	Yes
Robison Jewish Health Center	43%	100%	NR	NA	3	2	No
Rogue Valley Manor	33%	NR	NR	NA	2	2	Yes
Rose City Nursing Home	34%	NR	33%	NA	2	1	No
Rose Haven Nursing Center	69%	NR	NR	NA	2	2	Yes
Rose Linn Care Center	NR	NR	NR	NA	1	1	Yes
Rose Villa Senior Living	42%	NR	NR	NA	1	2	Yes
Royale Gardens Health and Rehabilitation Center	63%	NR	NR	NA	1	1	Yes
Sheridan Care Center	61%	NR	NR	NA	2	1	Yes
Sherwood Park Nursing and Rehab	85%	NR	NR	NA	1	1	No
South Hills Rehab Center	70%	NR	100%	NA	4	1	Yes
Sunnyside Care Center	29%	NR	NR	NA	3	1	No
The Dalles Health and Rehabilitation Center	42%	100%	NR	NA	2	2	No
Tierra Rose Care Center	48%	NR	NR	NA	2	2	No
Timberview Care Center	47%	NR	NR	NA	1	1	No
Town Center Village Rehab	NR	NR	NR	NA	1	1	No
Trinity Mission Health & Rehab of Portland, LLC	77%	NR	NR	NA	2	1	Yes
Trinity St. Elizabeth - Saint Alphonsus Care Center-Baker City	56%	NR	NR	NA	2	2	No
Umpqua Valley Nursing & Rehabilitation Center	70%	NR	NR	NA	3	2	Yes
Valley West Health Care Center	40%	NR	NR	NA	2	1	No
Hillside Retirement-The Village at Hillside	0%	NR	NR	NA	1	2	Yes
Village Health Care	28%	NR	NR	NA	3	1	Yes
Village Manor	NR	NR	NR	NA	1	1	No

## Long-Term Care Facility Healthcare Worker Flu Vaccination Rates, 2010-2011

Long-Term Care Facility	Vaccination Rates				Count of reported vaccine delivery methods	Count of reported vaccine promotion methods	Formal education conducted?
	Employees	Non-Employees, Credentialed	Non-Employees, Other	Total			
Vista Specialty Care	25%	NR	NR	NA	1	1	No
Wallowa Valley Care Center	64%	NR	NR	NA	1	1	No
West Hills Health & Rehabilitation	98%	NR	NR	NA	4	2	Yes
Willamette View Health Center	82%	100%	NR	NA	3	1	No
Willowbrook Terrace	68%	NR	NR	NA	1	3	Yes
Windsor Health and Rehabilitation Center	68%	NR	NR	NA	1	1	No

NR = Not Reported. The facility did not report total count of HCW and count of HCW vaccinated.

NA = Not Available. If a facility did not provide data for all three categories of workers (employees; non-employees, (non-employees, credentialed; non-employees, other), the total vaccination rate could not be calculated.

### Vaccination delivery methods:

Mobile Carts

Centralized mass vaccination fairs

Peer vaccinators

Provided vaccination in congregate areas (e.g., conferences/meetings or cafeteria)

Provided vaccination at occupational health clinic

Other

### Vaccination promotion methods:

No formal promotional activities are planned (was not counted as a method)

Incentives

Reminders by mail, email or pager

Coordination of vaccination with other annual programs (e.g., tuberculin skin testing)

Required receipt of vaccination for credentialing (if no contraindications)

Campaign including posters, flyers, buttons, fact sheets

Other



***Office for***  
**Oregon Health Policy and Research**

**Ambulatory Surgical Centers**  
**Survey on Elements of Patient Safety Performance**

**January 2012**



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## EXECUTIVE SUMMARY

This is the first report in Oregon to provide information on infection control practices in all 85 ASCs in the state. Findings are summarized below for five topics of the report.

**ASC Characteristics.** Of the 85 ASCs operating in Oregon as of May 2011, ASCs have been in operation an average of 10 years, with one facility that opened 40 years ago and two in 2011. The majority of Oregon ASCs began operating between 1996 and 2010, during which 70 facilities opened. Twenty-two percent (18) of Oregon ASCs are accredited by a federally recognized accrediting body. In Oregon, 88% (74) of ASCs have physician partners who perform surgeries in the center that own part or all of the facility. The primary specialties of ASCs are as follows: 25% (23) gastrointestinal endoscopy, 22% (19) ophthalmologic, 16% (14) orthopedics, 12% (10) plastic/reconstructive, and 7% (6) pain management. These five categories represent 84% of the ASCs in Oregon.

**Staff Training in Infection Control.** Ninety-one percent (77) of Oregon ASCs have registered nurses (RN) who are responsible for infection control. Most ASCs (98%) indicated that the person responsible for infection control is an ASC employee. Of the 85 ASCs in Oregon, 13% (11) have staff with a certificate in infection control from the Certification Board for Infection Control and Epidemiology, and two additional ASCs indicate staff is in process of obtaining this certification. Of the 74 ASCs that do not have a certified person in charge of infection control, about half (48%, n=41) indicated they had attended infection control trainings sponsored by the state ASC association. All ASCs noted that nursing staff were trained in infection control procedures, and higher training rates were reported for staff responsible for equipment disinfection (95%, n=81) and staff providing direct patient care (91%, n=77).

**Infection Control Program.** All ASCs reported using one or more national infection control guideline for its infection control program. In its Action Plan to address HAIs, the US Health and Human Services recommends that ASCs conduct regular self-audits on infection control practices using the CMS Audit Tool. Ninety-five percent (80) of ASCs report they conduct infection-control self-audits, and the most frequently reported interval is quarterly or more frequently (57%, n=48). Sixty-nine percent of ASCs (59) use the CMS tool for self-audits. Most (78%, n=66) ASCs educate patients about methods to reduce infections after the procedure in their discharge plans.

**Infection Control Practices.** ASCs reported on specific infection control practices, such as policies for the use of gloves and equipment decontamination. Twenty ASCs provided answers that are outside the standard scope of practice. Seventy-six percent (65) of ASCs provided answers consistent with federal guidelines for infection control.

**Post-Discharge Surveillance.** When asked about the main methods to identify post-discharge infections, the majority (72%; n=61) of ASCs reported that they rely on the physician performing the procedure to report it back to the ASC. Sixty-six percent (56) of ASCs noted they did not use an electronic data system to track post-discharge infections. Seventy-eight percent (66) of ASCs reported using one or more of the following post-discharge survey methods: patient surveys, surgeon surveys or exchange patient lists with surgeons. Fifty-one percent (43) of ASCs reported conducting surveillance for one month after the procedure for procedures without implants, in accordance with federally recognized standards. Forty-seven percent (33 of 70) reported conducting surveillance for one year for surgeries with implants, in accordance with federally recognized standards. All ASCs reported collecting at least one process measure. Eighty-nine percent (76) ASCs reported collecting one or more outcome measures related to surgical site infections or transmission of infectious agents.

The Healthcare Acquired Infection (HAI) Advisory Committee will review the results of this report to consider the following issues:

1. Reporting of infections for selected procedures based on morbidity/mortality and volume in the state.
2. The use of standard federally recognized infection control definitions and measurement tools.
3. Standards for infection prevention in patient education and discharge reports for all ASCs.
4. The communication of standards in the use of data and reporting of process and outcome measures within the ASC.

The Oregon Patient Safety Commission (OPSC) and the Oregon Healthcare Regulation and Quality Improvement (OHRQI) have initiated measures to improve infection control training in the state. It has developed a model infection control program for ASCs. As of December 2011, it has offered three trainings for ASCs in infection control and will hold two additional trainings in the spring of 2012. Between April 2012 and July 2013, it will offer five additional trainings for ASCs on the topic of infection control. These trainings will include materials to train all ASC staff in infection control procedures, such as hand hygiene and environmental cleaning.

## BACKGROUND

An Ambulatory Surgical Center (ASC) is a healthcare facility in which procedures that do not require an overnight stay are conducted. ASCs perform a wide range of procedures. In the 1980s and 1990s, many surgeries and procedures that used to be performed exclusively in hospitals began taking place in ASCs. Typical surgical procedures conducted in ASCs include endoscopies and colonoscopies (including removal of identified polyps), orthopedic procedures, plastic/reconstructive surgeries, and eye, foot, and ear/nose/throat surgeries.

Recently, there has been much focus on HAIs associated with ASCs. In 2008, an outbreak of Hepatitis C was traced to two gastrointestinal specialty ASCs in Nevada. It was estimated that 40,000 individuals were potentially exposed to Hepatitis C and other infectious agents and the attendant alert to these individuals was the largest public health notification in US history.<sup>1</sup> The cause of the outbreak was traced to lapses in infection control, including reusing syringes and drawing medication to be injected into multiple patients from single-dose vials. Subsequent inspections of other ASCs in other states found similar problems, suggesting that such lapses are not isolated events.<sup>2,3</sup>

This report is part of the Healthcare Acquired Infections (HAI) Reporting Program, promulgated in ORS 442.851, Notes Following, and OARs 409-023-0000 through 409-023-3500. It summarizes the results of a survey conducted by the Office for Oregon Health Policy and Research (OHPR) of 86 free-standing ASCs in Oregon on evidence-based elements of patient safety performance. The goal of this survey is to provide an overview of current safety practices in ASCs, and to provide information for policymakers, providers, professional associations, and the public. The Oregon HAI Advisory Committee will use this data to evaluate reporting and other policies for ASCs related to HAI.

The survey tool is presented in Appendix A. A list of acronyms for the report is in Appendix B.

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<sup>1</sup> Fisher, GE et al., Hepatitis C virus infections from unsafe injection practices at an endoscopy clinic in Las Vegas. *Clin Infect Dis* 2010 Aug 1;51(3):267-73.

<sup>2</sup> Schaefer, MK, et al. Infection control assessment of ambulatory surgical centers. *JAMA* 2010 Jun 9 303(22):227-39.

<sup>3</sup> US Government Accountability Office, February 2009. Health-care associated infections. HHS action needed to obtain representative data on risks in ambulatory surgical centers. GAO-09-213.

## METHODS

A standard survey to collect data on patient safety best practices in ASCs did not exist, so the following resources were consulted to create this survey:

- Phase 2 of the US Department of Health and Human Services Action Plan to Prevent Healthcare Associated Infections<sup>4</sup>
- The Centers for Medicare and Medicaid Services (CMS) Infection Control Audit Tool for Ambulatory Surgical Centers<sup>5</sup>
- The Washington State Department of Health Post-Discharge Surgical Site Infection Surveillance Practice Survey<sup>6</sup>
- Input from the HAI Advisory Committee and Dana Selover, MD, MPH, Office of Community Health and Health Planning, Oregon Health Authority

The survey was field tested by the ambulatory surgical center subcommittee. The final survey was input into Survey Monkey and distributed to the administrators of 86 ASCs via email on March 1, 2011, with a due date of March 31, 2011. Follow-up calls were made to facilities that did not complete the survey within the allotted time. During the survey fielding period, OHPR learned that of the 86 ASCs addressed in the survey, two ASCs had closed and one had opened. Thus, the survey represents the 85 ASCs opened in the Oregon during the data collection period, and OHPR received surveys from all 85 Oregon ASCs.

## RESULTS

The survey consisted of five parts:

- ASC Characteristics

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<sup>4</sup> US Department of Health and Human Services. Action Plan to Prevent Healthcare Associated Infections: Phase 2: Ambulatory Surgical Centers, End-Stage Renal Dialysis Facilities, and Increasing Influenza Vaccination among Healthcare Personnel. [http://www.hhs.gov/ash/initiatives/hai/tier2\\_ambulatory.html](http://www.hhs.gov/ash/initiatives/hai/tier2_ambulatory.html). Accessed 7/4/2011.

<sup>5</sup> Centers for Medicare and Medicaid. Exhibit 351, Ambulatory Surgical Center Infection Control Surveyor Worksheet (Rev. 68 Issued: 11-24-10, Effective: 11-24-10, Implementation: 11-24-10). [http://www.cms.gov/manuals/downloads/som107\\_exhibit\\_351.pdf](http://www.cms.gov/manuals/downloads/som107_exhibit_351.pdf). Accessed 7/4/2011.

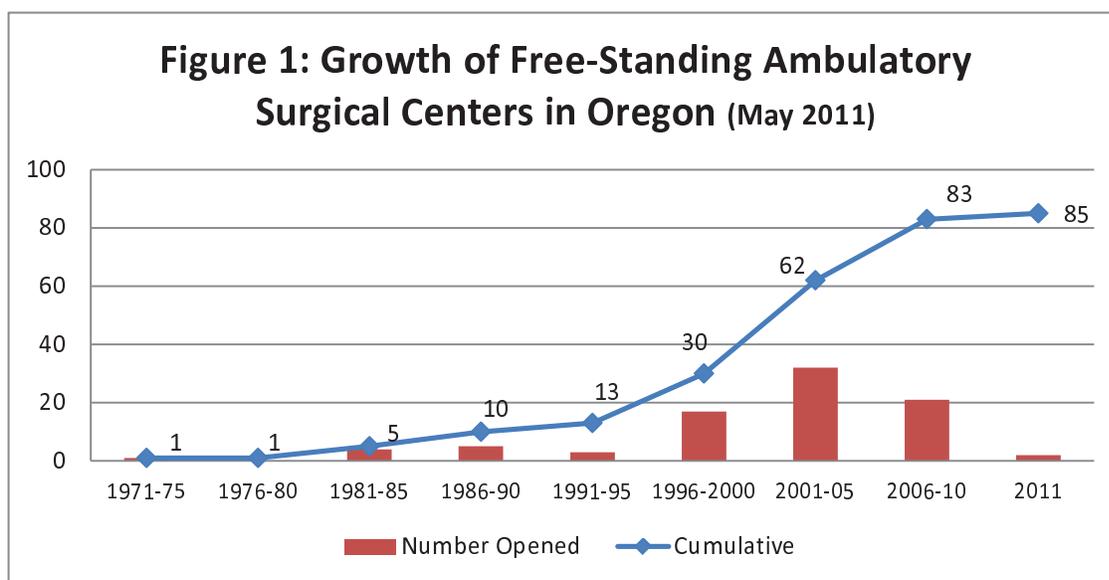
<sup>6</sup> Zarate R, Birnbaum D. Post-Discharge Surgical Site Infection Surveillance in Washington Acute Care Hospitals. Abstract #1060568. Council of State & Territorial Epidemiologists annual conference, Pittsburgh Pennsylvania, June 2011.

- Staff Training
- Infection Control Program
- Infection Control Practices, and
- Post-Discharge Surveillance and Reporting.

This document summarizes results from each section.

**ASC Characteristics**

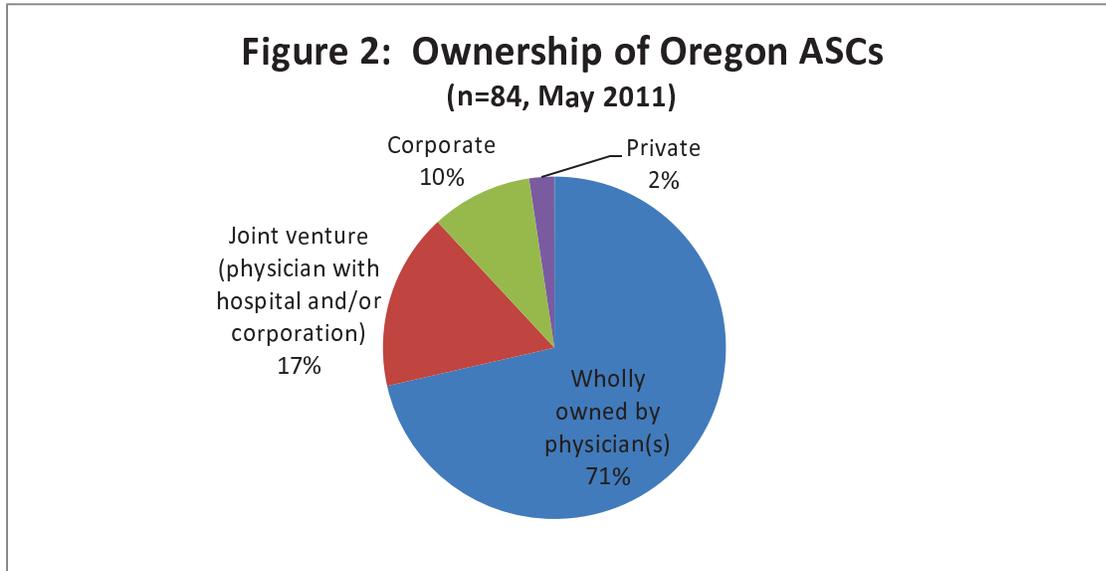
Of the 85 ASCs operating in Oregon as of May 2011, ASCs have been in operation an average of 10 years, with one facility that opened 40 years ago and two in 2011. The majority of Oregon ASCs began operating between 1996 and 2010, during which 70 facilities opened. *Figure 1* shows the count of ASCs opened by period and the cumulative count for Oregon ASCs in operation as of May 2011.



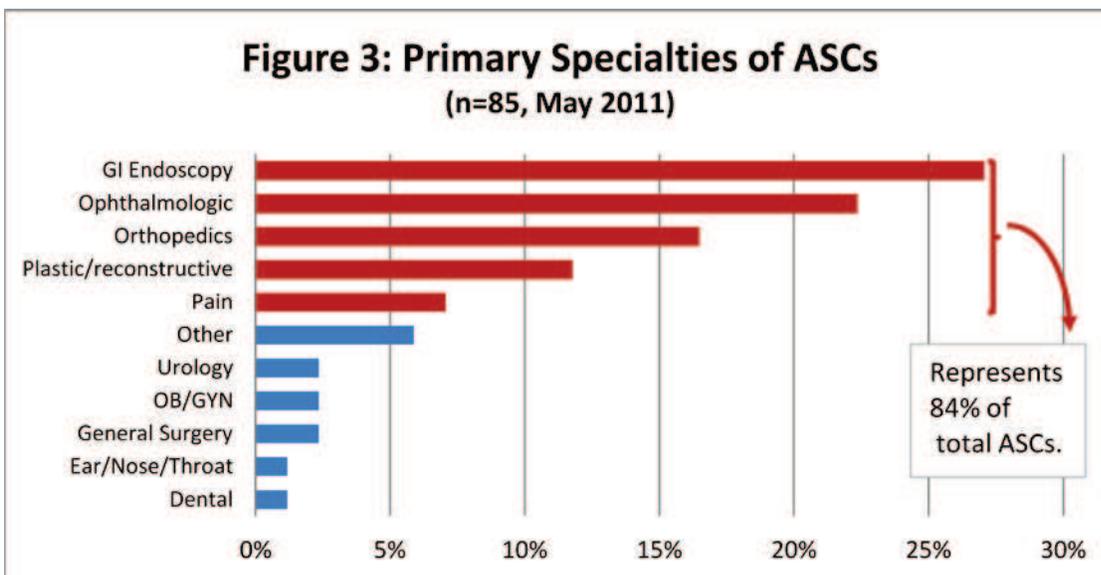
Currently, CMS recognizes four accrediting organizations that it allows to survey ASCs for CMS standards. Twenty-two percent (18) of Oregon ASCs are accredited by a federally recognized accrediting body. Twelve percent (10) are accredited by the Association for Ambulatory Health Care (AAHC), 6% (5) by the Joint Commission, and 4% (3) by the American Association of Ambulatory Surgery Facilities (AAASF). No ASC reported accreditation by the American Osteopathic Association (AOA).

ASCs have different ownership models. In Oregon, 88% (74) of ASCs have physician partners who perform surgeries in the center that own part or all of the facility (see *Figure 2*). Of these 74 ASCs, 60 (71% of total ASCs) are wholly owned by physicians and 14 (17%) are held as joint

ventures with physicians, hospitals and/or corporations. Twelve percent (10) do not have physician ownership. Of these ten facilities, 8 (10% of total ASCs) are owned by a corporation and 2 (2%) are privately owned.



ASCs perform a variety of outpatient procedures. When asked for their primary specialty, 25% (23) indicated gastroenterology endoscopy, 22% (19) ophthalmologic, 16% (14) orthopedics, 12% (10) plastic/reconstructive, and 7% (6) pain management (*Figure 3*). These five categories represent 84% of the ASCs in Oregon. The remaining categories (urology, OB/GYN, general surgery, ear/nose/throat) each comprise less than 3% of ASCs. The “other” category include multispecialty, orthognathic, gynecology, neurosurgery, and spine surgery by neurosurgeons.



When asked if the ASC performed additional procedures beyond its specialty, all but one ASC indicated additional procedures were performed. The top four additional procedures were pain management (35%, n = 30), ophthalmologic (35%, n = 30), GI endoscopy (29%, n = 25), and general surgery (27%, n = 23). The average ASC has 3 procedure rooms, with a range of 1 to 11 procedure rooms per ASC in the state.

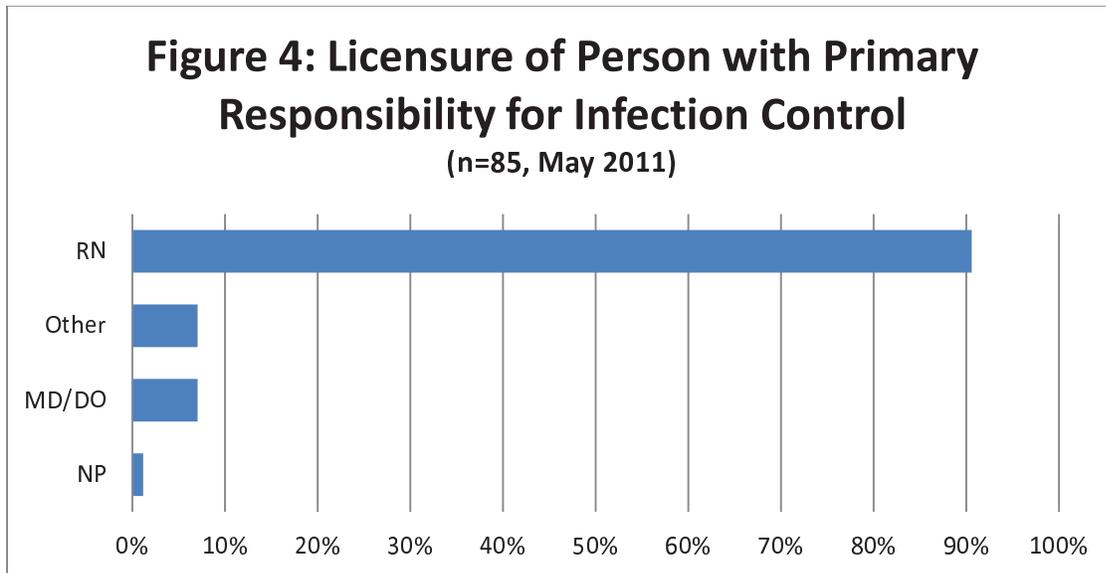
ASCs were also analyzed by volume of procedures performed in the state. *Table 1* lists the top 10 principle procedures performed by ASCs in 2009 and the percentage of total procedures represented by each category. Of the top ten principle procedures (representing 37% of the total), five of them are performed by gastrointestinal (GI) ASCs and represent a quarter of ASC procedures performed in the state during 2009. This data is from a separate OHPR data collection effort, not from the survey.

<b>Rank</b>	<b>Procedure</b>	<b>Count</b>	<b>Percentage</b>
<b>1</b>	Diagnostic Colonoscopy	16,262	8.5%
<b>2</b>	Colonoscopy and Biopsy	13,064	6.8%
<b>3</b>	Cataract Surgery, with Insertion of Intraocular Lens Prosthesis, 1 Stage	9,826	5.1%
<b>4</b>	Lesion Removal Colonoscopy	8,559	4.5%
<b>5</b>	Upper GI Endoscopy, Biopsy	7,793	4.1%
<b>6</b>	Injection Foramen, Epidural Lumbar/Sac	5,611	2.9%
<b>7</b>	Abortion	3,002	1.6%
<b>8</b>	After Cataract Laser Surgery	2,557	1.3%
<b>9</b>	Cystoscopy (endoscopy of the urinary bladder via the urethra)	2,519	1.3%
<b>10</b>	Upper GI Endoscopy, Diagnosis	1,915	1.0%

<sup>7</sup> Office for Oregon Health Policy and Research, Analysis of 2009 ASC Discharge Data based on data available as of June 30, 2011, Oregon Health Authority.

### **Staff Training in Infection Control**

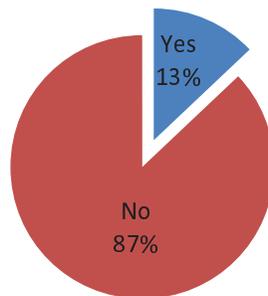
As required by state licensure, each ASC is required to have a person charged with primary responsibility for the infection control program at the ASC. Ninety-one percent (77) of Oregon ASCs have registered nurses (RN) who are responsible for infection control. Six ASCs have physicians (MD/DO) that are charge of infection control. Other responses include instrument technician, certified medical assistant, and medical technologist with American Society for Clinical Pathology certification. *Figure 4* presents licenses held by the person responsible for infection control in ASCs.



Most ASCs (98%) indicated that the person responsible for infection control was an ASC employee. One ASC indicated that the person responsible for infection control was a contractor. ASCs reported that on average this person spent 6 hours per week on infection control; one ASC reported no hours spent on infection control and 18% (15) reported spending 10 or more hours on infection control per week. No relationship was noted between procedure room counts and specialty type and the hours reported spent on infection control per week.

An internationally recognized standard of mastery of infection control knowledge in health care is the Certified in Infection Control certificate offered by the Certification Board for Infection Control and Epidemiology (CBIC). Of the 85 ASCs in Oregon, 13% (11) have staff with a certificate in infection control from CBIC; two additional ASCs indicate staff is in process of obtaining this certification, as noted in *Figure 5*.

**Figure 5: Percentage of Centers with Certified\* Person in Charge of Infection Control (n=85, May 2011)**



\* Certified by the Certification Board for Infection Control and Epidemiology

Two additional facilities reported certification in progress.

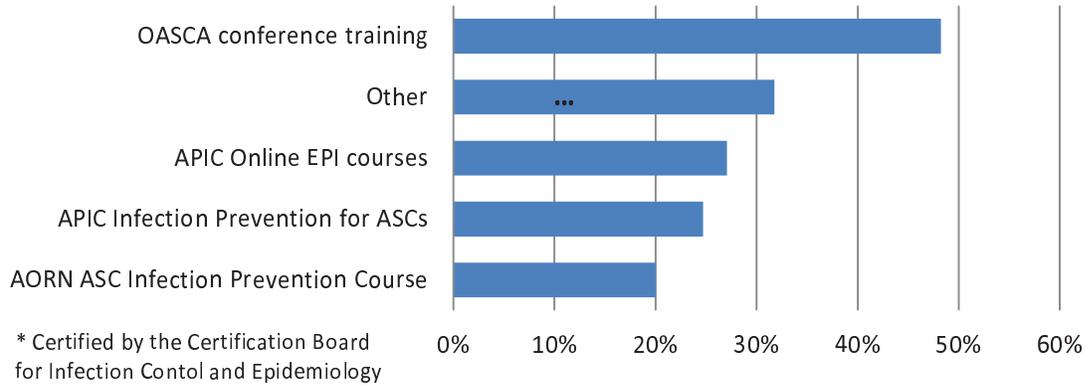
In *Figure 6*, of the 74 ASCs that do not have a certified person in charge of infection control, about half (48%, n=41) indicated they had attended an Oregon Ambulatory Surgical Center Association (OASCA) training<sup>8</sup>. Thirty-two percent (27) of respondents cited other infection prevention training, which included corporate and national training programs, the New York State Mandatory Training program for ASCs, other APIC trainings, and CDC and Occupational Safety and Health Administration (OSHA) training programs. Between 20 and 27% of respondents indicated they had attended professional infection control trainings, which include APIC epidemiology courses, APIC courses for infection control in ASCs, and the ASC course developed by the Association of periOperative Registered Nurses (AORN).

Four ASCs did not report participating in the standard infection control trainings. Of these ASCs, two indicated that the person in charge of infection control was new to the position and a future training program was identified; of the other two, it was listed that “RN” and “MD” consisted of their infection control training.

<sup>8</sup> It should be noted that although the Oregon Patient Safety Commission is conducting an infection control training at the OASCA conference in 2011, OASCA does not have a regular, annual infection control training program based on federally recognized standards.

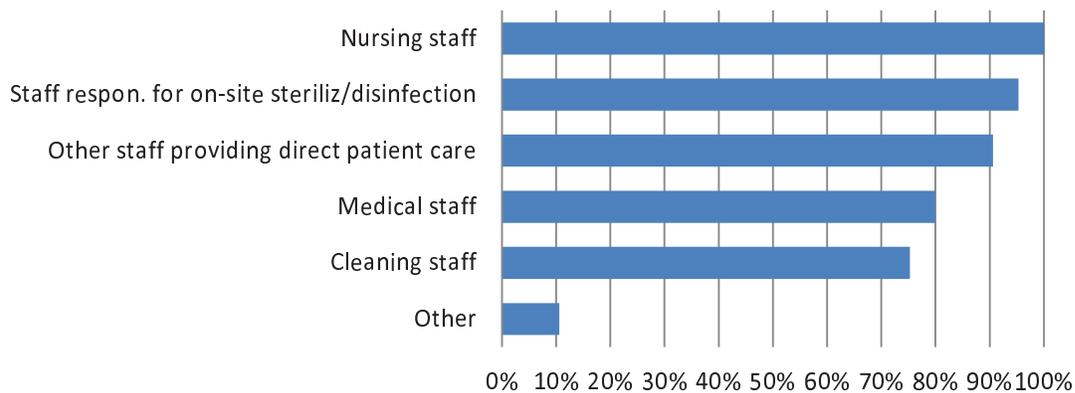
**Figure 6: Training for Non-Certified\* Persons in Charge of Infection Control**

(n=74, May 2011)

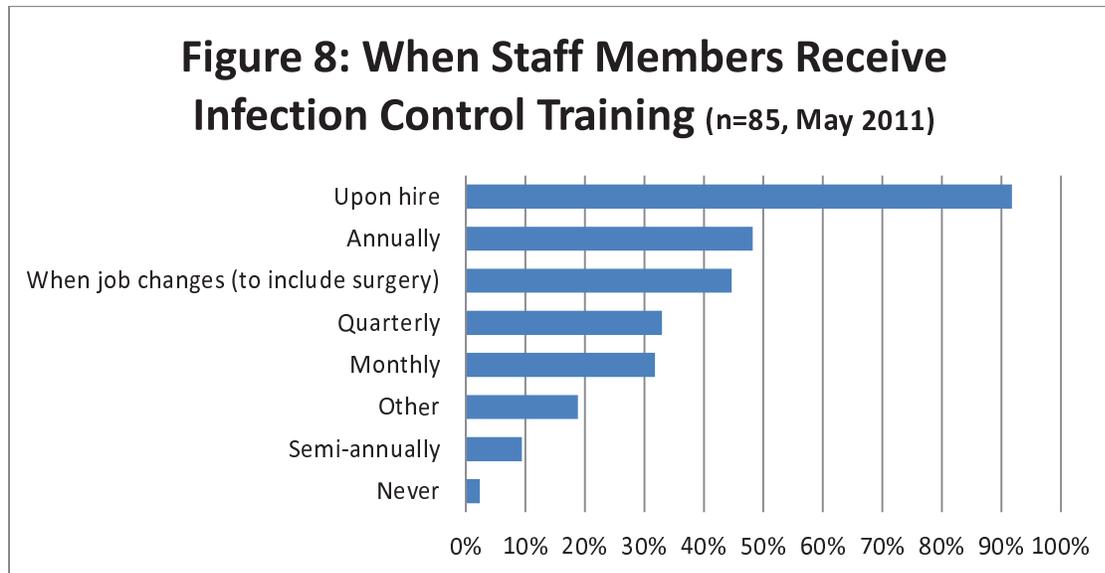


Training in infection control practices extends beyond the primary person responsible for infection control. All ASCs noted that nursing staff were trained in infection control procedures. About half (42) of ASCs reported all five staff categories included in the survey were trained in infection control practices; 28% (24) reported four staff categories were trained (*Figure 7*). Higher training rates were reported for staff responsible for equipment disinfection (95%, n=81) and staff providing direct patient care (91%, n=77; see *Figure 7*). Lower rates were noted for medical staff and cleaning staff of 80% (68) and 75% (64), respectively. The “other” category included front office staff, vendors, and all staff that work in the surgery center.

**Figure 7: Staff Members that Receive Infection Control Training (n=85, May 2011)**



The survey included a question about when staff receive training in infection control. Ninety-two percent (78) of ASCs responded that staff were trained upon hire (*Figure 8*). With respect to the interval of training, 48% (41) indicated staff were trained annually, 33% (28) quarterly, and 32% (27) monthly. Forty-five percent (38) indicated that training occurs when a job changes to include surgery involvement. The “other” category generally represented trainings occurring more frequently than monthly, including daily, periodically, at staff meetings, and whenever new information was available or policy changed. Two ASCs responded that staff were never trained in infection control.

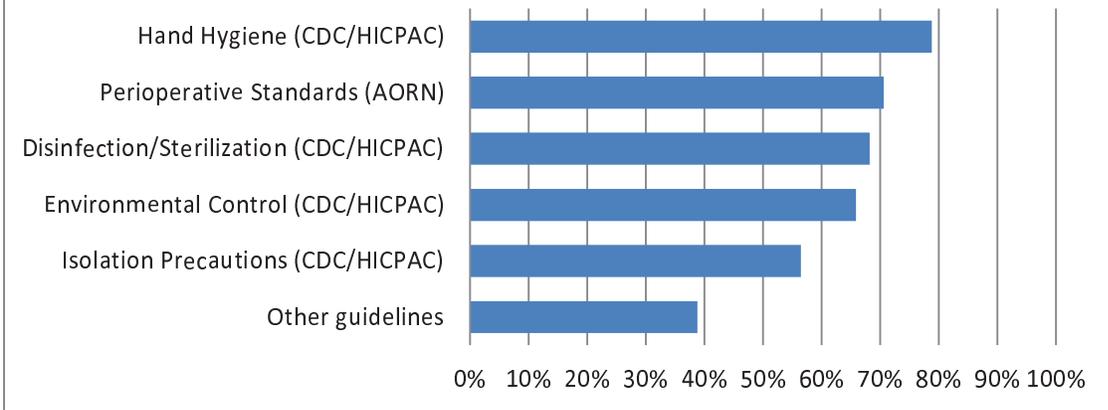


### **Infection Control Program**

To meet state and federal guidelines, ASCs maintain an active infection control program to minimize infections and communicable diseases. Seventy-nine Oregon ASCs provided information on when its infection control program was most recently updated. On average, ASCs had updated their programs in the past seven months. The time reported since the most recent update ranged from less than one month (11 ASCs) to 23 months (1 ASC).

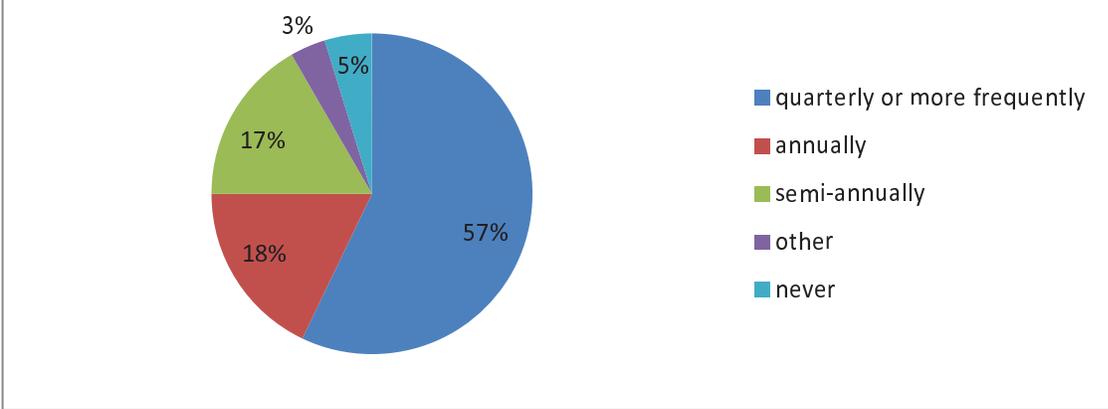
All ASCs reported using one or more national infection control guideline for its infection control program (*Figure 9*). Seventy-nine percent (67) indicated that they used hand hygiene guidelines issued by the Centers for Disease Control and Prevention (CDC)/Healthcare Infection Control Practices Advisory Committee (HICPAC). Between 66% and 71% cited the following CDC/HICPAC standards: Perioperative Standards for Recommended Practices, Disinfection and Sterilization in Healthcare Facilities, and Environmental Infection Control in Healthcare Facilities. In the other category, ASCs noted a number of other guidelines, most notably APIC (16%; n=14), Society of Gastroenterology Nurses and Associations (SGNA; 13% n=11), and Association for the Advancement of Medical Instrumentation (AAMI; 12%, n=10).

**Figure 9: National Infection Control Guidelines selected by ASCs (n=85, May 2011)**



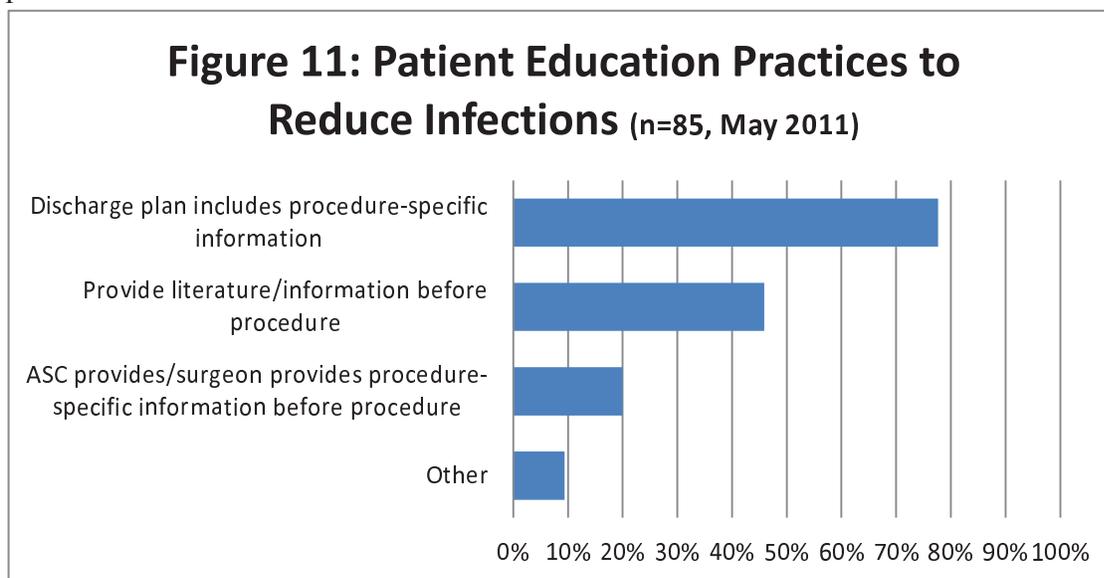
One recommendation of the HHS Action Plan for ASCs to prevent HAI is to conduct self-audits on infection control practices using the CMS Audit Tool. Ninety-five percent (80) of ASCs report they conduct infection-control self-audits, and the most frequently reported interval is quarterly or more frequently (57%, n=48; *Figure 10*). Four ASCs indicated they have never conducted a self-audit for infection control.

**Figure 10: Frequency of Self-Audits for Infection Control Standards (n=85, May 2011)**



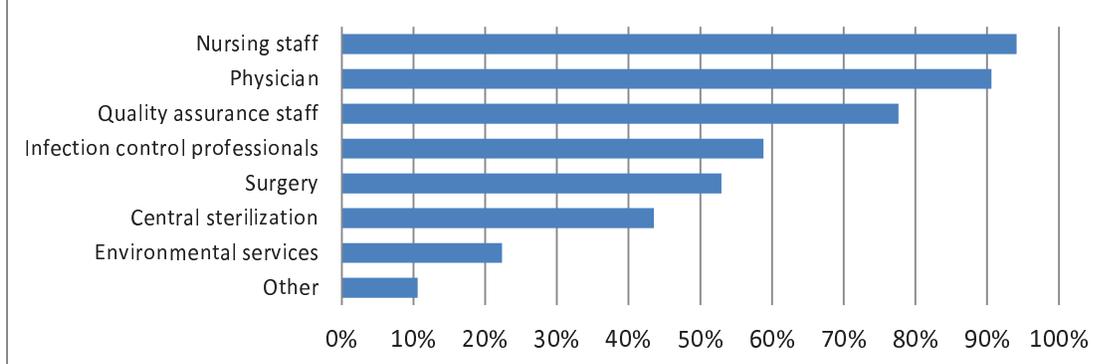
Most ASCs (69%, n=59) are using the CMS tool for self-audits. About one-third (31%; n=26) are using other tools, which include those created by professional societies, such as AAASF, OSHA, AAHC, as well as the CDC hand hygiene and safe injection practices, and the AORN Perioperative Competencies. Twelve ASCs report using self-created tools.

Most (78%, n=66) ASCs educate patients about methods to reduce infections after the procedure in its discharge plan (*Figure 11*). Forty-six percent (39) report two or more methods to educate patients. About half (46%, n=39) of ASCs provide general literature to patients before the procedure, and 20% (17) provide procedure-specific information regarding infection prevention before the procedure. Other education methods were noted as computer-based education modules, infection prevention literature (i.e., regarding hand hygiene and droplet transmission) in the preoperative area, and providing chlorhexidine scrub and instructions for its use before the procedure.



Ninety-five percent (81) of ASCs have a written plan in place to respond to an infection outbreak. Four ASCs reported they did not have such a plan. ASCs also reported on the groups/organizations that are represented in the committee that oversees infection control for its facility. Most ASCs reported nursing staff (94%, n=80) and physicians (91%, n=77) were represented on this committee (see *Figure 12*). A majority reported participation by quality assurance (78%, n=66), infection control professionals (59%, n=50) and surgery (53%, n=45). The “other” category included anesthesia services and clinical directors.

**Figure 12: Representation in Governing Body/Committee that Oversees Infection Control Practice (n=85, May 2011)**



**Infection Control Practices**

In this section of the survey, ASCs reported on specific infection control practices, such as policies for the use of gloves and equipment decontamination (see *Table 2*). Seventy-six percent (65) of ASCs provided answers consistent with federal guidelines for infection control. Twenty ASCs provided answers that are outside the standard scope of practice. Out of the 13 categories of practice, 85% (11) contain responses that are outside the scope of standard practices; these responses are flagged in red in *Table 2*.

**Table 2: Infection Control Practices Reported by ASCs (n=85, May 2011)**

Infection Control Practice	Never	Rarely	Sometimes	Often	Always	Not Applicable
Staff wear gloves for procedures that might involve contact with blood or bodily fluids	0	0	0	1	83	1
Staff wears gloves when handling potentially contaminated patient equipment.	0	0	0	3	81	1
Staff remove gloves before moving to next task or patient	0	0	0	4	80	1
Needles and syringes are	0	0	0	0	84	1

**Table 2: Infection Control Practices Reported by ASCs  
(n=85, May 2011)**

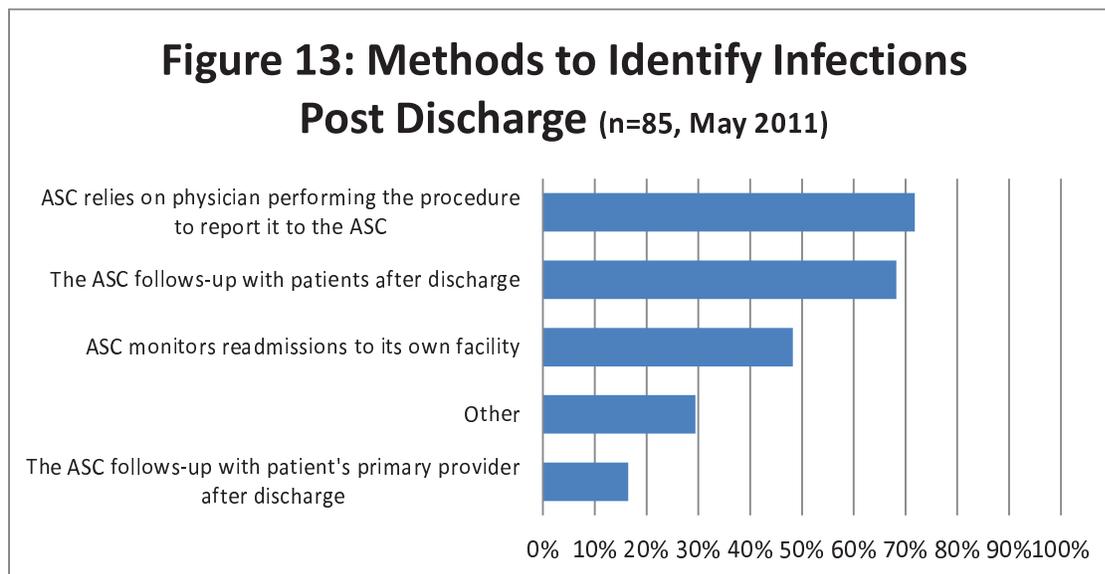
Infection Control Practice	Never	Rarely	Sometimes	Often	Always	Not Applicable
used for only one patient						
Medication vials are always entered with a new needle/new syringe	0	0	0	0	83	1
Single-dose medications used for more than one patient	74	5	3	0	1	2
Prefilled syringes used for more than one patient	76	0	1	0	1	7
High-level disinfectants prepared, tested, and replaced according to manufacturer's instructions	0	0	0	2	71	12
Medical devices and instruments are inspected for visual soil and re-cleaned before high-level disinfection.	1	0	0	1	74	9
Operating rooms are cleaned and disinfected after each surgical or invasive procedure with an EPA-registered disinfectant	1	0	0	2	77	5
Operating rooms are terminally cleaned daily	1	1	1	3	74	5
The glucose meter is cleaned and disinfected after every use	1	0	0	0	78	6
A new single-use auto-disabling lancing device is used for each patient	1	0	0	0	75	9

### Post-Discharge Surveillance

“Epidemiologists often say ‘You can’t prevent what you can’t measure.’ When it comes to healthcare associated infections, we know this holds true.”<sup>9</sup> An ASC faces apparent challenges in measuring infections associated with its procedures. Because patients are only in the ASC for a short period of time, ASCs are required to collect information after the patient’s discharge to identify infections associated with the procedure. The final section of the survey covers the post-discharge surveillance practices. This section includes questions on methods to collect data post discharge, definitions used to identify infections, and metrics collected and reported.

#### Methods to Collect Data Post Discharge

When asked about the main methods to identify post-discharge infections, the majority (72%; n=61) of ASCs reported that they rely on the physician performing the procedure to report it back to the ASC (see *Figure 13*). Sixty-eight percent (58) report they also follow-up with the patient. About half (48%; n=41) of ASCs report monitoring readmissions to its facility. Six facilities reported that the physician’s offices were attached to the ASC, and regular meetings were held to discuss patient follow-up issues. Four ASCs reported that they exchanged patient lists with surgeons, and seven ASCs reported that they follow-up procedures with physicians.



<sup>9</sup> Dr. Arjun Srinivasan, MD, Associate Director for Healthcare-Associated Infection Prevention Programs, Center for Disease Control and Prevention, Division of Healthcare Quality Promotion. Viewpoints: How can caregivers reduce hospital-acquired infections? *The Atlanta Journal Constitution*, June 28, 2011, p. 11.

ASCs were additionally asked to report on three specific post-discharge surveillance methods:

- Patient surveys: in which a patient is contacted by phone, email or postal mail and asked if any infection has occurred post discharge.
- Surgeon surveys: in which the ASC surveys the surgeon via phone, email or postal mail regarding any infections that have occurred for patients during a specific time period.
- Surgeon lists: in which the ASC sends the surgeon a list of patients and has the surgeon sign off by each patient name if an infection has or has not occurred.

Table 3 summarizes the results of this section of the survey. It includes the counts of methods reported by each ASC, the interval at which it conducted the method, and the response rates.

<b>Table 3: Post-Discharge Survey Methods (May 2011)</b>			
	<b>Patient Surveys</b>	<b>Surgeon Surveys</b>	<b>Surgeon Lists</b>
<b>How many facilities reported using this method?</b>			
Count	39	47	46
<b>How often do you send out your survey?</b>			
Weekly	11	4	3
Monthly	6	34	38
Semiannually	2	2	0
Other (typically daily)	20	7	5
<b>What is the return rate for the survey?</b>			
Average	62%	86%	94%
Min	10%	0%	0%
Max	100%	100%	100%
<b>How many prompts are sent to improve the return rate?</b>			
None	25	13	11
One	11	10	10
Two or more	3	24	25

This section of the survey indicates:

- Seventy-eight percent (66) of ASCs reported using one or more of the three methods noted above. Of the total 85 ASCs, 46% conduct patient surveys; 55% conduct surgeon surveys, and 54% exchange patient lists.
- Patient surveys were most often conducted on a daily basis. These surveys also had the lowest return rate and typically ASCs did not send prompts to increase the return rate.

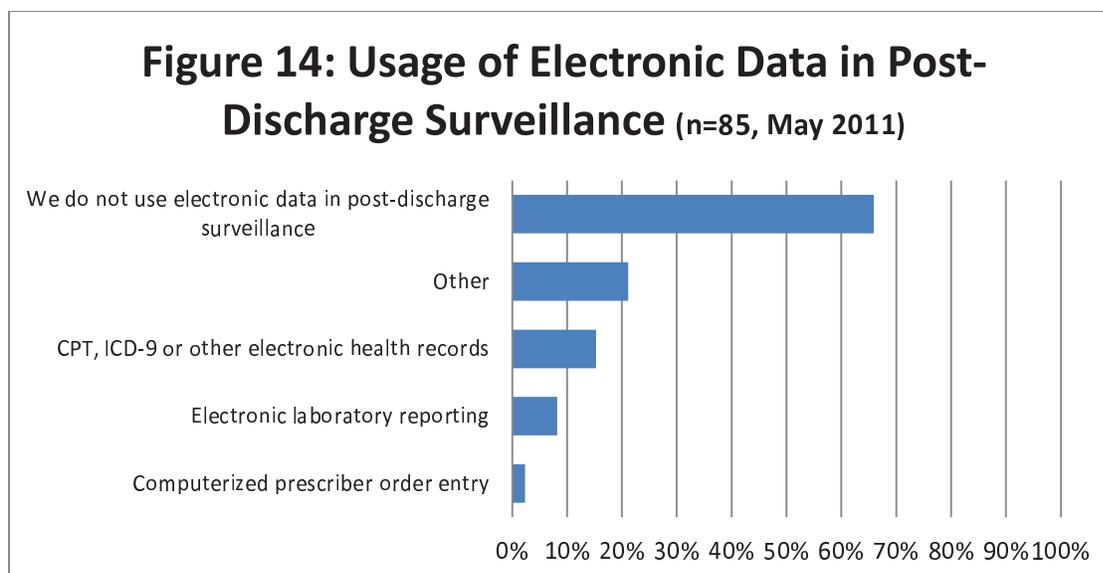
Twenty-two percent (19) ASCs reported using a patient survey in combination with either a surgeon survey or patient list exchange with surgeons.

- Surgeon surveys and the exchange of patient lists with surgeons most often occurred on a monthly basis, had a higher return rate than patient surveys, and more often had two or more prompts to increase the return rate. Sixty-eight percent (55) of ASCs reported using either a surgeon survey or exchanging patient lists with surgeons.

The relationship between the use of prompts to complete surveys and return rates were also evaluated (See *Table 4*). This analysis shows that in general return rates increase with the use of prompts. Patient surveys increased from a 56% return rate with no prompts to over 70% with the use of prompts. Surgeon surveys increased from a 70% return rate to over 95% for facilities that used two or more prompts. The return rate for the exchange of patient lists was over 90% whether or not prompts were used; the highest return rate (98%) was noted for facilities that used one prompt.

	Patient Surveys		Surgeon Surveys		Surgeon Lists	
	Return Rate	N	Return Rate	N	Return Rate	N
<b>No Prompts</b>	56%	25	70%	13	90%	11
<b>One Prompt</b>	71%	11	84%	10	98%	10
<b>Two or More Prompts</b>	76%	3	95%	24	94%	25

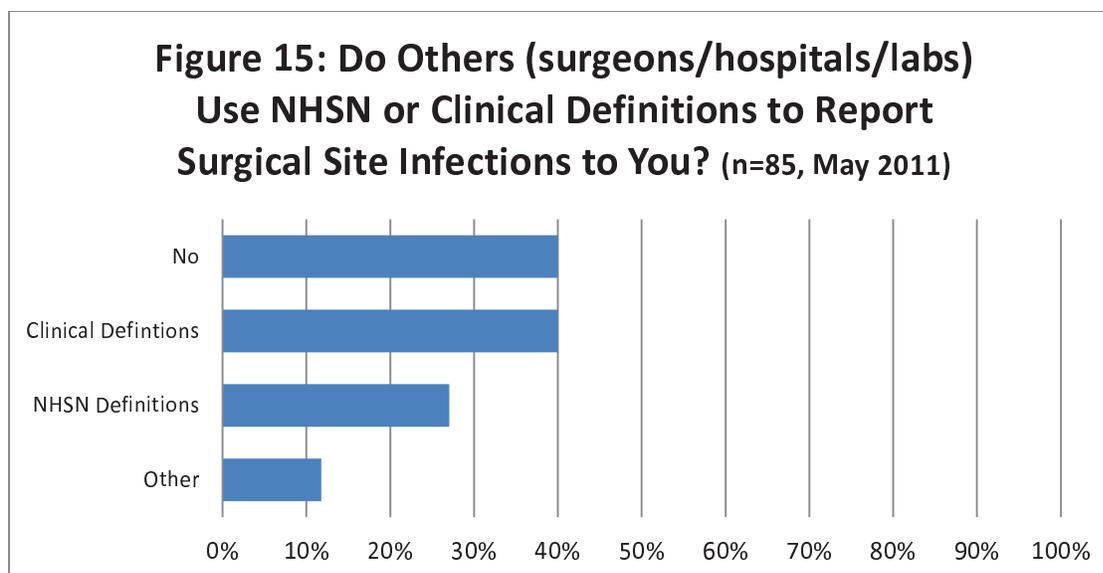
In addition to these survey methods, ASCs were asked if they collected post-discharge surveillance data with electronic systems. Sixty-six percent (56) of ASCs noted they did not use an electronic data system to track post-discharge infections. Fifteen percent (13) noted the use of electronic health records (e.g., CPT, ICD-9) and 8% (7) noted the use of electronic lab reporting. In the “other” category, five ASCs reported the use of electronic medical records, four the use of other commercial tracking programs, three paper or spreadsheet systems, and two the use of an electronic trigger tool. Additional methods are provided in *Figure 14*.



### Definitions used for Infections

For our hospital-based reporting system, OHPR uses the CDC's National Healthcare Safety Network (NHSN) to conduct surveillance for healthcare associated infections. Sixty-five percent (55) of ASCs noted that they did use NHSN definitions to define surgical site infections.

The ASC was also asked if others, such as surgeons, hospitals, laboratories, use NHSN or clinical definitions to report infections to the ASC (*Figure 15*). In response, 40% (34) of ASCs stated that others used clinical definitions and 40% (34) stated neither NHSN nor clinical definitions were used. Twenty-seven percent (23) indicated that others used NHSN definitions to report infections to them. Ten ASCs reported other definitions were used; in this section, respondents noted that it was not known the definitions that were used, or a combination of NHSN and clinical definitions that were used. One ASC cited American Society for Gastrointestinal Endoscopy (ASGE) standards.



ASCs were also asked for the time period post-discharge that surveillance was conducted for infections related to the procedure. The NHSN standard is the surveillance is to be conducted for one month for infections post-discharge without implants and one year for procedures with an implant.<sup>10</sup>

Fifty-one percent (43) ASCs reported conducting surveillance for one month after the procedure for procedures without implants (*Table 5*), in accordance with federally recognized standards. Twenty-one percent (18) reported they did not conduct surveillance. Of these 18 facilities, six reported they rely on physicians to report infections to them, five noted they had office-based ASCs and regular case review is conducted for infections, and two noted this question was not applicable to them. One ASCs noted that with spinal injections infections are evident within 3 days and this clinic performs regular self-audits. Two facilities noted surveillance was not applicable to their facility.

Of the 85 facilities surveyed, 15 were identified as not performing procedures with implants and were excluded from the data set. Forty-seven percent (33 of 70) reported conducting surveillance for one year for surgeries with implants, in accordance with federally recognized standards. Twenty-one percent (15) reported conducting surveillance for one month and 10% (7) for one week. Sixteen percent (11) reported not conducting surveillance.

<sup>10</sup> The NHSN definition of an implant: “a nonhuman-derived object, material, or tissue that is permanently placed in a patient during an operative procedure and is not routinely manipulated for diagnostic or therapeutic purposes. Examples include but are not limited to: porcine or synthetic heart valves, mechanical heart, metal rods, mesh, sternal wires, screws, cements, and other devices.”

[http://www.cdc.gov/nhsn/PDFs/pscManual/16pscKeyTerms\\_current.pdf](http://www.cdc.gov/nhsn/PDFs/pscManual/16pscKeyTerms_current.pdf). Implants also include lenses.

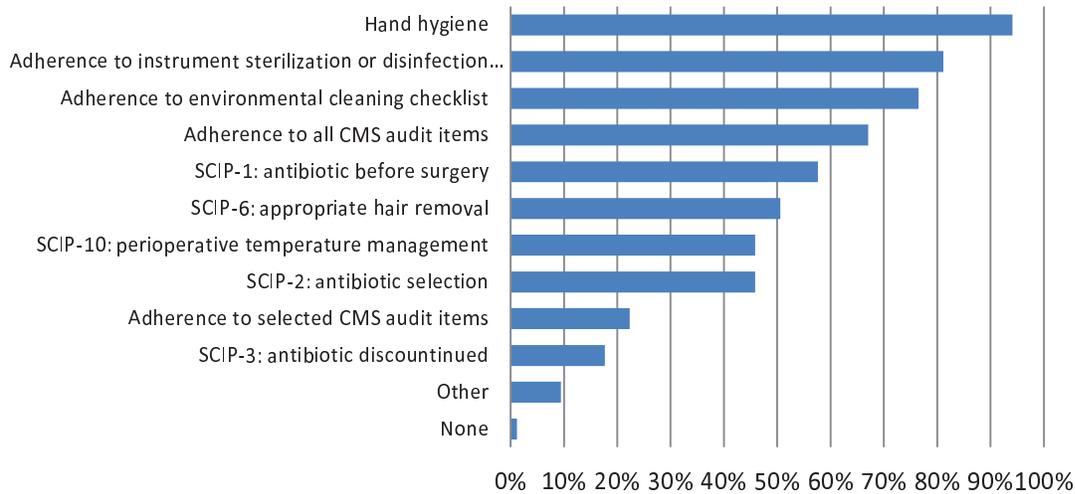
**Table 5: Surveillance Periods for Surgical Procedures with and without Implants  
(May 2011)**

	<u>ASC Surveillance for surgical site infections without implants</u> (n=85)		<u>ASC Surveillance for surgical site infections with implants</u> (n = 70; 15 facilities reported not performing surgeries with implants)	
Yes, for at least one week after the procedure	12	14%	7	10%
Yes, for 2 weeks after the procedure	2	2%	0	0%
Yes, for 30 days after the procedure	43	51%	15	21%
Yes, for 3 months after the procedure	5	6%	4	6%
Yes, for 6 months after the procedure	1	1%	0	0%
Yes, for 1 year after the procedure	4	5%	33	47%
No	18	21%	11	16%

### Metrics Collected and Reported

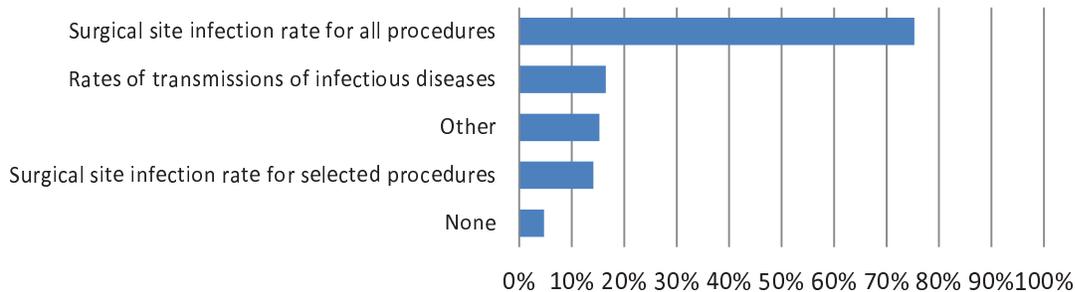
ASCs reported on process and outcomes measures that were collected related to infection control. All ASCs reported collecting at least one process measure; 8% (7) reported one process measure; 78% (66) reported two measures, and 13% (11) reported collecting three or more process measures (*Figure 16*). Ninety-four percent (80) of ASCs reported collecting data on hand hygiene using either the observation or product use method. High rates were also reported for adherence to an instrumentation sterilization/disinfection checklist (81%), to an environmental cleaning list (76%) and to all CMS audit items (67%). Fifty-eight percent (49) ASCs report the Surgical Care Improvement Project (SCIP) measure 1 regarding prophylactic use of an antibiotic and 51% (43) report reporting SCIP-6 regarding appropriate hair removal. *Figure 16* provides additional details on process measures collected by the ASCs.

**Figure 16: What Process Measures does the ASC Collect? (n=85, May 2011)**



Eighty-nine percent (76) ASCs reported collecting one or more outcome measures related to surgical site infections or transmission of infectious agents. Seventy-five percent (64) of ASCs reported collecting surgical site infection rates for all procedures and 16% track rates of transmission of infectious diseases (see *Figure 17*). In the “other” category, ASCs noted that infections are rare events and two ASCs noted that any occurrence of infection that is related to a procedure is reported.

**Figure 17: What Outcome Measures does the ASC use to Measure SSIs or Transmission of an Infectious Agent? (n=85, May 2011)**



Thirty-one percent (26) of ASCs noted that their post-discharge surveillance system revealed cases of post-discharge infection that would not have been counted without surveillance. Twenty-six percent (22) reported that its post-discharge surveillance program did not reveal cases of infection that were not accounted for in other methods. Twenty-one percent (18) ASCs reported never identifying a post-discharge infection, and six ASCs (7%) reported not having a post-discharge surveillance program.

Ninety-two percent (78) of ASCs report providing these process and outcome measures to others. The highest rates were reported for sharing this data with the ASC's governing body (84%; n=71), surgeons (82%; n=70), nurses (78%, n=66), and ASC's other staff (67%, n=57). Lower rates were reported for the ASC's accrediting body/regulatory agency (33%; n=28) and ASC patients (15%; n=13). Thirteen ASCs noted additional reporting to data, including internal and public web sites, the Patient Safety Commission, Medical Executive Committee. One ASC noted it uses its data with its insurance carriers.

The final question of the survey asked if a patient were ever admitted to the ASC with an infection related to a procedure conducted at another facility. Twenty-two percent (19) responded affirmatively. Of those 19 ASCs, 12 reported the infection to the facility of the original surgery.

## CONCLUSIONS

This is the first report in Oregon to provide information on infection control practices in all 85 ASCs in the state. The data in the survey are self-reported by the ASCs, and are not validated through an on-site visit or other means.

This report indicates that current ASCs in the state have been in operation for an average of 10 years, and that ASCs provide a broad array of surgical procedures. The majority of ASCs specialize in providing GI endoscopy, ophthalmologic, orthopedic, and pain management services. This conclusion is supported by analysis of ASCs by both specialty type and volume of procedures.

In the majority of ASCs, the infection control program is directed by registered nurses. Thirteen percent of ASCs have infection control directors that are nationally certified in infection control programs, and two additional ASCs have individuals completing coursework to obtain this certification.

There is no consistency in infection control training, including the curriculum, who is trained, and when training occurs. Patients are not pro-actively involved in infection prevention. Most ASCs are educating patients about infection prevention in post-discharge instructions. One ASC

reported posting infection prevention literature in pre-operative areas, and one ASC reported providing chlorhexadine scrub to patients preoperatively for open surgical procedures.

When reporting infection control practices, 11 out of 13 standards include responses outside the standard scope of practice. The standards that most ASCs include in their infection control program are those for hand hygiene, perioperative standards, and disinfection and sterilization. Most ASCs (95%) conducted self-audits for adherence to infection control practices, and conduct these audits quarterly or more frequently (57%). Although 69% of ASCs report using the CMS tool, it is not used consistently in the state.

ASCs do not share a common definition to identify infections. Sixty-five percent of ASCs stated they followed NHSN definitions; however, when asked how others (such as other physicians, labs, or hospitals) report infection to the ASC, only 27% reported NHSN definitions were used. In addition, although 65% of ASCs stated they use NHSN definitions, these ASCs did not consistently report follow-up surveillance periods consistent with these definitions.

There is low usage of electronic data surveillance systems to conduct follow-up surveillance. Sixty-five percent (56) of ASCs stated they did not use electronic data systems post-discharge. Seventy-two percent of ASCs rely on physicians to report infections to the ASC, and 68% report that they follow-up with patients. The majority of ASCs report using one or more of the following post-discharge survey methods: patient surveys, surgeon surveys or exchanging patient lists with a surgeon.

ASCs appear to collect a wider range of process measures than outcome measures. Most frequently, they are collecting hand hygiene, adherence to sterilization/disinfection checklist and adherence to environmental cleaning checklists. Some ASCs are collecting SCIP data; SCIP 1 (prophylactic antibiotic use) and SCIP-6 (appropriate hair removal) are most often collected. In terms of outcome measures, 70% report collecting SSIs for all procedures, and 16% reporting collection of transmission of infectious agents.

The Healthcare Acquired Infection (HAI) Advisory Committee will review the results of this report to consider the following issues:

1. Reporting of infections for selected procedures based on morbidity/mortality and volume in the state.
2. The use of standard federally recognized infection control definitions and measurement tools.
3. Standards for infection prevention in patient education and discharge reports for all ASCs.
4. While considering the differences among specialty types of ASCs, the communication of standards in the use of data and reporting of process and outcome measures within the ASC.

The Oregon Patient Safety Commission (OPSC) and the Oregon Healthcare Regulation and Quality Improvement (OHRQI) have initiated measures to improve infection control training in the state. OPSC has developed a model infection control program for ASCs. As of December 2011, it has offered three trainings for ASCs in infection control and will hold two additional trainings in the spring of 2012. Between April 2012 and July 2013, it will offer five additional trainings for ASCs on the topic of infection control. These trainings will include materials to train all ASC staff in infection control procedures, such as hand hygiene and environmental cleaning.

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# ASC Annual Survey\_Patient Safety

1.

**Thank you for participating in this survey on evidence-based elements of patient safety performance.**

**If you do not complete the survey in one session and close the survey by selecting the "x" in the upper right corner, you can re-open the survey from the email link and complete it from the same computer. Once you press "done" at the end of the survey, it cannot be edited.**

A definition of surgery for this survey is presented below:

“Surgery is performed for the purpose of structurally altering the human body by the incision or destruction of tissues and is part of the practice of medicine. Surgery is also the diagnostic or therapeutic treatment of conditions or disease processes by any instruments causing localized alteration or transposition of live human tissues which include lasers, ultrasound, ionizing radiation, scalpels, probes, and needles. The tissue can be cut, burned, vaporized, frozen, sutured, probed, or manipulated by closed reductions for major dislocations or fractures, or otherwise altered by mechanical, thermal, light-based, electromagnetic, or chemical means. Injection of diagnostic or therapeutic substances into body cavities, internal organs, joints, sensory organs, and the central nervous system, is also considered surgery. (This does not include the administration by nursing personnel of some injections, subcutaneous, intramuscular, and intravenous, when ordered by a physician.) All of these surgical procedures are invasive, including those performed with lasers, and the risks of any surgical procedure are not eliminated by using a light knife or laser in place of a metal knife, or scalpel.”

2.

## \*1. Contact Information

ASC Name:

Phone Number:

## 2. License Information

ORST License No:

CMS ID (38C):

## \*3. What year did the ASC open for operation?

## \*4. Does the ASC participate in Medicare via accredited "deemed" status?

Yes

No

## 3. Accreditation List

# ASC Annual Survey\_Patient Safety

**\*5. By which of the following CMS-recognized accreditation organizations is your agency accredited? Check all that apply.**

- Accreditation Association for Ambulatory Health Care (AAAHC)
- American Association for Accred. of Ambulatory Surgery Facilities (AAAASF)
- American Osteopathic Association (AOA)
- The Joint Commission (JC)
- Other (please specify)

## 4.

**\*6. What is the ownership of the facility? (check all that apply)**

- Physician-owned
- Hospital-owned
- National Corporation (including joint ventures with physicians)
- Other (please specify)

**\*7. What procedure type reflects the majority of procedures performed at the ASC?**

- |  |                                       |  |
|--|---------------------------------------|--|
| <input type="radio"/> Bronchoscopy           | <input type="radio"/> Ear/Nose/Throat | <input type="radio"/> Pain                   |
| <input type="radio"/> Dental                 | <input type="radio"/> OB/Gyn          | <input type="radio"/> Plastic/reconstructive |
| <input type="radio"/> General Surgery        | <input type="radio"/> Ophthalmologic  | <input type="radio"/> Podiatry               |
| <input type="radio"/> GI Endoscopy           | <input type="radio"/> Orthopedics     | <input type="radio"/> Urology                |
| <input type="radio"/> Other (please specify) |                                       |  |

## 5.

## ASC Annual Survey\_Patient Safety

### \*8. What additional procedures are performed at the ASC? (Check all that apply.)

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Bronchoscopy           | <input type="checkbox"/> Ear/Nose/Throat | <input type="checkbox"/> Pain                   |
| <input type="checkbox"/> Dental                 | <input type="checkbox"/> OB/Gyn          | <input type="checkbox"/> Plastic/reconstructive |
| <input type="checkbox"/> General Surgery        | <input type="checkbox"/> Ophthalmologic  | <input type="checkbox"/> Podiatry               |
| <input type="checkbox"/> GI Endoscopy           | <input type="checkbox"/> Orthopedics     | <input type="checkbox"/> Urology                |
| <input type="checkbox"/> Other (please specify) |  |   |

**\*9. (A “procedure room” means a room where surgery or invasive procedures are performed; and “invasive procedure” means a procedure requiring insertion of an instrument or device into the body through the skin or a body orifice for diagnosis or treatment, and operative procedures in which skin or mucous membranes and connective tissue are incised, or an instrument is introduced through a natural body orifice).**

**How many staffed operating rooms (including procedure rooms) does the ASC have?**

**6.**

**\*10. What license(s) does the person at your facility with the primary responsibility for infection control have?**

- MD/DO
- PA
- NP
- RN
- LPN
- Other (please specify)

**\*11. Is this person an (check only one):**

- ASC Employee
- ASC Contractor

## ASC Annual Survey\_Patient Safety

**\*12. Is this person certified in infection control (CIC) by the American Professionals in Infection Control (APIC)?**

Yes

No

### 7. Follow-up on infection control training

**\*13. If this person is not certified in infection control, what type of training does the primary person responsible for infection control have? (Check all that apply.)**

- American Professionals in Infection Control (APIC) Infection Prevention for ASCs
- APIC Online EPI courses
- Association of periOperative Registered Nurses (AORN) ASC Infection Prevention Course
- Oregon Ambulatory Surgery Center Association (OASCA) conference training
- Other (please specify)

### 8.

**\*14. On average, how many hours per week does this person spend in the ASC working on the infection control program?**

**\*15. For your entire facility, which staff members in your ASC receive infection control training? (Check all that apply.)**

- Medical staff
- Nursing staff
- Other staff providing direct patient care
- Staff responsible for on-site sterilization/high-level disinfection
- Cleaning staff
- Other (please specify)

## ASC Annual Survey\_Patient Safety

9.

**\*16. How often does the ASC educate and document education of health care workers involved in procedures about health care associated infections and the importance of prevention? (Check all that apply.)**

- Upon hire
- When involvement in surgical procedures is added to job responsibilities
- ASC reviews infection control practices with staff monthly
- ASC reviews infection control practices with staff quarterly
- ASC reviews infection control practices with staff semi-annually
- ASC reviews infection control practices with staff annually
- ASC does not review infection control practices with staff
- Other (please specify)

**\*17. What month and year were the ASC's infection control protocols most recently revised?**

10.

**\*18. Which nationally recognized infection control guidelines has the ASC selected for its program. (Check all that apply).**

- Guideline for Isolation Precautions (CDC/HICPAC Guidelines)
- Hand Hygiene (CDC/HICPAC Guidelines)
- Disinfection and Sterilization in Healthcare Facilities (CDC/HICPAC Guidelines)
- Environmental Infection Control in Healthcare Facilities (CDC/HICPAC Guidelines)
- Perioperative Standards and Recommended Practices (AORN)
- None
- Guidelines issued by specialty society/organization (specify):

## ASC Annual Survey\_Patient Safety

**\*19. How often do you conduct self-audits against best practice infection control standards? (e.g., use CMS survey tool to conduct self-audits).**

- Never. We do not conduct self-audits of infection control practices
- We conduct self-audits quarterly or more frequently
- Other (please specify)
- We conduct self-audits semi-annually
- We conduct self-audit annually

### 11. Question Regarding Self-Audit Tool

Please provide more information on your self-audit tool.

**\*20. For your self-audits, do you use the the CMS audit tool and/or other guidelines? ([http://www.cms.gov/manuals/downloads/som107\\_exhibit\\_351.pdf](http://www.cms.gov/manuals/downloads/som107_exhibit_351.pdf))**

- We use the CMS audit tool for our self-audits.
- We monitor compliance with other guidelines (specify):

### 12.

**\*21. How does the ASC educate patients regarding steps they can take to reduce the possibility of an infection occurring in relation to the procedure? (Check all that apply.)**

- We provide general literature or information regarding patient activities to reduce infections before the procedure
- We either provide or document that the surgeon provides procedure-specific information regarding patient activities to reduce infections before the procedure
- Our discharge plan includes procedure-specific information for the patient to reduce infection and to reduce progression of infections associated with the procedure.
- We do not educate patients on activities to reduce infections associated with the procedure.
- Other (please specify)

## ASC Annual Survey\_Patient Safety

**\*22. Does the ASC have a written plan in place for responding to infection outbreaks?**

- Yes  
 No

**13.**

**\*23. What groups/organizations are currently represented in the Governing Body/committee that oversees infection control practices? Select all that apply; you may select multiple boxes for one member (e.g., a physician may also be a surgeon).**

- |  |   |
|--|---|
| <input type="checkbox"/> Physician                       | <input type="checkbox"/> Surgery                |
| <input type="checkbox"/> Nursing Staff                   | <input type="checkbox"/> Central Sterilization  |
| <input type="checkbox"/> Infection Control Professionals | <input type="checkbox"/> Environmental Services |
| <input type="checkbox"/> Quality Assurance Staff         |   |
| <input type="checkbox"/> Other (please specify)          |   |

**14.**

**\*24. For each item below, check the answer that best applies on a scale from Never to Always regarding infection control policies and practices at your facility.**

	Never	Rarely	Sometimes	Often	Always	Not Applicable
Staff wear gloves for procedures that might involve contact with blood or bodily fluids	<input type="radio"/>					
Staff wear gloves when handling potentially contaminated patient equipment.	<input type="radio"/>					
Staff remove gloves before moving to next task or patient	<input type="radio"/>					
Needles and syringes are used for only one patient	<input type="radio"/>					
Medication vials are always entered with a new needle/new syringe	<input type="radio"/>					
Single-dose medications used for more than one patient	<input type="radio"/>					
Prefilled syringes used for more than one patient	<input type="radio"/>					

**15.**

# ASC Annual Survey\_Patient Safety

**\*25. For each item below, check the answer that best applies on a scale from Never to Always regarding infection control policies and practices at your facility.**

	Never	Rarely	Sometimes	Often	Always	Not Applicable
High-level disinfectants prepared, tested, and replaced according to manufacturer's instructions	<input type="radio"/>					
Medical devices and instruments are inspected for visual soil and re-cleaned before high-level disinfection.	<input type="radio"/>					
Operating rooms are cleaned and disinfected after each surgical or invasive procedure with an EPA-registered disinfectant	<input type="radio"/>					
Operating rooms are terminally cleaned daily	<input type="radio"/>					
The glucose meter is cleaned and disinfected after every use	<input type="radio"/>					
A new single-use auto-disabling lancing device is used for each patient	<input type="radio"/>					

## 16.

**\*26. Are sterilization processes conducted on site?**

- Yes
- No

**\*27. Does the ASC use one or more of the following methods to identify infections post discharge? (Check all that apply.)**

- The ASC follows-up with patients after discharge
- The ASC follows-up with the patients' primary care providers after discharge
- The ASC relies on the physician performing the procedure to obtain this information at a follow-up visit after discharge and report it to the ASC
- The ASC monitors readmissions to its own facility
- None of the above
- Other (please specify)

## 17.

## ASC Annual Survey\_Patient Safety

**\*28. Does your ASC use patient surveys by mail, email, or telephone to conduct routine surveillance for infections?**

- Yes  
 No

### 18. Details regarding Patient Survey

Please provide additional information regarding your patient survey.

**\*29. How often do you conduct your survey?**

- Weekly  
 Monthly  
 Semiannually  
 Other (please specify)

**\*30. What is your average return rate (percentage) for your survey? (Enter 0 to 100)**

**\*31. Do you send a prompt to nonresponders to increase your return rate?**

- No, we do not send prompts.  
 Yes, we send one prompt.  
 Yes, we send more than one prompt.

### 19.

**\*32. Does your ASC use surgeon surveys by mail, email or telephone to conduct routine surveillance for infections?**

- Yes  
 No

### 20. Details regarding Surgeon Survey

Please provide additional information regarding your surgeon survey.

**ASC Annual Survey\_Patient Safety****\*33. How often do you conduct your survey?**

- Weekly
- Monthly
- Semiannually
- Other (please specify)

**\*34. What is your average return rate (percentage) for your survey? (Enter 0 to 100)****\*35. Do you send a prompt to nonresponders to increase your return rate?**

- No, we do not send prompts.
- Yes, we send one prompt.
- Yes, we send more than one prompt.

**21.****\*36. Does your ASC exchange patients lists with each surgeon and have the list signed by the surgeon to conduct routine surveillance for infections?**

- Yes
- No

**22. Details regarding patient lists exchanged with surgeon**

Please provide additional information regarding your exchange of patient lists with surgeons

**\*37. How often do you exchange patient lists with your surgeon(s)?**

- Weekly
- Monthly
- Semiannually
- Other (please specify)

## ASC Annual Survey\_Patient Safety

**\*38. What is your average return rate (percentage) for the lists you exchange with surgeons (i.e., how many of the lists are returned signed by the surgeon)? (Enter 0 to 100)**

**\*39. Do you send a prompt to nonresponders to increase your return rate?**

- No, we do not send prompts.
- Yes, we send one prompt.
- Yes, we send more than one prompt.

**23.**

**\*40. Which types of electronic data do you use in your post discharge surveillance system? (Check all that apply.)**

- CPT, ICD-9 or other electronic health record notations
- Electronic laboratory reporting (ELR)
- Computerized prescriber order entry (CPOE)
- We do not use electronic data in our post-discharge surveillance system.
- Other (please specify)

**\*41. Do you use the CDC's National Healthcare Safety Network (NHSN) criteria to define post-discharge surgical site infection? (<http://www.cdc.gov/nhsn/about.html>)**

- Yes
- No

## ASC Annual Survey\_Patient Safety

**\*42. Do others (e.g., surgeons, hospitals, labs) use NHSN or clinical definitions to report surgical site infections to you? (Check all that apply.)**

- NHSN Definitions
- Clinical Definitions
- No
- Other (please specify)

24.

**\*43. Does the ASC conduct surveillance for surgical site infections for procedures involving implantable devices?**

- Yes, for 1 week after the procedure
- Yes, for 2 weeks after the procedure
- Yes, for 30 days after the procedure
- No. If not, explain why:
- Yes, for 3 months after the procedure
- Yes, for 6 months after the procedure
- Yes, for at least one year after the procedure

**\*44. Does the ASC conduct surveillance for surgical site infections following procedures that do not involve implantable devices?**

- Yes, for 1 week after the procedure
- Yes, for 2 weeks after the procedure
- Yes, for 30 days after the procedure
- No. If not, explain why:
- Yes, for 3 months after the procedure
- Yes, for 6 months after the procedure
- Yes, for at least one year after the procedure

25.

## ASC Annual Survey\_Patient Safety

**\*45. What process measures does the ASC use to monitor compliance with processes to reduce surgical site infections or the transmission of an infectious agent, such as staphylococcus infections or hepatitis? (Check all that apply.)**

- Hand hygiene monitoring by evaluating product use or observation
- Surgical Care Improvement Project (SCIP)-Inf-1: prophylactic antibiotic received within 1 hour prior to surgical incision
- SCIP-Inf-2: prophylactic antibiotic selection for surgical patients
- SCIP-Inf-3: prophylactic antibiotic discontinued within 24 hours after surgery
- SCIP-Inf-6: appropriate hair removal
- SCIP-Inf-10: surgery patients with perioperative temperature management
- Adherence to all practices in CMS audit tool
- Adherence to selected practices in CMS audit tool
- Adherence to checklist for instrument sterilization or high-level disinfection, such as glucose meters or bronchoscope
- Adherence to checklist for environmental cleaning
- None
- Other (please specify)

**26.**

**\*46. What has your post-discharge surveillance system revealed about your facility's post discharge infection rate?**

- Never found a case of post discharge infection
- Revealed cases of post discharge infection already counted from other sources
- Revealed cases of post discharge infection not otherwise counted.
- We do not have a post-discharge surveillance program.
- Other (please specify)

## ASC Annual Survey\_Patient Safety

**\*47. Does the ASC provide data on surgical site infection prevention outcome and process measures to interested parties? (Check all that apply.)**

- |  |   |
|--|---|
| <input type="checkbox"/> Yes, to the ASC's surgeons      | <input type="checkbox"/> Yes, to the ASC's governing body                       |
| <input type="checkbox"/> Yes, to the ASC's nurses        | <input type="checkbox"/> Yes, to an accreditation agency or a regulatory agency |
| <input type="checkbox"/> Yes, to the ASC's other staff   | <input type="checkbox"/> No   |
| <input type="checkbox"/> Yes, to the ASC's patients      |   |
| <input type="checkbox"/> Yes, to others (please specify) |   |

## 27.

**\*48. What outcome measures does the ASC use to measure of surgical site infections or the transmission of an infectious agent, such as staphylococcus infections or hepatitis? (Check all that apply.)**

- Surgical site infection rates for all procedures.
- Surgical site infection rate for selected procedures.
- Rates of transmissions of infectious diseases.
- None.
- Other (please specify)

**\*49. Have you ever had a patient admitted to your facility with an infection related to a procedure conducted at another facility?**

- Yes
- No

## 28. Follow-up question regarding admitted patient with infection

## ASC Annual Survey\_Patient Safety

**\*50. If a patient is admitted to your facility with an infection related to a procedure conducted at another facility, do you report that infection to that other facility?**

Yes

No

## 29. Electronic Signature

**\*51. Electronic Signature**

**I certify that all statements contained herein are true and accurate to the best of my knowledge. I understand that my printed name below is enforceable as if I had signed below.**

### Signature for the Person Completing Report:

**Full Name:**

**Title:**

**Date:**

**Email Address:**

## APPENDIX B:

## ANNOTATED ACRONYM LIST

AAAASF	<u>American Association for Accreditation of Ambulatory Surgical Centers</u> was established in 1980 and offers an accreditation program for medical and surgical care in ambulatory surgery facilities. More than 1000 ambulatory surgery facilities are accredited by AAAASF.
AAAHHC	<u>Accreditation Association for Ambulatory Healthcare</u> is a private, non-profit organization formed in 1979 and offers accreditation programs for a variety of ambulatory care settings, including ambulatory and surgery centers, community health centers, medical and dental group practices, medical home, and managed care organizations, as well as Indian and student health centers, among others. It currently accredits almost 5,000 organizations.
AAMI	<u>Association for the Advancement of Medical Instrumentation</u> was founded in 1967 and focuses on increasing the understanding and beneficial use of medical instrumentation through effective standards and educational programs, and publications. It has over 6,000 members worldwide.
AGA	<u>American Gastroenterological Association's</u> mission is to advance the science and practice of gastroenterology. It offers a practice and research library, publishes a journal, and provides other services in support of its mission.
AHCSMMI	<u>International Association of Healthcare Central Service Material Management</u> was established in 1958 and offers accreditation programs and continuing education in programs associated with equipment sterilization and central services, including central service technician, instrument specialist, and healthcare leadership. It has over 12,000 members.
ANSI	American National Standards Institute. the American National Standards Institute (ANSI). U.S. standards and conformity assessment system
AOA	<u>American Osteopathic Association</u> is the accrediting agency for all osteopathic medical schools and has federal authority to accredit hospitals and other health care facilities.
AORN	<u>Association of periOperative Nurses'</u> mission is to promote safety and optimal outcomes for patients undergoing operative and other invasive procedures by providing practice support and professional development opportunities to perioperative nurses. It collaborates with professional and regulatory organizations, industry leaders, and other healthcare partners who support the mission. For ASCs, it offers an Infection Prevention Course and other educational opportunities.
APIC	<u>American Professionals in Infection Control and Epidemiology's</u> mission is to improve health and patient safety by reducing risks of infection and other adverse outcomes. Its 13,000 members have primary responsibility for infection prevention, control and hospital epidemiology in healthcare settings. APIC advances its mission through education, research, practice guidance and credentialing.
ASC	<u>Ambulatory surgical centers</u> , also known as outpatient surgery centers or same day surgery centers, are health care facilities where surgical procedures not

	requiring an overnight hospital stay are performed. In this report, ASC refers to free-standing centers. It does not include hospital same-day surgery departments or physician office-based surgeries.
ASGE	<u>American Society for Gastrointestinal Endoscopy</u> is an international organization that promotes standards for endoscopic training and practice, fosters endoscopic research, and provides endoscopic training and educational opportunities.
ASPAN	<u>American Society of Peri-Anesthesia Nurses</u> is the professional specialty nursing organization representing the interests of more than 55,000 nurses practicing in all phases of preanesthesia and postanesthesia care, ambulatory surgery, and pain management.
CDC	<u>Centers for Disease Control and Prevention</u> is one of operating components of the Department of Health and Human Services. <b>CDC's Mission</b> is to collaborate to create the expertise, information, and tools that people and communities need to protect their health – through health promotion, prevention of disease, injury and disability, and preparedness for new health threats.
CBIC	<u>Certified Board in Infection Control and Epidemiology</u> is a voluntary autonomous multidisciplinary board that provides direction for and administers the certification process for professionals in infection control and applied epidemiology.
CIC	<u>Certified in Infection Control</u> (via CBIC). The CIC credential is recognized and endorsed by APIC and the Community and Hospital Infection Control Association – Canada.
CMA	<u>Certified Medical Assistant</u> is a credential offered through the American Association of Medical Assistants (AAMA).
CMS	<u>Centers for Medicaid &amp; Medicare Services</u> is one of the operating components of the Department of Health and Human Services. Its mission is to ensure effective, up-to-date health care coverage and to promote quality care for beneficiaries.
CNOR	<u>CNOR</u> is a definition not an acronym. CNOR certification is for registered nurses who work with surgical patients. It is offered by the Competency and Credentialing Institute.
EMR	<u>Electronic Medical Record</u> is a computerized medical record created in an organization that delivers care, such as a hospital or physician's office.. Electronic medical records tend to be a part of a local stand-alone health information system that allows storage, retrieval and modification of records.
HICPAC	<u>Healthcare Infection Control Practices Advisory Committee</u> . Fourteen external infection control experts who provide guidance and advice to the CDC and the US HHS regarding the practice of health care infection control and strategies for surveillance and prevention of healthcare associated infections.
IP	<u>Infection Preventionist</u> refers to a person whose primary training is in either nursing, medical technology, microbiology, or epidemiology, and who has acquired additional training in infection control. The Infection Preventionist serves as the coordinator of an Infection Prevention and Control Program.
TJC	<u>The Joint Commission</u> , formerly the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), is a United States -based not-for-profit

	organization. The Joint Commission accredits over 19,000 health care organizations and programs in the United States. A majority of state governments have come to recognize Joint Commission accreditation as a condition of licensure and the receipt of Medicaid reimbursement.
MT, ASCP	<u>Medical Technologist, American Society for Clinical Pathology</u> . A medical laboratory technologist certification is offered to qualified laboratory professionals by ASCP.
NHSN	The <u>National Healthcare Safety Network</u> is a voluntary, secure, internet-based surveillance system that integrates patient and healthcare personnel safety surveillance systems managed by the Division of Healthcare Quality Promotion (DHQP) at CDC. During 2008, enrollment in NHSN was opened to all types of healthcare facilities in the United States, including acute care hospitals, long term acute care hospitals, psychiatric hospitals, rehabilitation hospitals, outpatient dialysis centers, ambulatory surgery centers, and long term care facilities.
NIOSH	<u>The National Institute for Occupational Safety and Health</u> . As part of the CDC, NIOSH is responsible for conducting research and making recommendations for the prevention of work-related illnesses and injuries.
OSHA	<u>Occupational Safety and Health Administration</u> . With the Occupational Safety and Health Act of 1970, Congress created the OSHA to ensure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance.
QA	<u>Quality assurance</u> is the systematic monitoring and evaluation of the various aspects of a project, service or facility to maximize the probability that minimum standards of quality are being attained by the production process.
SCIP	The <u>Surgical Care Improvement Project</u> is a national partnership of organizations committed to improving the safety of surgical care through the reduction of post-operative complications. The SCIP program is sponsored by the Centers for Medicare & Medicaid Services (CMS) in collaboration with a number of other national partners, including the American Hospital Association (AHA), Centers for Disease Control and Prevention (CDC), Institute for Healthcare Improvement (IHI), The Joint Commission (TJC) and others. SCIP is an extension of a previous CMS initiative called the Surgical Infection Prevention Project (SIPP).
SGNA	<u>Society of Gastroenterology Nurses Association</u> is a professional organization of nurses and associates dedicated to the safe and effective practice of gastroenterology and endoscopy nursing.
SSI	A <u>surgical site infection</u> is an infection that occurs after surgery in the part of the body where the surgery took place. Surgical site infections can sometimes be superficial infections involving the skin only. Other surgical site infections are more serious and can involve tissues under the skin, organs, or implanted material.
WHO	The <u>World Health Organization</u> is the directing and coordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting

	norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.
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## **SURVEILLANCE OPTIONS FOR AMBULATORY SURGICAL CENTERS**

### **CURRENT SITUATION**

- OHPR conducted a survey of ASCs and found inconsistent training, infection control practices and infection surveillance methods for the 86 Oregon ASCs.
- OHPR has revised its administrative rules to include ASCs in its healthcare worker influenza vaccination survey, starting with the 2011-2012 season. ASCs have been informed of this requirement via registered mail and email and data collection forms have been distributed. OHPR anticipates distributing a Survey Monkey form in April 2012 to collect the data and to report facility-specific rates during the summer of 2012.
- The HAI Advisory Committee has expressed its interest in expanding its surveillance of ASCs and has asked to review options for additional measurement. Potential process and outcome measures are discussed below.

### **POTENTIAL PROCESS MEASURES**

#### **Measures from the National ASC Quality Collaborative**

The national [ASC Quality Collaborative](#) includes two measurements endorsed by the National Quality Forum (NQF):

- Percentage of ASC Admissions with antibiotic ordered who received antibiotic on time
- Percentage of ASC Admissions with appropriate surgical site hair removal

Considerations:

1. Endorsed by NQF.
2. Current reported rates (by approximately 1,326 ASCs across the nation) are between 97% and 98% for both measures.
3. Operational definitions and sample data collection logs exist.
4. No automated data collection system identified.

#### **Additional Process Measures that could be collected via annual survey**

- Participation in Infection Control Training (Need to identify set of qualified trainings).
- Re-survey surveillance methods.
- SCIP Measures 1 – 3 (antibiotic 1 hour before, appropriate antibiotic section, antibiotic discontinued)
- Use and frequency of use of self-audit with CMS Survey Tool for infection control standards.

Considerations:

1. Measures not endorsed by NQF.
2. Operational definitions exists for some of these measures or could be easily created.
3. No automated data collection system identified.

**POTENTIAL OUTCOME MEASURES**

Six states have been identified as collecting outcome measures for Ambulatory Surgical Centers. During July 2011, CDC provided some information on state reporting for ASCs. OHPR also contacted each state to learn more about its program. Findings are summarized below.

State HAI ASC Reporting									
State	Procedures								Notes
	HER	BRST	KPRO	HPRO	HYST	VHST	FX	LAM	
CO	x	x	x	x	x	x			started 9/2008; phased in; BRST to add 9/2011.
MA	x								started 6/2011
NH		x					x		started 6/2011
TX									still in process; voluntary
NJ		x		x				x	waiting for NHSN ICD-9/CPT crosswalk
MO	x	x							not using NHSN

Common issues included:

- NHSN has not been modified for ASC use. For example, many ASCs use CPT codes to identify procedures. NHSN defines procedures by ICD-9 codes. States indicated that they did not provide ICD-9/CPT crosswalk to ASCs. It was noted that CDC was preparing an ICD-9/CPT crosswalk for distribution.
- One state also indicated it was also collecting the two process measures supported by NQF/The Quality Collaborative.
- CDC recommends NHSN procedures that are frequently performed in ASC settings (e.g., hernias or breast procedures). Procedures more common in ASCs, such as knee arthroscopy, are not included in NHSN procedures at this time.

In addition, OHPR attempted to create a crosswalk of ICD and CPT codes to evaluate the possibility of using NHSN for ACS reporting, but it was unable to do. OHPR contacted the Agency for Healthcare Research and Quality (AHRQ); AHRQ was not able to provide a crosswalk and is in the process of providing additional guidance on evaluating ASC discharge data for infection rates. OHPR may also consider the use of its All Payers All Claims (APAC) data set for ASC infection analysis.