

# Surgical Site Infection Surveillance in Ambulatory Surgery Centers

California Ambulatory Surgery Association  
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# Objectives

- Discuss adherence monitoring of peri-operative care practices to prevent surgical site infection (SSI)
- Review CDPH HAI Program ASC adherence monitoring observations, 2016-2017
- Describe SSI surveillance methods, including which procedures require follow-up for 30 or 90 days post-operatively
- Review National Healthcare Safety Network (NHSN) SSI surveillance for outpatient surgery (NEW!)
- Describe the importance of surveillance, investigating possible causes of SSI, and reporting results to improve performance

# Preventing SSI: The MOST Important Things

## *Prevent the Devastating Effects of Deep/Organ Space SSI*

### ☐ **Prophylactic antibiotics**

*Right drug, right dose, right time*

☐ No doses after incision closed

### ☐ **Alcohol-based** skin prep

☐ Blood glucose control, all patients

☐ Normothermia, all patients

☐ Increased FiO<sub>2</sub>, if normal function

☐ Pre-night shower or bath

☐ Treat other infections

☐ Smoking cessation at least 30 days

☐ No hair removal; if must, clippers

☐ Maintain positive pressure ventilation

☐ Hand hygiene

☐ Surgical attire worn entire time including mask and head cover (covering all head and facial hair)

☐ Clean and disinfect all surfaces between cases

☐ Flash sterilization only if emergency

☐ Sterile dressing for 24-48 hours

CDC/HICPAC (2017)

# Peri-operative Adherence Monitoring

- To ensure evidence based practices are being done consistently, perform adherence monitoring for:
  - Hand hygiene
  - OR observations of care practices
  - Safe injection practices
  - Environmental cleaning and disinfection
  - Blood glucose monitoring
  - Device reprocessing
  - High level disinfection of reusable devices
  - Sterilization of reusable devices

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<https://www.cdph.ca.gov/Programs>

# CDC ASC Assessments

- CDC conducted assessments in 68 ASC in three states
- Lapses in infection control were common, especially in areas
  - Hand hygiene and PPE
  - Injection safety and medication handling
  - Equipment reprocessing
  - Equipment cleaning
  - Handling blood glucose monitoring equipment

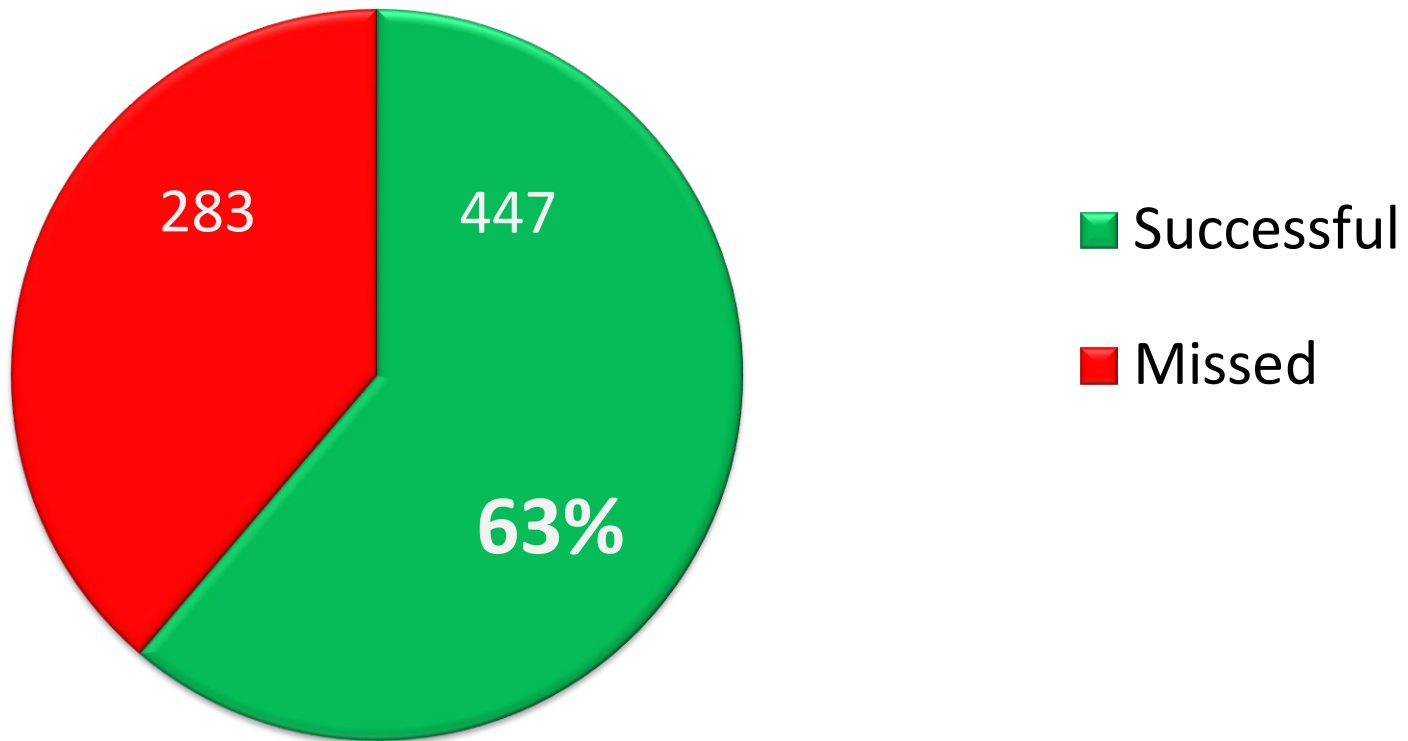
*Infection Control Assessment of Ambulatory Surgical Centers*

JAMA 2010

**Are Evidence Based Practices are performed routinely in CA ASC ?**

**Results of CDPH HAI Program  
Liaison IP Observations  
in 49 ASC 2016 - 2018**

**Hand Hygiene Adherence  
760 Observations in 47 ASC  
2016–2018**



**Only 2 ASC had 100% HH adherence**

# Hand Hygiene Adherence Monitoring Tool

SAMPLE

Refer to handout or [cdph.ca.gov/hai](http://cdph.ca.gov/hai)

HH Opportunity	Discipline	What type of HH opportunity was observed? (select/ <input checked="" type="checkbox"/> 1 per line)	Was HH performed for opportunity observed? ✓ or Ø
Example	N	<input type="checkbox"/> before care/entering room* <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care* <input checked="" type="checkbox"/> upon leaving room *Remember: Hand hygiene should be performed before <u>and</u> after glove use	✓
HH1.	T	<input type="checkbox"/> before care/entering room <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care <input checked="" type="checkbox"/> upon leaving room	✓
HH2.	R	<input checked="" type="checkbox"/> before care/entering room <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care <input type="checkbox"/> upon leaving room	0
HH3.	T	<input type="checkbox"/> before care/entering room <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care <input checked="" type="checkbox"/> upon leaving room	✓
HH4.	T	<input type="checkbox"/> before care/entering room <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care <input checked="" type="checkbox"/> upon leaving room	0
HH5.	R	<input type="checkbox"/> before care/entering room <input checked="" type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care <input type="checkbox"/> upon leaving room	0
HH6.	R	<input checked="" type="checkbox"/> before care/entering room <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care <input type="checkbox"/> upon leaving room	0
HH7.	T	<input type="checkbox"/> before care/entering room <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care <input checked="" type="checkbox"/> upon leaving room	0
HH8.	T	<input type="checkbox"/> before care/entering room <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input checked="" type="checkbox"/> after care <input type="checkbox"/> upon leaving room	✓
HH9.	T	<input checked="" type="checkbox"/> before care/entering room <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care <input type="checkbox"/> upon leaving room	0
HH10.	R	<input checked="" type="checkbox"/> before care/entering room <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care <input type="checkbox"/> upon leaving room	0
Disciplines: CNA = Nurse Assistant D = Dietary N = Nurse P = Physician RT = Respiratory Therapist S = Student VIS = Visitor VOL = Volunteer W = Social Worker OTH = Other, Specify U = Unknown T = Technician			Opportunities: ✓ = Opportunity Successful Ø = Opportunity Missed
For HH1-HH10:			
Total # HH Successful ("# ✓"): <b>3</b>		Total # HH Opportunities Observed: <b>10</b>	Adherence: <b>30%</b>
(Total # HH Successful ÷ Total HH Opportunities Observed x 100)			



## Operating Room Adherence Monitoring

	# Observations	Adherence
<b>48 ASCs</b>	<b>789</b>	<b>69%</b>
OR Clean		76%
Door closed to maintain positive air pressure		79%
Appropriate surgical attire		57%
Safe injection practices observed		52%
Appropriate pre-op skin prep		91%
Sterility is maintained		94%
Hand hygiene adherence		47%

# Monitoring in the Operating Room

Refer to handout or [cdph.ca.gov/hai](http://cdph.ca.gov/hai)



## Healthcare-Associated Infections Program Adherence Monitoring Operating Room Observations

**Regular monitoring with feedback of results to staff can maintain or improve adherence to SSI prevention tool to identify gaps and opportunities for improvement. Monitoring may be performed in any type**

**Instructions:** Observe each practice in the operating room and check a box if adherent, Yes or No. In the bottom row, enter the number of "Yes" for adherent practices observed and the total number of observations ("Yes" + "No"). Calculate the percentage of adherence.

Surgical Site Practice		OR Observations 1	OR Observation 2	OR Observation 3
SS1.	Pre-operative hand antisepsis following manufacturer's recommendations. No long or artificial nails, no jewelry worn.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
SS2.	Hair not removed. If necessary, removed just prior to surgery with clippers.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
SS3.	Skin prep in OR with alcohol-based agent	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

# Safe Injection Practices Adherence Monitoring -1

	# Observations	Adherence
<b>45 ASC</b>	<b>1291</b>	<b>82%</b>
Hand Hygiene prior to preparation and administration of medication		42%
Medication preparation area clean – free from body fluids or contaminated equipment		90%
Needles and syringes used for only 1 patient – including insulin pens		98%
Rubber septum on vial disinfected with alcohol prior to piercing		40%
Vial entered with new needle/ syringe – even on same patient		84%
Single-dose medication is used for only one patient		95%
Medication administration tubing/connectors used for only 1 patient		98%

# Safe Injection Practices Adherence Monitoring -2

	# Observations	Adherence
Multi-dose vials dated when opened and discarded within 28 days or follow manufacturer date (Different than expiration date printed on vial)		69%
Multi-dose vials are dedicated to individual patients when possible		79%
Multi-dose vials are kept in a centralized medication area		64%
All sharps are disposed of in a puncture-resistant sharps container		95%
Filled sharps containers are disposed of in accordance with state medical waste rules		99%
All controlled substances are kept locked in a secure area		96%
Healthcare personnel wear facemask when placing catheter or injecting material into the epidural or subdural space		96%

# Safe Injection Practices Adherence Monitoring

Refer to handout or [cdph.ca.gov/hai](http://cdph.ca.gov/hai)



## Healthcare-Associated Infections Program Adherence Monitoring Safe Injection Practices

**Regular monitoring with feedback and staff education is recommended to improve safe injection practices and create opportunities for improvement. Monitoring may occur in any type of patient care location where medication is administered.**

**Instructions:** This form can be used to observe up to 4 areas where providers are preparing or providing patient care. There are 4 opportunities for each practice type. Observe each practice and check a box if adherent, Yes or No. In the "Yes" column, enter the number of "Yes" for adherent practices observed and the total number of observations ("Yes" + "No"). Calculate adherence percentage.

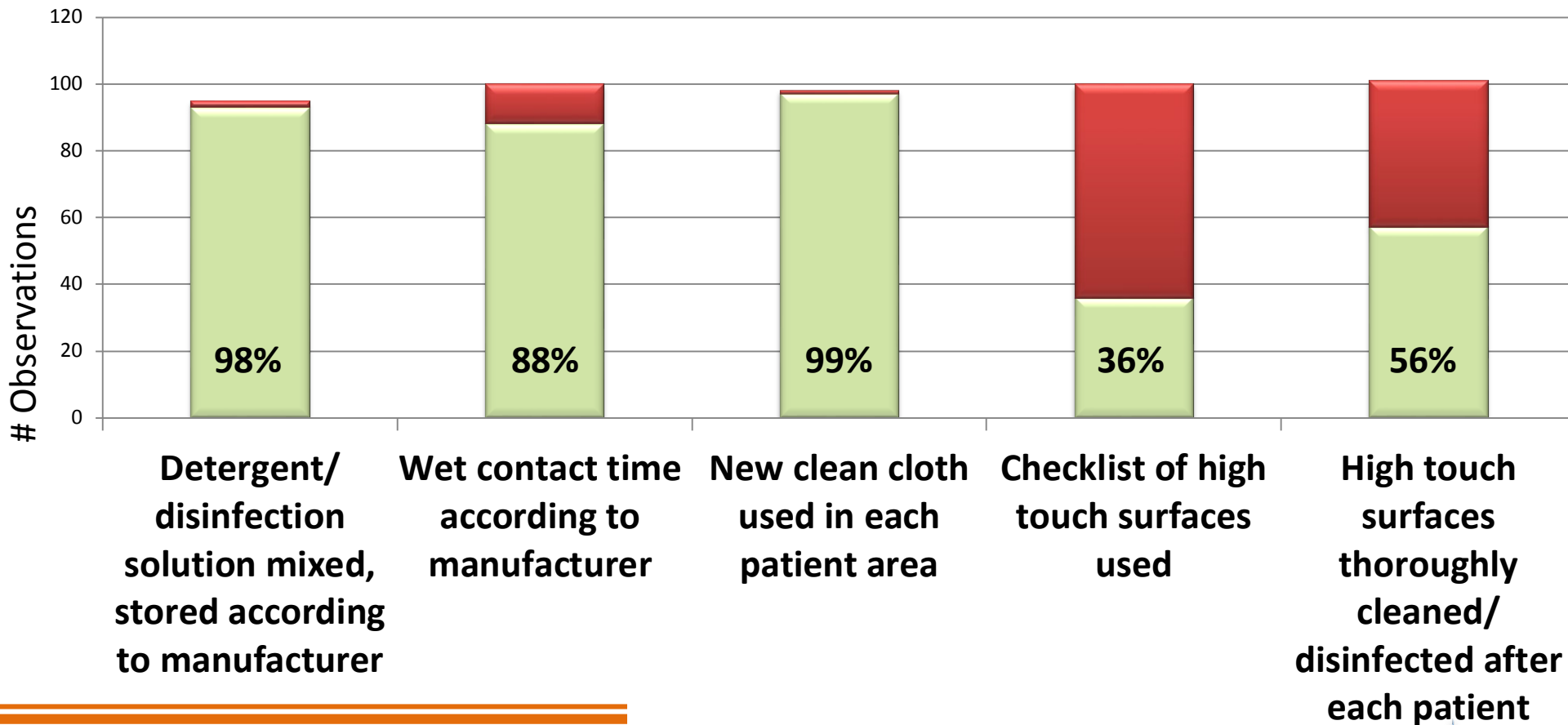
Safe Injection Practices		Area 1 or Opportunity 1		Area 2 or Opportunity 2	
SI1.	Proper hand hygiene is performed prior to preparing and administering medication.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
SI2.	Medication preparation area is clean and free from contact with blood, body fluids, or contaminated equipment.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Needles and syringes are used for only one patient. This includes				

## Environmental Cleaning Adherence

47 ASC

2016-2018

■ Successful ■ Missed



# Environmental Cleaning Adherence Monitoring

Refer to handout or [cdph.ca.gov/hai](http://cdph.ca.gov/hai)



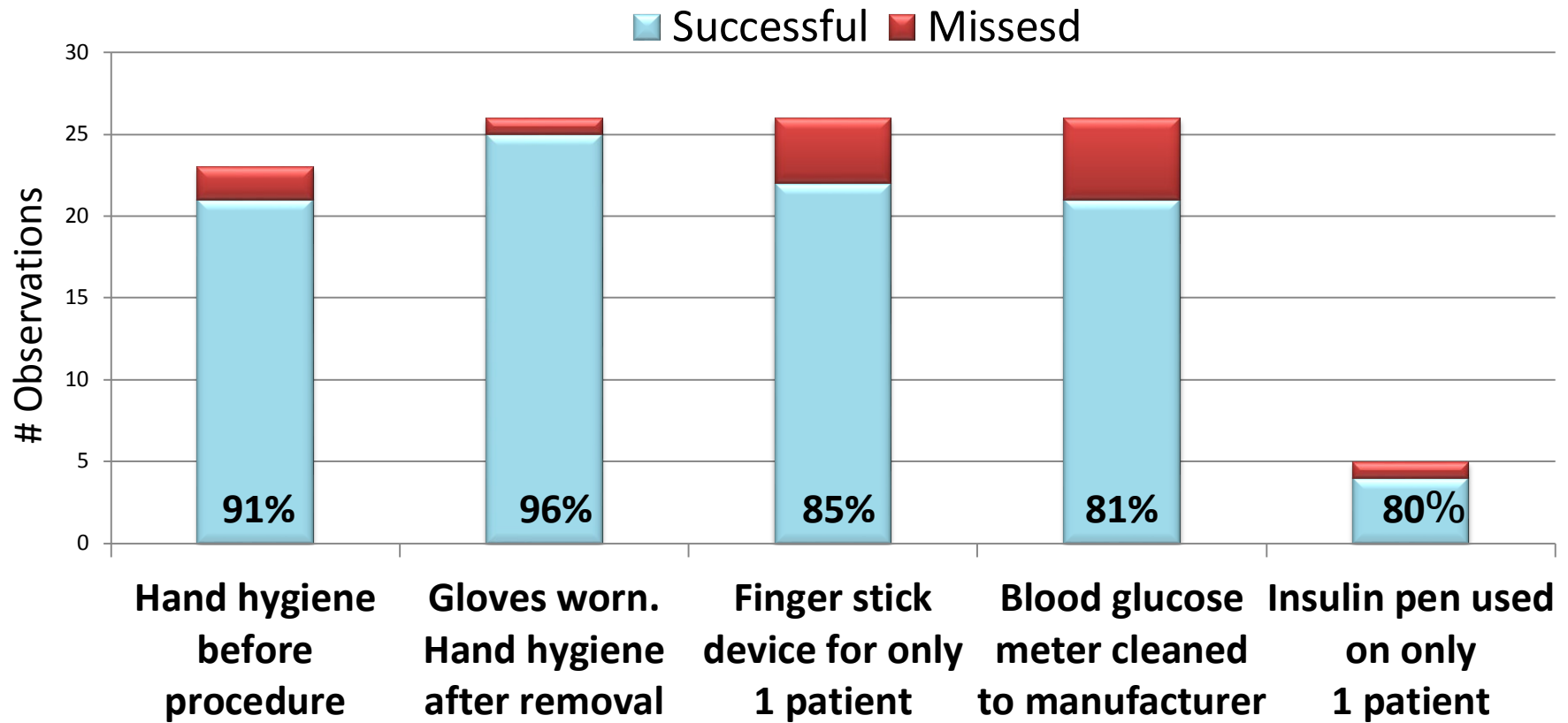
## Healthcare-Associated Infections Program Adherence Monitoring Environmental Cleaning and Disinfection in the Perioperative Area

**Regular monitoring with feedback of results to staff can maintain or improve adherence to environmental cleaning and disinfection practices. Monitoring may be performed in any type of patient care area.**

**Instructions:** Observe at least two different environmental services (EVS) staff members. Check a box if you were unable to observe. In the column on the right, record the total number of adherent practices observed (Yes + No). Calculate adherence percentage in the bottom row. Select appropriate setting (Pre-op, OR, PACU).

Environmental Cleaning and Disinfection Observations		Observation 1 <input type="checkbox"/> Pre-op <input type="checkbox"/> OR <input type="checkbox"/> PACU		Observation 2 <input type="checkbox"/> Pre-op <input type="checkbox"/> OR <input type="checkbox"/> PACU	
EV1.	Detergent/disinfectant solution is mixed, stored according to manufacturer's instructions.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
EV2.	Solution remains in wet contact with surfaces according to manufacturer's instructions.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
EV3.	A new clean, saturated cloth is used in each patient area. The cloth is changed when visibly soiled.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

## Blood Glucose Practices Adherence 46 ASC, 2016-2018





# Blood Glucose Adherence Monitoring

Refer to handout or [cdph.ca.gov/hai](http://cdph.ca.gov/hai)



## Healthcare-Associated Infections Program Adherence Monitoring Blood Glucose Meter

**Regular monitoring with feedback of results to staff can maintain or improve adherence to blood glucose and opportunities for improvement. Monitoring may be performed in any type of patient care location v**

**Instructions:** Observe 3-4 patients/residents during blood glucose sampling. Check a box for each practice number of "Yes" for adherent practices observed and the total number of observations ("Yes" + "No"). Cal

Blood Glucose Meter Opportunity		Patient/ Resident 1		Patient/ Resident 2		Patient/ Resident 3	
<b>BG1.</b>	Hand hygiene <u>is performed</u> before the procedure.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>BG2.</b>	Gloves are worn by the healthcare provider when performing the finger stick procedure and are removed after the procedure. Hand hygiene follows glove removal.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>BG3.</b>	Finger stick devices <u>are used</u> for only one patient/resident. <i>Note: This includes both the lancet and the lancet holding device.</i>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

# Monitoring Device Reprocessing

Refer to handout or [cdph.ca.gov/hai](http://cdph.ca.gov/hai)



## Healthcare-Associated Infections Program Adherence Monitoring Device Reprocessing

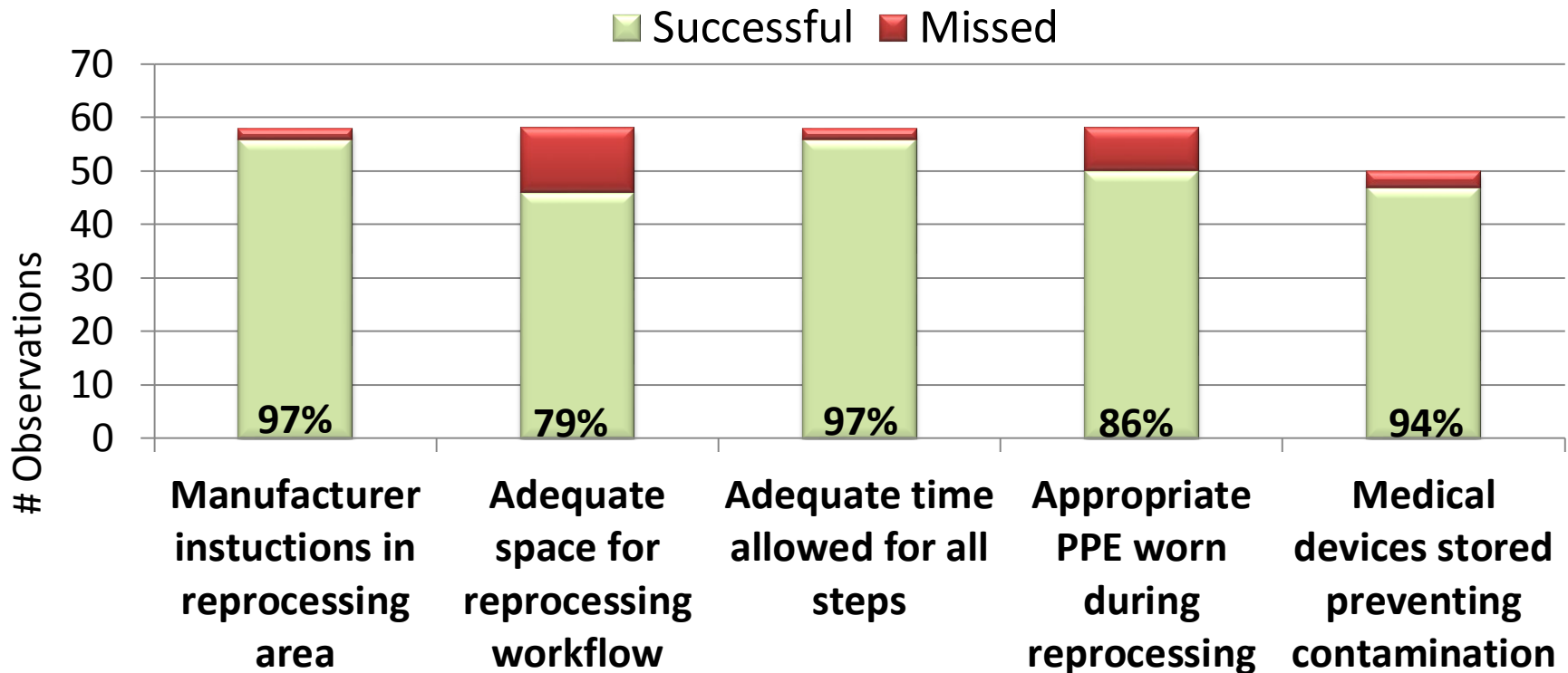
**Regular monitoring with feedback of results to staff can maintain or improve adherence to device reprocessing opportunities for improvement. Monitoring may be performed in any type of location where device reprocessing occurs.**

**Instructions:** Observe each practice in the reprocessing area and check a box if adherent, Yes or No. In the table, record the number of observations for adherent practices observed and the total number of observations ("Yes" + "No"). Calculate adherence percentage.



Device Reprocessing Practices		Procedure 1
DR1.	Policies, procedures, and manufacturer reprocessing instructions for reusable medical devices used in the facility are available in the reprocessing area(s).	<input type="checkbox"/> Yes <input type="checkbox"/> No
DR2.	Reusable medical devices are cleaned, reprocessed (disinfection or sterilization) and maintained according to the manufacturer instructions. <i>Note: If the manufacturer does not provide such instructions, the device may not be suitable for multi-patient use.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
DR3.	Single-use devices are discarded after use and not used for more than one patient. <i>Note: If the facility elects to reuse single-use devices, these devices must be reprocessed prior to reuse by a third-party reprocessor that it is registered with the FDA as a third-party reprocessor and cleared by the FDA to reprocess the specific device in question. The facility should have documentation from the third party reprocessor confirming this is the case.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No

**ASC Device Reprocessing Adherence Monitoring**  
**Percent Successful**  
**October 2016 - July 2018 (n=46 ASC)**



# Monitoring High Level Disinfection

Refer to handout or [cdph.ca.gov/hai](http://cdph.ca.gov/hai)



## Healthcare-Associated Infections Program Adherence Monitoring High-Level Disinfection of Reusable Devices

**Regular monitoring with feedback of results to staff can maintain or improve adherence to high-level disinfection practices and provide opportunities for improvement. Monitoring may be performed in any type of location where high-level disinfection is performed.**

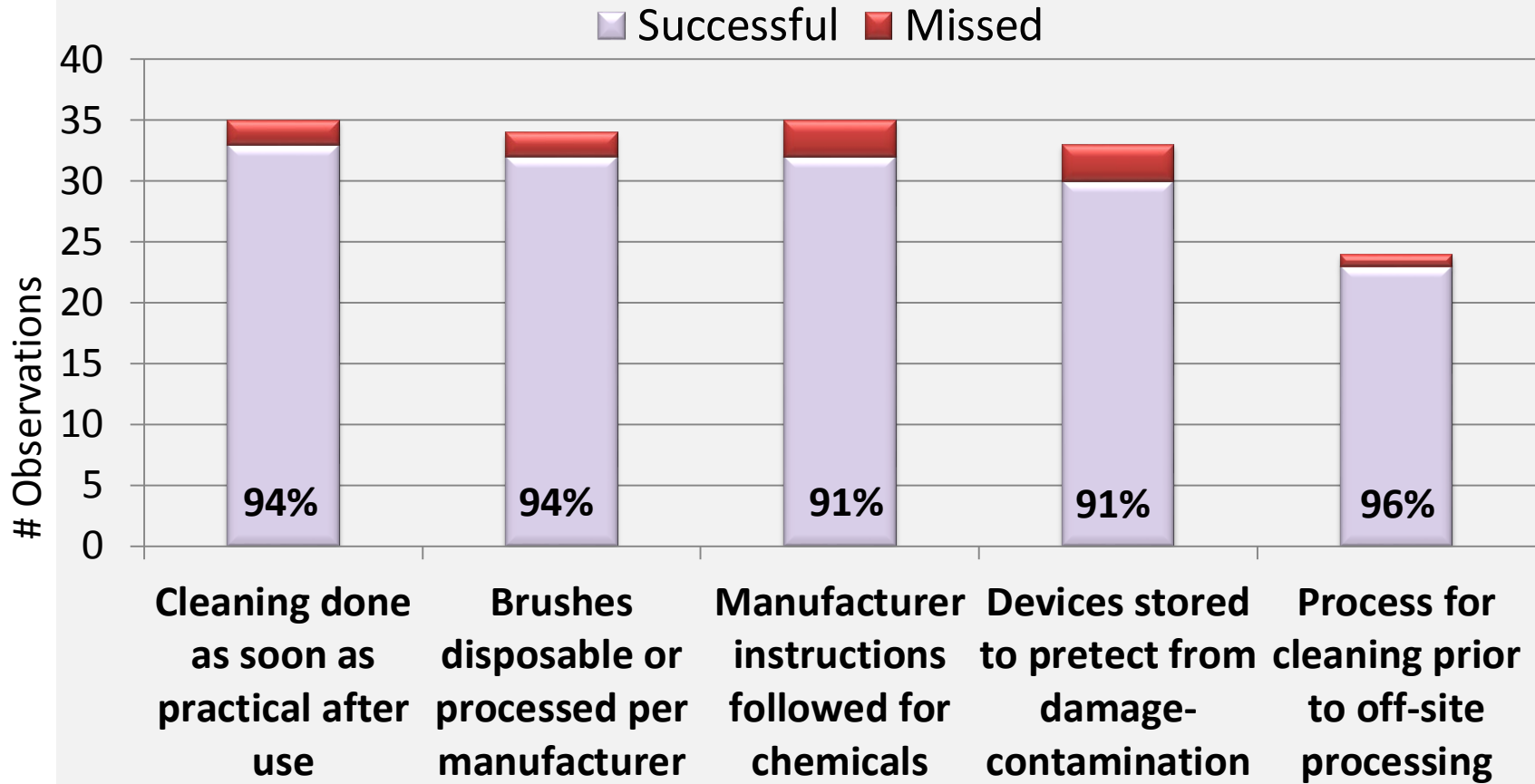
**Instructions:** Observe each practice in the high-level disinfection area and check a box if adherent, Yes or No. Record the number of “Yes” for adherent practices observed and the total number of observations (“Yes” + “No”).

High-Level Disinfection Practices		Device Observation 1
HL1.	Pre-cleaning is performed at the point of use to prevent the bioburden from drying and then the soiled endoscope is promptly transported to the reprocessing area.	<input type="checkbox"/> Yes <input type="checkbox"/> No
HL2.	Flexible endoscopes are inspected for damage and leak tested as part of each reprocessing cycle. Any device that fails the leak test is removed from clinical use and repaired.	<input type="checkbox"/> Yes <input type="checkbox"/> No
HL3.	Devices are thoroughly cleaned according to manufacturer instructions and visually inspected for residual soil prior to high-level disinfection. <i>Note: Cleaning may be manual or automated. Ensure model specific cleaning.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No

## High-Level Disinfection Adherence

### 31 ASC

### 2016-2018



# Monitoring Sterilization

Refer to handout or [cdph.ca.gov/hai](http://cdph.ca.gov/hai)



## Healthcare-Associated Infections Program Adherence Monitoring Sterilization of Reusable Devices

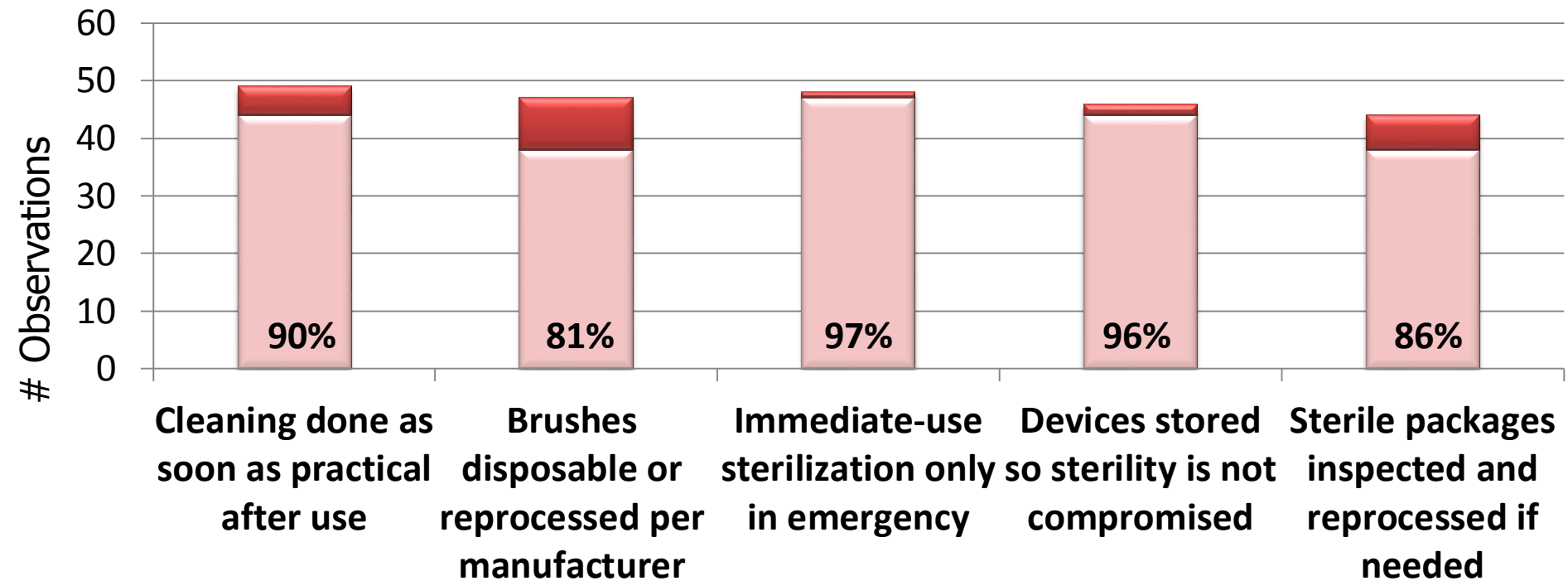
**Regular monitoring with feedback of results to staff can maintain or improve adherence to sterilization gaps and opportunities for improvement. Monitoring may be performed in any type of location where**

**Instructions:** Observe each practice in the sterilization area and check a box if adherent, Yes or No. In the bottom row, enter the number of adherent practices observed and the total number of observations ("Yes" + "No"). Calculate adherence percentage.

Sterilization Practices		Observation 1	
RD1.	Devices are thoroughly cleaned according to manufacturer instructions and visually inspected for residual soil prior to sterilization. <i>Note: Cleaning may be manual (i.e., using friction) and/or mechanical (e.g., with ultrasonic cleaners, washer-disinfector, washer-sterilizers). Ensure appropriately sized cleaning brushes are selected for cleaning device channels and lumens.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
RD2.	Cleaning is performed as soon as practical after use (e.g., at the point of use) to prevent soiled materials from becoming dried onto devices.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
RD3.	Enzymatic cleaner or detergent is used for cleaning and discarded according to manufacturer's instructions (typically after each use)	<input type="checkbox"/> Yes <input type="checkbox"/> No	

## Sterilization Practices Adherence 43 ASC, 2016-2018

■ Successful ■ Missed



**Are you sure Evidence Based Practices are  
performed routinely in your ASC ?**

**You won't know if you don't monitor!**



# SSI Surveillance

- Challenging in the ASC
  - Diversity of procedures
  - Need for clear surveillance definitions
  - Patients may seek treatment for infections elsewhere
    - Hospital, emergency department, urgent care, MD office
- ASC may be unaware of the SSI and unable to collect data

# SSI Surveillance Requirements

- Consistent use of standard surveillance methods and SSI definitions
- Capture sufficient risk factor data for each procedure performed
- Application of risk adjustment methods that calculate an SSI probability for each surgical patient

# Clinical vs Surveillance Definitions

Clinical criteria used by physicians for patient care and management may differ from surveillance criteria

- Clinical
  - Patient centered
  - Used for therapeutic decisions
- Surveillance
  - Population based
  - Applied exactly the same way each time

# SSI Surveillance Strategies -1

- Phone or send emails or postcards to patients after their discharge **inquiring if they developed an infection**
- Include questions about infections in **patient satisfaction surveys**
- Send postcards or emailing lists of patients undergoing procedures to their **surgeon/provider** requesting them to document if the patient developed infections and report them to the ASC
- Contact the patient's **primary care provider** by phone or email to inquire if the patient developed a post-procedure infection

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APIC (2014)

## Post-discharge Surveillance Strategies -2

- Work with infection preventionists (IPs) in **local hospitals** or clinics to develop **notification systems** when patients are admitted to hospitals or seen in emergency departments or clinics with postoperative SSIs that might be associated with procedures performed at the ASC
- **Review daily ASC culture** and lab reports from specimens submitted for possible infections that might be attributed to prior procedures performed at the ASC facility
- **Review daily operative schedules** to identify patients undergoing incision and drainage (I & D) procedures that might be associated with prior surgical procedures

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APIC (2014)

# National Healthcare Safety Network

- Centers for Disease Control and Prevention (CDC) national HAI surveillance system
- Provides standardization
- Used by CDPH, CMS, and others to receive HAI data from hospitals and other facility types
  - Data used for HAI public reporting and pay for performance programs
- Accessed through a secure, web-based interface; open to all U.S. healthcare facilities at no charge
- **New outpatient SSI surveillance capabilities (Nov 2018)**

## NHSN Strengths

- Provides standards for surveillance across health care facilities
- Data are risk-adjusted for comparison to national referent data
- Web-based; data housed remotely
- Includes data quality checks
- Data analysis tools are built-in
- Allows electronic reporting using national electronic health record standards (e.g., HL7, CDA)
- Expandable to many health care settings

# NHSN Data Access

Facilities own their NHSN surveillance data and:

- May edit data at any time to improve accuracy and completeness
- May join NHSN groups to confer rights for data access
  - State health departments (e.g., CDPH)
  - Healthcare organizations
  - Facilities within a group cannot see each other's data



# NHCN Outpatient Procedure Component (OPC)

- New November 2018
- Voluntary enrollment
- For ASC defined by Code of Federal Regulations 42 CFR § 416.2
  - *Any distinct entity that operates exclusively for the purpose of providing surgical services to patients **not requiring hospitalization** and in which the expected duration of services does not exceed 24 hours following an admission to the ASC*

**Note:** Hospital outpatient procedure departments will continue to use the NHSN Patient Safety Component SSI surveillance module

# NHSN Modules for ASC Surveillance - 1

## 1. Same Day Outcome Measures

- Patient burn
- Patient fall
- Wrong events ( wrong site, side, patient, procedure, and/or implant
- All-cause hospital transfer/admission

If monitoring same day outcome measures, all patients must be monitored for all four elements from admission to discharge

# NHSN Module for ASC Surveillance - 2

## 2. Surgical Site Infection Surveillance

- Allows choice of operative procedures to monitor
  - High risk and/or high volume procedures
  - Procedures on facility quality initiatives
- Surveillance is active and patient-based
- Includes formal post-discharge surveillance reporting process
- Fewer reporting fields than hospital-based SSI surveillance
- Includes breast procedure SSI

# How to Enroll in NHSN Outpatient Component

- ASC currently enrolled in hospital-based Patient Safety SSI surveillance will be automatically enrolled in OPC
  - No action required
- ASC currently enrolled in NHSN Healthcare Personnel Safety Component (such as for monitoring HCP flu vaccination)
  - Can add OPC as a component
  - Need to complete ASC Annual Facility Safety Survey
- ASC NOT currently participating in NHSN
  - Need to complete the NHSN enrollment process and setup

ASC Training: [cdc.gov/nhsn/ambulatory-surgery/ssi/](https://cdc.gov/nhsn/ambulatory-surgery/ssi/)

# ASC Currently Enrolled in NHSN

Add Outpatient Component

Complete the ASC Annual  
Facility Survey



## Patient Safety Component—Annual Facility Survey for Ambulatory Surgery Center (ASC)

**NHSN Home**

- Alerts
- Dashboard
- Reporting Plan ▶
- Patient ▶
- Event ▶
- Procedure ▶
- Summary Data ▶
- Import/Export
- Surveys ▶
- Analysis ▶
- Users ▶
- Facility ▶**
- Group ▶
- Logout

**Edit Facility Information**

Mandatory fields marked with \*

[Facility Information](#) [Components](#) [Contact Information](#)

**Facility Information**

Facility ID:

Facility name \*:

Address, line 1 \*:

Address, line 2:

Address, line 3:

City \*:

State \*:

Form Approved  
OMB No. 0920-0666  
Exp. Date: 01/31/2021  
[www.cdc.gov/nhsn](http://www.cdc.gov/nhsn)

Customize Forms  
Facility Info  
**Add/Edit Component**



# ASC New to NHSN

## National Healthcare Safety Network (NHSN)

CDC > NHSN

[cdc.gov/nhsn/enrollment/index.html](https://cdc.gov/nhsn/enrollment/index.html)

🏠 NHSN

NHSN Login

About NHSN

Enroll Here

Enrollment for Ambulatory  
Surgery Centers

Enrollment for Acute Care  
Hospitals/Facilities

Enrollment for Long-term Acute  
Care Hospitals/Facilities

Enrollment for Inpatient  
Rehabilitation Facilities

Enrollment for Inpatient

## New to NHSN? Enroll Facility Here.

Select Your Facility Type

### Acute Care Hospitals / Facilities



Enrollment for urgent care or other short-term stay facilities (e.g. critical access facilities, oncology facilities, military/VA facilities)

### Ambulatory Surgery Centers



Enrollment for outpatient surgery centers.

## National Healthcare Safety Network (NHSN)

CDC > NHSN > Enroll Here

[cdc.gov/nhsn/ambulatory-surgery/enroll.html](https://cdc.gov/nhsn/ambulatory-surgery/enroll.html)



🏠 NHSN

NHSN Login

About NHSN

Enroll Here

Enrollment for Ambulatory  
Surgery Centers

Set-up

Enrollment for Acute Care  
Hospitals/Facilities

Enrollment for Long-term Acute  
Care Hospitals/Facilities

Enrollment for Inpatient  
Rehabilitation Facilities

Enrollment for Inpatient  
Psychiatric Facilities

## 5-Step Enrollment for Ambulatory Surgery Centers

**Note:** The following instructions are for ambulatory surgical centers (ASCs) that must enroll in NHSN for the purpose of fulfilling CMS's Ambulatory Surgical Center Quality Reporting (ASCQR) Program requirements. Participating CMS-licensed ASCs will be required to report healthcare personnel vaccination summary data via NHSN beginning with the 2014-2015 influenza season. Detailed operational guidance, training, and other information for this reporting are available at [ASC Surveillance for Healthcare Personnel Vaccination](#).

If your facility is already enrolled in NHSN, e.g. because your state requires your facility to report surgical site infection data, your facility does not have to be re-enrolled. Your NHSN Facility Administrator may simply activate the Healthcare Personnel Safety Component in NHSN.

### Step 1: Training and Preparation



Print and follow [detailed checklist June 2015](#) to ensure successful and efficient enrollment.

Complete the [HCP Influenza Vaccination Summary: Ambulatory Surgery Centers. September 2015](#) [PDF - 3M] training.

Be sure to check trusted websites and spam blockers.

Time to complete step 1: 2 hours, 45 minutes

# NHSN Reporting

## Once your ASC is enrolled in NHSN

- Complete annual survey
  - ASC specifics
- Report monthly
  - Procedure types you want to follow for surveillance
  - Risk factor data for each patient who has that surgery
- Report SSI per NHSN protocol
- Create reports in NHSN to display your data



## Outpatient SSI Surveillance Denominator Data Fields

Reporting Detail	Patient Safety	Outpatient Procedure
ASA Score	✓	✓*
Height	✓	✓
Weight	✓	✓
Diabetes	✓	✓
Wound Class	✓	✓
Trauma	✓	
Emergency	✓	
General Anesthesia	✓	✓
Duration	✓	✓
Closure Technique	✓	

\* Procedures that do not generate an ASA are excluded.

# Outpatient Procedures with 30-Day SSI Surveillance Period

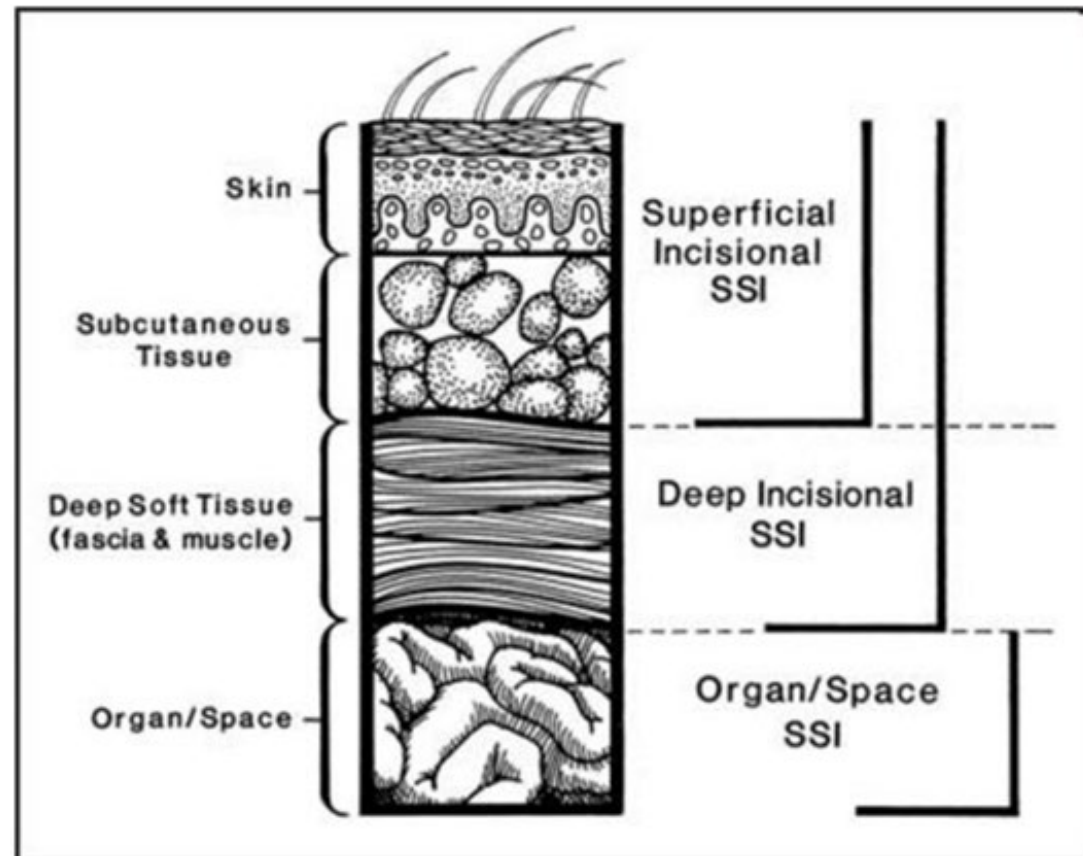
AMP	Limb amputation	NEPH	Kidney surgery
APPY	Appendix surgery	OVRY	Ovarian surgery
AVSD	Shunt for dialysis	PRST	Prostate surgery
BILI	Bile duct, liver or pancreatic surgery	REC	Rectal surgery
CEA	Carotid endarterectomy	SB	Small bowel surgery
CHOL	Gallbladder surgery	SPLE	Spleen surgery
COLO	Colon Surgery	THOR	Thoracic Surgery
GAST	Gastric surgery	THYR	Thyroid and/or parathyroid surgery
HYST	Abdominal hysterectomy	VHYS	Vaginal hysterectomy
LAM	Laminectomy	XLAP	
NECK	Neck surgery		

# Outpatient Procedures with 90-Day SSI Surveillance Period

BRST	Breast surgery
FUSN	Spinal fusion
FX	Open reduction of fracture
HER	Herniorrhaphy
HPRO	Hip prosthesis
KPRO	Knee prosthesis
PACE	Pacemaker surgery
PVBY	Peripheral vascular bypass surgery
VHSN	Ventricular shunt

# SSI Types

- Outpatient SSI definitions (criteria) are similar to hospital SSI definitions Safety Component
- SSI categorized as:
  - Superficial incisional SSI
  - Deep incisional SSI
  - Organ/space SSI
- Criteria are slightly different for breast SSI



# Superficial Incisional SSI

- ❑ Infection occurs within 30 days after surgical procedure
  - AND
  - ❑ Involves only skin and subcutaneous tissue of the incision
  - AND
  - Meets at least 1 of 4 criteria:
    - ❑ 1. Purulent drainage from the superficial incision
    - ❑ 2. Organism isolated from incision culture or fluid (obtained aseptically)
    - ❑ 3. Diagnosis of superficial SSI by surgeon or attending physician or other designee
    - ❑ 4. Incision opened by surgeon or designee; culture positive or not cultured
- AND { at least 1 of the following:  
Pain or tenderness  
Localized swelling  
Erythema  
Heat

# Superficial Incisional SSI

- Do not report stitch abscess as an SSI (defined as minimal inflammation and discharge confined to points of suture penetration)
- Do not report a localized stab wound infection as an SSI
- Do not report cellulitis by itself, it is not an SSI

NHSN Outpatient Procedure Component, Nov 2018)

## Deep Incisional SSI

- ❑ Infection occurs within 30 days after surgical procedure (unless its one of the 9 procedures followed for 90 days)
- AND
- ❑ Involves deep soft tissues of the incision, e.g. fascial & muscle layers
- AND
- Meets at least 1 of 3 criteria:
  - ❑ 1. Purulent drainage from deep incision
  - ❑ 2. Abscess or evidence of infection involving deep incision detected on gross anatomical or histopathologic exam or imaging test
  - ❑ 3. Deep incision spontaneously dehisces **OR** opened by surgeon, attending physician or designee, and culture positive or not cultured\*
    - AND { Patient has at least 1:
      - ❑ fever >38°C
      - ❑ localized pain, or tenderness

\*A culture negative finding does not meet this criteria  
(NHSN Outpatient Procedure Component, Nov 2018)

## Organ/Space SSI

- ❑ Infection occurs within 30 days after surgical procedure (unless its one of the 9 procedures followed for 90 days)  
AND
- ❑ Involves any part of body deeper than the fascial/muscle layers, opened or manipulated during the surgical procedure  
AND
- ❑ Meets at least 1 of 3 criteria:
  - ❑ 1. Purulent drainage from drain placed into organ/space
  - ❑ 2. Organism isolated from an aseptically-obtained culture of fluid or tissue in the organ/space
  - ❑ 3. Abscess or evidence of infection involving the organ/space that is detected on gross anatomical or by histopathologic or imaging test



# Ambulatory Breast Procedure SSI Measure

- SSI following breast procedures in ASC reporting to NHSN
  - Highest volume of SSI
  - Highest SSI risk probability
- Different criteria for reporting Breast SSI



*Outpatient Procedure Component*

## **Appendix A: Instructions for Reporting Infections of Breast Surgery (BRST)**

These instructions apply to surgical site infections (SSIs) during the 30-day (superficial SSI) and 90-day (deep and organ/space SSI) postoperative periods following BRST- Breast Surgery performed in Ambulatory Surgery Centers.

**Surgical site infection:** An infection, following a breast surgery, of either the skin, subcutaneous tissue or breast parenchyma at the incision site (superficial incisional SSI), deep soft tissues of the incision site (deep incisional SSI), or any part of the body deeper than the fascial/muscle layers that is opened or manipulated during the operative procedure (organ/space SSI).

### **BRST - Superficial incisional SSI**

Must meet the following criteria:


# Post-discharge Surveillance Toolkit

Includes:

- Sample letter
- Sample line list by surgeon
- SSI worksheet

[cdc.gov/nhsn/pdfs/opc/opc-ssi-post-discharge-toolkit-508.pdf](https://cdc.gov/nhsn/pdfs/opc/opc-ssi-post-discharge-toolkit-508.pdf)

Outpatient Procedure Co...



Outpatient Procedure Co...

**SAMPLE: Post-discharge Worksheet for Suspected SSI**  
*[Insert Name Ambulatory Surgery Center]* *[Insert Date]*  
 Post-discharge Surgical Site Infection Surveillance

Patient Demographics:	
Patient Name (Last, First):	
Primary CPT Code of Procedure:	Date of Procedure:
Date SSI Identified:	
Was the SSI identified on admission to a hospital?      Y      N	
If Yes, name of facility: _____	
Select the infection type and associated criteria (if known) from the options below:	
<input type="checkbox"/> <b>A. Superficial Incisional SSI:</b> Involves only the skin and subcutaneous tissue of the incision	
<b>Criteria met (check all that apply):</b>	
<input type="checkbox"/> Purulent drainage from the superficial incision	
<input type="checkbox"/> Organisms identified from an aseptically-obtained specimen from the superficial incision or tissue <sup>1</sup>	
<input type="checkbox"/> *Superficial incision that is deliberately opened by a surgeon, attending physician <sup>2</sup> or other culture or non-culture based <sup>1</sup> microbiologic testing is not performed.	
<b>*If checked, please answer the following (check all that apply):</b>	
<input type="radio"/> Pain or tenderness	
<input type="radio"/> Incision healing	

# Importance of SSI Surveillance, Investigation, and Reporting

- Recognize any SSI increases over time
    - Specific procedure – equipment – or pathogen?
  - Become aware of pathogens reportable to local health department (LHD), such as group A streptococcus
  - Recognize your LHD may be aware of a regional problem
    - LHD may be able to assist with epidemiological and laboratory support
  - Report any defective product, device, or medication suspected of contamination to the FDA and CDC
  - Establish relationships with local acute care hospitals
    - You may share the same patients!
-

## Summary

- SSI can only be prevented if every healthcare personnel adheres to evidence-based practices
- You need to know the gaps to correct the gaps
- A robust SSI surveillance program uses consistent methods, captures sufficient risk factor data, and applies standardized SSI definitions
- NHSN provides a standardized surveillance system
- Established relationships with acute care hospitals and local public health departments provide additional support

# References

CDC – *Guideline for disinfection and sterilization in healthcare facilities* (2017).  
<https://www.cdc.gov/infectioncontrol/guidelines/disinfection/>

CDC/HICPAC – *Guideline for prevention of surgical site infections* (2017).  
<https://jamanetwork.com/journals/jamasurgery/fullarticle>

CDC/HICPAC – *Core infection prevention and control practices for safe healthcare delivery in all settings – recommendations of the healthcare infection control practices advisory committee* (2017). <https://www.cdc.gov/hicpac/pdf/core-practices.pdf>

CDPH – *Monitoring adherence to health care practices that prevent infection* (2017).  
<https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/MonitoringAdherenceToHCPracticesThatPr>

## Questions?

For more information,  
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