



# ***Standardization of Infection Control Protocols in the Ambulatory Surgery Center (ASC)***

**MODERATED BY CATHY BRETT, ASC COMMUNICATIONS, INC.**

**BECKER'S ASC REVIEW**

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# TODAY'S PRESENTERS

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**Chuck Peck, MD**

**Managing Director,  
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**Leader of Clinical and Operational  
Effectiveness**



**TK Miller, MD**

**Associate Professor of Surgery Virginia  
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**Medical Director,  
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**Medical Director,  
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*“The overall burden of HAIs in outpatient settings is unknown; however, it is evident from the infections that have been identified that it is a significant problem resulting from very basic infection control failures...”*

Health and Human Services press release  
July 2009

# LEARNING OBJECTIVES

Describe how **infection prevention protocols can help** the ASC demonstrate quality of care

Review **current infection prevention guidelines**

Explain **how to design and implement** a standardized infection prevention protocol for your ASC **that complies with guidelines**

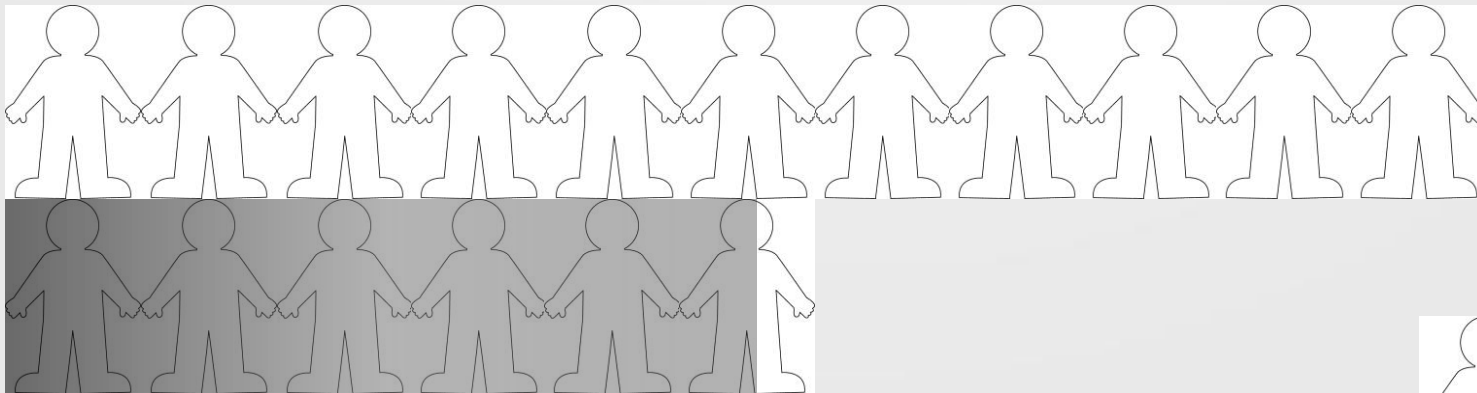
Understand **how to engage staff** to promote compliance with guidelines and specific protocols at your facility



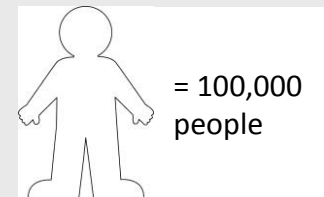
Improve quality of patient care and cost effectiveness in ASC

# THE HEALTHCARE-ASSOCIATED INFECTION (HAI) PROBLEM

- According to U.S. Centers for Disease Control and Prevention (CDC):
  - 1.7 million people acquire HAIs each year
    - Result: approximately 271 deaths per day
- One-third of HAIs are considered preventable



Approximately 566,000 preventable HAIs



# THE PROBLEM OF HAIs IN ASCs

- By the numbers:
  - 5,000+ centers in the U.S.
  - 6 million surgeries annually performed
    - More than three-quarters of all operations in the U.S. are performed on an outpatient basis
- CDC has noted an increase in HAIs in outpatient settings, which it attributed to “unsafe medical practices”

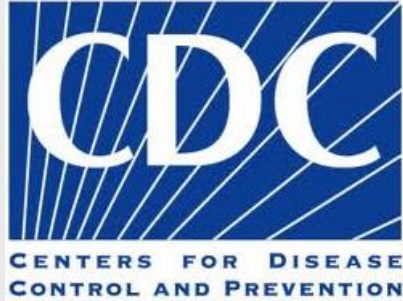


# WHY ASCs SHOULD STANDARDIZE INFECTION PREVENTION PROTOCOLS

- A 2010 CDC report found among a sample of ASCs in 3 states, lapses in infection control were common and could potentially put patients at risk
- Standardization could help eliminate variability in processes and help HCPs implement evidence-based, proven products that could result in:
  - Less waste
  - Fewer errors
  - Better quality outcomes
  - Increased cost effectiveness
  - Prevented medication errors and HAIs



# CDC GUIDELINES OUTLINE EFFECTIVE APPROACH TO INFECTION CONTROL



- **Patients** should take an **antiseptic shower** or bath the day before the procedure
- If hair removal is deemed necessary, **clip immediately before surgery**
- The skin at the site of the incision should be **prepared with an antiseptic**; preferred agents should **provide rapid, persistent, broad-spectrum antimicrobial activity**
- **Surgical team** personnel should **wash their arms and forearms** with an antiseptic solution before putting on sterile gloves and gowns
- **Healthcare organizations must implement policies** to prevent transmission from personnel to patients
- **An antimicrobial prophylaxis** should be administered before an operation begins, typically via intravenous infusion



# CDC PROVIDES ADMINISTRATIVE RECOMMENDATIONS FOR ASCs



1. Develop and maintain infection prevention and occupational programs
2. Assure sufficient and appropriate supplies necessary for adherence to Precautions (e.g., hand hygiene personal protective equipment, equipment)
3. Assure at least one individual in infection prevention is regularly available to the facility
4. Develop written infection policies and procedures appropriate for the services provided, and based upon evidence-based regulations or standards

# CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS) DEMAND INFECTION CONTROL

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In May 2009 CMS began enforcing new Conditions for Coverage for ASCs that require adherence to several revised infection control practices



# CMS CONDITIONS FOR COVERAGE

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- The ASC must maintain an infection control program that seeks to minimize infections and communicable diseases (416.51)
- The Infection Control Plan must address all of the following:
  - Maintenance of a sanitary environment (416.44a – Physical Environment)
  - Development/implementation of IC measures related to ASC personnel
  - Mitigation of risks associated with patient infections present upon admission
  - Mitigation of risks contributing to HAIs
  - Active surveillance
  - Monitoring compliance with all policies/procedures/protocols and other program requirements (i.e., 416.48a – Administration of Drugs)
  - Plan evaluation and revision when indicated
  - Coordination as required by law with federal, state and local emergency preparedness and health authorities to address communicable and infectious disease threats and outbreaks
  - Compliance with reportable disease requirements of the local health authority

# CMS CONDITIONS FOR COVERAGE, CONTINUED

- 416.51(b) - Must designate in writing a **qualified, licensed healthcare professional** to lead the infection control program
  - Utilize a job description specifically for the Infection Control Officer
  - Certification for the individual is not required (unless specified by State laws (e.g., NJ))
  - Must have documentation that this person has training that qualifies them to lead an Infection Control Program (e.g., ongoing education/training such as IC courses, participation in local and/or national meetings such as APIC)
- Questions to consider in your ASC:
  - Is there documentation of the **training** that qualifies this individual to lead an infection control program?
  - Do you have a log sheet that documents the **time** this person spends working on the infection control program?



# CHALLENGES IN STANDARDIZING ASC INFECTION CONTROL PROTOCOLS

- In ASCs, there is high risk of inconsistencies, which are a big threat in infection prevention:
  - Many different doctors
  - Surgeries can span across many different sub-specialties
    - Orthopaedic, OB/GYN, cardiology, vascular, urology
  - Sub-specialties may have different habits or methods
- Surveillance for outcome measures in ASCs is challenging because:
  - Patient encounters may be brief or sporadic
  - Evaluation and treatment of consequent infections may involve different healthcare settings (e.g., hospitals)



# ESTABLISH A COMPLETE APPROACH TO IMPLEMENTATION AND EVALUATION



## 4 PILLARS OF ESTABLISHING A STANDARDIZED INFECTION CONTROL PROGRAM IN ASCs

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1. Understand the Culture of the Community
2. Understand the Culture of the ASC
3. Comply with Regulatory Guidelines and Policies
4. Monitor and Track Infections

# UNDERSTAND THE CULTURE OF THE COMMUNITY

- Survey and know your community to know where the high risk patients live/frequent
- Make sure you avoid or take extra precautions with these patients





## UNDERSTAND THE CULTURE OF THE ASC

- Instill a culture of infection prevention
  - Exclude any infected wounds
  - Provide multiple hand cleaning stations
  - Ensure cleaning rooms follow HIPPA standards
    - Maintain as close to cycle cleaning as possible, regardless of ASC setting
  - Reduce the number of people entering the surgery areas
  - Make sure IP is a part of all staff materials
  - Promote IP culture to all new staff and reinforce standards

# EMPLOYEE HEALTH IN THE ASC

- Infection prevention starts with the staff
  - Maintain current facility protocols pertaining to communicable diseases (i.e., potential flu outbreaks and employee immunizations) as well as P&P's for “sick time”
  - Follow current state-specific & CDC guidelines for TB
  - If employee job functions change, perform another OSHA risk assessment
  - Revisit exposure control plan annually; ensure that facility policy/procedures pertaining to “exposure incidents” are reflective of current practice
  - Appropriate record keeping is a must!



# COMPLY WITH REGULATORY GUIDELINES AND POLICIES

Important areas for ongoing assessment:

- Basic elements of infection prevention
  - Hand hygiene and surgical hand antisepsis
  - Nails, jewelry and gloves
  - Skin antisepsis
  - Injections, infusions and medications
- Role of the environment
- Cleaning, disinfection and sterilization

## COMPLY WITH REGULATORY GUIDELINES AND POLICIES, CONTINUED

- CMS provides an [example of an audit tool](#) being used by federal surveyors to assess adherence to elements of Standard Precautions in ASCs
- The tool asks which guidelines the ASC is following:
  - Guideline for Isolation Precautions (CDC/HICPAC)
  - Hand Hygiene (CDC/HICPAC)
  - Disinfection and Sterilization in Healthcare Facilities (CDC/HICPAC)
  - Environmental Infection Control in Healthcare Facilities ( CDC/HICPAC)
  - Perioperative Standards and Recommended Practices (AORN)
  - Guidelines issues by a specialty surgical society/organization (List)

**NOTE!** If the ASC cannot document that it considered and selected specific guidelines for use in its infection control program, a deficiency related to 42 CFR 416.51(b) **must** be cited. This is the case even if the ASC's infection control practices comply with generally accepted standards of practice/national guidelines. If the ASC neither selected any nationally recognized guidelines nor complies with generally accepted infection control standards of practice, then the ASC should be cited for a condition-level deficiency related to 42 CFR 416.51.

# HAND HYGIENE & SURGICAL HAND ANTISEPSIS ARE THE FIRST LINES OF DEFENSE

- Hand Hygiene: *A general term that applies to either hand washing, antiseptic hand wash, antiseptic hand rub or surgical hand antiseptic*
  - Staff need to clearly understand when and how to perform hand hygiene
  - Conduct random checks to ensure quality
- Surgical Hand Antisepsis: *The preoperative use of an antiseptic hand wash (requires water) or antiseptic hand rub (does not require water) by surgical personnel to eliminate transient and reduce resident hand flora*
  - Products must meet FDA requirements for efficacy, including being persistent and cumulative in the bacterial log reduction on the skin over time

## FDA Surgical Hand Scrub Testing

11 Washes over a 5-Day Period		
Day 1	1 wash	1- $\log_{10}$ reduction of microbial flora within 1 minute after application
Day 2	3 washes	2- $\log_{10}$ reduction of microbial flora within 1 minute after application
Day 3	3 washes	No test
Day 4	3 washes	No test
Day 5	1 wash	3- $\log_{10}$ reduction of microbial flora within 1 minute after application

Source: FDA Tentative Final Monograph



# HAND HYGIENE & SURGICAL HAND ANTISEPSIS ARE THE FIRST LINES OF DEFENSE, CONTINUED

- Use of alcohol-based hand rub as the primary mode of hand hygiene in healthcare settings is recommended by the CDC and the World Health Organization (WHO)
- Compared with soap and water, use of an alcohol-based hand rub in healthcare settings can increase compliance with recommended hand hygiene practices by requiring less time and irritating the hands less



# NAILS, JEWELRY AND GLOVES HAVE AN IMPACT, TOO

- Artificial nails or extenders are more likely to harbor gram negative pathogens on fingertips
  - Acrylic base facilitates microbial adhesion
  - DO NOT WEAR artificial nails/extendors when having contact with high-risk patients
  - Epidemiologically implicated in various types of outbreaks
- Skin underneath rings tends to be more heavily colonized than other comparable areas
  - Results from recent study with ICU nurses: rings were the only substantial risk factor for carriage of gram-negative bacilli
- Gloves
  - Healthcare providers should remove gloves (and immediately perform hand hygiene) before moving to the next task and/or patient
  - Wear gloves when handling potentially contaminated equipment



# PREOPERATIVE SKIN ANTISEPSIS IS KEY TO PREVENTING SURGICAL INFECTIONS

- 11 Leading organizations recommend skin antisepsis with a 2% chlorhexidine gluconate (CHG) solution
  - A 2% Chlorhexidine Gluconate/70% Isopropyl Alcohol formulation is rapid-acting, persistent and works on a broad spectrum of bacteria



- Consistent with CDC guidelines, a skin prep should be **applied with an applicator** to eliminate direct hand-to-patient contact
  - Additionally, a hands-free application with an applicator **helps prevent cross-contamination**





# SAFE INJECTION, INFUSION & MEDICATION VIAL PRACTICES

- Reduce variability in these practices to help improve infection rates:
  - Injections:
    - Disinfect (scrub) all vial tops, IV hubs/ports with alcohol for 3 secs before accessing
    - Use 1 sterile needle, 1 sterile syringe for each injection and each entry into a vial
  - Infusions:
    - Begin administration within 1 hour of spiked IV bag (USP 797)
    - Best if irrigation solutions are discarded between patients
  - Medications:
    - Never leave a needle inserted into a medication vial septum for multiple uses.
    - Use blunt needle to withdraw meds
    - Single-use vials (i.e., propofol) should never be used for more than 1 patient; discard any unused solution immediately
    - Recommend that opened multi-dose vials are discarded at 28 days (USP 797)
    - Discard prepared syringes at end of case; do not save for next patient!
    - Administer all eye & ear drops/ointments using a “no touch” technique; if tip of container touches patient, dispose!
    - Obtain topicals in smallest UOM; remove w/sterile applicator each time (no double-dip)
    - Pre-drawn syringes must include labeling: time, person’s initials, med name, dose, expiration date



## THE ROLE OF THE ENVIRONMENT

### IV. Environmental Infection Control

#### Additional Instructions:

Observations are to be made of staff who perform environmental cleaning (e.g., surgical technicians, cleaning staff, etc.)

Practices to be Assessed	Was practice performed?	Manner of confirmation
A. Operating rooms are cleaned and disinfected after each surgical or invasive procedure with an EPA-registered disinfectant	Yes No N/A	Observation Interview Both
B. Operating rooms are terminally cleaned daily	Yes No N/A	Observation Interview Both
C. High-touch surfaces in patient care areas are cleaned and disinfected with an EPA-registered disinfectant	Yes No N/A	Observation Interview Both
D. The ASC has a procedure in place to decontaminate gross spills of blood	Yes No N/A	Observation Interview Both
E. Additional breaches in environmental cleaning not captured by the questions above were identified (If YES, please specify further in comments)	Yes No N/A	Observation Interview Both

# EOC (ENVIRONMENT OF CARE) ASSESSMENT

- Spot check external services for housekeeping
- Positive vs. negative air pressure gradients
- Temp/humidity levels (68-73 degrees; 30-60%)
- Air changes per hour (15 minimum in OR)
- Potential privacy/security risks
- Potential ergonomic hazards
- Safe handling of electrical equipment
- Clinical alarms should be audible and not disabled
- Blanket and solution warmer temps controlled
- Potential hazards for: fire, med gas, surgical smoke
- Handling of chemicals (cytotoxic agents)
- Hazardous waste
- Misconnections of tubing, lines

# CLEANING, DISINFECTION & STERILIZATION

- Always perform instrument decontamination prior to sterilization or disinfection to remove bioburden and foreign material
  - Use:
    - Detergent and water
    - Enzyme cleaner and water
- Items coming in contact w/nonintact skin or mucous membranes are considered semi-critical and should receive high-level disinfection (HLD) at a minimum (e.g., laryngoscope handles/blades, bronchoscopes, GI endoscopes, rectal probes)
  - Use FDA-approved chemical agent for HLD
  - Minimum effective concentration (MEC) level of solution must be checked prior to each use
  - HLD requires specified contact conditions (concentration, length of time, temperature, total immersion including channels)
    - Disease transmission can occur with improper use
- Effective sterilization cannot occur without effective cleaning
  - Keep flash sterilization to a minimum (record info on log)
  - Sterilized items should be labeled w/sterilization date, sterilizer and load numbers
  - Sterile products must be stored under environmentally controlled conditions:
    - Temperature should not exceed 75 F or 70% humidity
    - 4 air exchanges/hr
    - Keep items 8-10" off floor, 18" down from sprinkler heads
    - Do not use cardboard
    - Rotate supplies



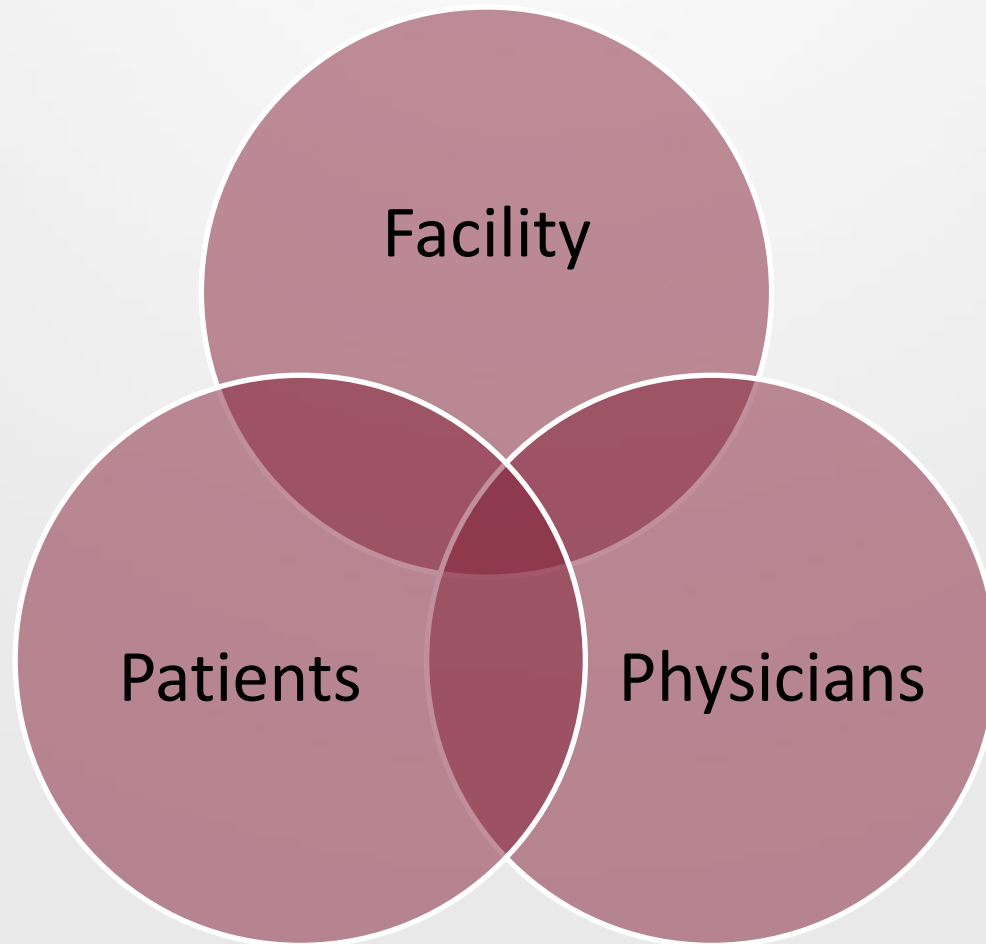
# TRACKING RESULTS IS CRITICAL TO DEMONSTRATING EFFECTIVENESS

- CMS requires 4 weeks of tracking for infections
  - Consider going over above so the staff understand the importance
- Track all products' lot numbers
  - Larger products (e.g., orthopaedic implants) as well as smaller products (e.g., sutures)
- Review all procedures each quarter
  - Ask each surgeon to rate each patient and flag any reported complications
- Consider tracking nurses or teams



# STANDARDIZING THE INFECTION PREVENTION PROTOCOL IS A COLLABORATIVE EFFORT

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# ASC INFECTION CONTROL PROGRAM SUMMARY

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## Must Haves:

1. Develop an **ongoing program** to prevent, identify and manage infections in accordance with nationally recognized infection control guidelines
2. Ensure the program is under direction of a **designated, qualified licensed healthcare professional** with training in infection control
3. Provide a **functional and sanitary environment** for provision of surgical services
4. Include **tracking mechanism** to immediately correct actions as needed and establish preventive measures that improve the control of infection

# CASE STUDY: LAKELAND SURGICAL AND DIAGNOSTIC CENTER'S ASC-SPECIFIC INFECTION CONTROL PROGRAM\*

**Situation:** In 2007, Lakeland Surgical and Diagnostic Center's CEO, Dave Daniel, decided that his Lakeland, FL facilities needed an infection control committee

**Who:** Bobbie Kendrick was appointed as infection control officer for the LSDC Florida Avenue campus

**Results:** in 2010, Kendrick reported an infection rate of .01 percent out of 19,000 cases that year

**How:**

**1. Four mandatory annual staff meetings.** Quarterly, the staff from the organizations meet and discuss current infection control topics of importance including, sterilization, and how to clean the facility.

**2. Physician involvement.** Two physicians, an epidemiologist and a pathologist sit on the LSDC infection control committee. It takes time to get people involved, but changes can make an impression.

**3. Surveillance.** LSDC has instituted abbreviated environmental surveillance each month and further in-depth surveillance is done quarterly. The committee strives to find deficiencies ahead of time and provide incentive for physicians to follow proper procedure.

**4. Administrative support.** CEO Dave Daniel has been tremendously instrumental in the development of the infection control program.

\*Case study provided by *Becker's ASC Review*





## Q&A

*If you have additional questions after the Q&A session, please contact:  
[InfectionControl@ccapr.com](mailto:InfectionControl@ccapr.com)*