LPCH Prevention of Hospital-Acquired Infection part 2 (Clinical)
Multi-Drug Resistant Organisms
What Are Multi-Drug Resistant Organisms?

A multi-drug resistant organism (MDRO) is an organism that is resistant to commonly used antibiotics; certain drug regimens will not work if an organism is resistant to multiple drugs.

Transmission-based Isolation Precautions
- Are additional precautionary measures observed across LPCH
- Are implemented when caring for patients with suspected or confirmed communicable diseases and MDROs

Isolation Signs
- Are displayed outside of the patient’s room and
- Are in English and Spanish and include graphics for ease of use
- Apply to all employees and medical providers
- Apply to families and visitors

Examples of MDROs
- **MRSA** Methicillin Resistant Staphylococcus Aureus
- **VRE** Vancomycin Resistant Enterococcus
- **ESBL** Extended Spectrum Beta Lactamase producing bacteria
- **CRE** Carbapenem-Resistant Enterobacteriaceae
How to Prevent Multi-Drug Resistant Organisms

There are several ways you can help prevent the spread of Multi-Drug Resistant Organisms.

Click each drop on the left to learn more.
How to Prevent Multi-Drug Resistant Organisms

Appropriate and Judicious Use of Antibiotics
Your role is to verify correct antibiotics being used on your patient, check microbiology results and report results to physician accordingly so that timely initiation, de-escalation or discontinuation of antimicrobial treatment can be implemented

• Avoid use of broad spectrum antimicrobials and/or perform prompt de-escalation of broad spectrum antimicrobial treatment once microbiology culture results are available
• Use an antimicrobial agent that targets the specific organism of
How to Prevent Multi-Drug Resistant Organisms

Excellent Hand Hygiene

- Healthcare workers' hands are vehicles for organism transmission
- Meticulous hand hygiene is crucial in preventing:
  - MDROs
  - Healthcare-acquired infections

National Patient Safety Goal
07.03.01
How to Prevent Multi-Drug Resistant Organisms

Proper Cleaning and Disinfection of Patient Care Equipment

- Dirty and unclean patient care equipment:
  - Can be a reservoir for microorganisms
  - Can be a vehicle for transmission of MDROs
How to Prevent Multi-Drug Resistant Organisms

Proper Cleaning and Disinfection of Patient Care Environment

Contaminated surfaces and a contaminated hospital environment can be reservoirs for microorganisms to grow.
How to Prevent Multi-Drug Resistant Organisms

Strict Adherence to Transmission-based Isolation Precautions are Instituted

- Use Contact Isolation Precautions for MRSA-, VRE-, CRE-, and ESBL-producing organisms
- Use Contact Plus Isolation Precautions to prevent the spread of C. difficile, Norovirus, and infectious diarrhea
How to Prevent Multi-Drug Resistant Organisms

Educate Patients and Visitors About MDRO and How to Prevent Transmission

It is important that your patients, their family members, and visitors understand the diagnosis, infection transmission prevention, and how to comply with our isolation protocols.
How to Prevent Multi-Drug Resistant Organisms

Document Proper Isolation and Education Provided in the Medical Record

Documentation serves as a proof of care provided to the patient and family members and is a very helpful tool during exposure investigation and regulatory agency surveys.
MRSA Active Surveillance Testing

Click the icon

California Law: SB 1058

Effective January 1, 2009 California law required MRSA Active Surveillance Testing for certain patient populations.

MRSA screening should be performed within 24 hours of hospital admission.

Criteria for MRSA Screening:

- Patients readmitted within 30 days of discharge from Acute Care Hospital
- Patients admitted to Intensive Care Unit (ICU)
- Patients transferred from Skilled Nursing Facility (SNF)
- Patients receiving inpatient hemodialysis
Other Requirements of SB 1058

✓ Patients shall be notified by their healthcare provider of positive MRSA result as soon as possible

✓ Physicians must document patient notification in patient’s medical record

✓ Patients shall receive a verbal and written instruction regarding prevention of MRSA transmission

✓ At LPCH, the attending nurse is also responsible in providing patient and family education about MRSA and how to prevent MRSA transmission

✓ Education provided must be documented in patient’s medical record
Do Not Report to Work If You Have Any of the Following

- Rash
- Sore Throat
- Diarrhea
- Cough
- Draining Wound(s)
- Cold or Flu-Like Symptoms
- Fever

Persons actively coughing should not have contact with patients or other team members.
Standard Precautions for All Team Members

Standard Precautions are the minimum infection prevention practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where healthcare is delivered.

These practices are designed to both protect the healthcare provider (HCP) and prevent HCP from spreading infections among patients.

To learn more, click the tissue box:
Standard Precautions for All Team Members

Standard Precautions for all team members include:

- **Hand hygiene**
  - Wash your hands often with soap and warm water for **15 seconds**
  - If soap and water are not available, use an alcohol-based hand rub.

- **Respiratory hygiene/cough etiquette**
  - Cough or sneeze into your **upper sleeve or elbow**, not your hands.
  - If you cover your mouth and nose with a tissue when you cough or sneeze, put your **used tissue in the waste basket** and **perform hand hygiene** with soap and water afterwards, or with alcohol-based hand rub.
What is an MDRO?

- A medical drug required opinion
- A multi-drug referred orientation
- A multi-drug resistant organism
- All of the above
Knowledge Check

Which of the following is an example of an MDRO?

- Influenza (flu)
- Methicillin resistant staphylococcus aureus (MRSA)
- Tuberculosis (TB)
- All of the above

That is Correct:
Methicillin resistant staphylococcus aureus (MRSA) is an example of an MDRO.

Continue
California Law SB 1058 requires active MRSA surveillance for which patient populations?

- Patients readmitted within 30 days of discharge from Acute Care Hospital
- Patients admitted to an Intensive Care Unit (ICU)
- Patients transferred from a Skilled Nursing Facility (SNF)
- All of the above

Incorrect Answer:
Actually, all of these patient populations require MRSA surveillance within 24 hours of hospital admittance.
California Law SB 1058 requires active MRSA surveillance for which patient populations?

- Patients readmitted within 30 days of discharge from Acute Care Hospital
- Patients admitted to an Intensive Care Unit (ICU)
- Patients transferred from a Skilled Nursing Facility (SNF)
- All of the above
LPCH Isolation Signs
LPCH Isolation Signs

We don’t want to take infections home to our loved ones and family or spread them to our patients and colleagues.

There are seven types of isolation signs posted outside of patient rooms. The signage instructions must be strictly followed to prevent the spread of infection.
You are about to enter the room of a patient with a MRSA infection
What PPE and hand hygiene is required before entering this room? Drag the icons into the red box. The correct icons will remain on the sign.
That's right. Please review the hygiene and PPE icons on the signage.

Contact isolation is meant to guard against infection caused by touching liquid particles, such as MRSA. **Masks are not required for isolation that is Contact only.**

There are 7 types of isolation and ALL require that you use hand gel and wear a gown and gloves before entering the patient room.
You are about to enter the room of a patient with a MRSA infection and C.DIFF
What PPE and hand hygiene is required before entering this room? Drag the icons into the red box. The correct icons will remain on the sign.
That’s right. Please review the hygiene and PPE icons on the signage.

Patients with highly transferable health concerns like C.diff of Norovirus would need Contact Plus isolation. MRSA infection would need Contact isolation. Both risks are covered under Contact Plus isolation.

When you see the +Plus designation on an isolation sign, wash your hands with soap and water when leaving the patient room, instead of using hand gel.
You are about to enter the room of a patient with influenza
What PPE and hand hygiene is required before entering this room? Drag the icons into the red box. The correct icons will remain on the sign.
That's right. Please review the hygiene and PPE icons on the signage.

Droplet/Contact isolation is meant to guard against infection causing liquid particles that may be spread by coughing. Droplet isolation requires use of a surgical mask before entering the room.
You are about to enter the room of a patient with influenza and C.DIFF
What PPE and hand hygiene is required before entering this room? **Drag the icons into the red box.** The correct icons will remain on the sign.
That's right. Please review the hygiene and PPE icons on the signage.

Because of the highly transferable C.DIFF, this isolation room is **+Plus**. Potential contact with influenza requires application of a surgical mask. When risks are combined the room becomes the Droplet/Contact+Plus type.

**TIPS & TRICKS**

The nearest sink is where you should wash your hands with soap and water.
You are about to enter the room of a patient with tuberculosis
What PPE and hand hygiene is required before entering this room? **Drag the icons** into the red box. The correct icons will remain on the sign.

- IN Before Entering
  - Remove gown and gloves in room, wear gown, remove mask, clean hands.
  - Quite la bata y los guantes en la habitación, póngase la bata, lave las manos.

- OUT Before Exiting
That’s right. Please review the hygiene and PPE icons on the signage.

Airborne/Contact isolation is meant to guard against infection causing liquid and airborne particles, through use of a fitted N95 mask, while with the patient.

**TIPS & TRICKS**
Unless the room is +Plus then use hand gel when exiting the patient room.
You are about to enter the room of a patient with chicken pox and the **norovirus**
What PPE and hand hygiene is required before entering this room? **Drag the icons** into the red box. The correct icons will remain on the sign.

- Remove gown and gloves in room, leave room, remove mask, wash hands with soap and water.
- Quite la bata y los guantes en la habitación, sale de la habitación, quite la mascarilla, lavalos las manos con agua y jabón.
That’s right. Please review the hygiene and PPE icons on the signage.

Because the norovirus is highly contagious like C.DIFF, the patient room is **+Plus** and requires washing your hands with soap and water when exiting.
Sometimes there is a special isolation request for patients that have compromised immune systems or have had transplants.
This Protective type isolation may be used in that instance and in conjunction with other isolation types.

If you see this sign, ensure that flowers or plants are not anywhere near the patient.
Lastly, make sure before entering the room that you apply PPE in the shown order from left to right.

Remove PPE and apply hand hygiene in the order listed on the isolation sign.
Aerosol Transmissible Diseases
What Are Airborne Transmissible Diseases?


- An Aerosol Transmissible Disease (ATD) is a disease or pathogen that is transmitted by aerosols.
- Aerosols are gaseous suspension of fine solid or liquid particles.
- These pathogens can come with secretions from upper and lower respiratory tract of a person.
- Some ATDs are vaccine preventable such as measles, varicella and seasonal influenza.
- ATDs can be transmitted in two ways: airborne and droplet.

ATDs and Infection Control
Identifying ATDs that are seen in the hospital setting and understanding how they are transmitted will protect you from occupational exposure as well as prevent and/or minimize ATD transmission among healthcare workers, patients and visitors.

The next slides show examples of ATDs and how they are transmitted.

Please remember it is essential to wear appropriate PPEs during direct contact and when providing care to patients with suspected or confirmed ATDs to protect yourself.
Aerosol Transmissible Diseases

DROPLET

Droplet ATDs are large particles that may drop quickly to ground or surfaces and do not travel very far.

Requires use of regular surgical mask for patient contact and patient care.

Signs and Symptoms

**Bacterial Meningitis**
- Fever, intense headache, stiff neck, confusion
- Pediatric patients may present with irritability, ALOC, seizures, nausea, and vomiting

**Influenza**
- High fever, body aches, cough, runny nose, nausea and vomiting, diarrhea in children

Next
Aerosol Transmissible Diseases

**AIRBORNE**

Airborne ATDs are very tiny particles (droplet nuclei) that can remain suspended in the air and may travel long distances on air currents. Requires use of N95 mask or Controlled Air Purifying Respirator (CAPR). You need to be fit tested and pass fit testing before you can wear an N95 mask. You need to be trained how to use a CAPR and learn how to properly inspect it before you can use a CAPR.

Wearing of CAPR or N95 is required when entering the room of a patient on Airborne Isolation Precautions or within an hour of patient discharge & when changing air filters of AIIR.

**Signs and Symptoms**

**Varicella**
Fever, body malaise, vesicular rash

**Pulmonary Tuberculosis**
Unexplained weight loss, night sweats, fever, prolonged cough, bloody respiratory secretions

Please bear in mind that pediatric patients may not usually present with classic signs and symptoms of tuberculosis.

Obtaining a history of possible TB exposure and recent travel to areas with high TB incidence is important.
Employee Vaccination

Getting vaccinated is your *best protection* against ATDs

- Some vaccine-preventable ATDs are **Influenza, Measles, Mumps, Rubella, Pertussis, and Varicella**
- Your blood antibody titers will be checked upon hire to check for immunity to certain ATDs
- Healthcare workers are highly encouraged to get vaccinated
- Healthcare worker flu vaccination is *mandated* by Santa Clara County Public Health Dept; healthcare workers must formally decline vaccine and wear mask in all patient areas during flu season (November 1 to March 31).
- These vaccines are offered to all employees upon hire as well as available year round should you decide to get vaccinated *free of charge*
ATD Exposure Control Plan (ATD ECP)

Learn about the ATD Exposure Control Plan by clicking each icon.

- Screening Patients for ATDs
- Engineering Controls
- Standard & Transmission Isolation Precautions
- Personnel Training and Education
- Patient and Family Education

Notes:
ATD Exposure Control Plan (ATD ECP)

Learn about the ATD Exposure Control Plan by clicking each icon.

Screening Patients for ATDs
- Patients presenting with respiratory symptoms should be offered to wear a mask
- Patients with suspected or confirmed ATDS should be placed in a private room or AIIR
- In the outpatient setting, patient should be scheduled at end of day, roomed promptly and situated away from other patients
- Patients with suspected or confirmed ATDs should be transported in an enclosed tent

Engineering Controls
Standard & Transmission Isolation Precautions
Personnel Training and Education
Patient and Family Education
ATD Exposure Control Plan (ATD ECP)

Learn about the ATD Exposure Control Plan by clicking each icon.

- Screening Patients for ATDs
- Engineering Controls
  - Routine maintenance and testing of negative pressure rooms, AIRs, and laboratory hoods
- Standard & Transmission Isolation Precautions
- Personnel Training and Education
- Patient and Family Education
ATD Exposure Control Plan (ATD ECP)

Learn about the ATD Exposure Control Plan by clicking each icon.

- **Screening Patients for ATDs**
- **Engineering Controls**
- **Standard & Transmission Isolation Precautions**
- **Personnel Training and Education**
- **Patient and Family Education**

**Isolation Precautions – Standard & Transmission-based**

- Observe standard precautions at all times, droplet and airborne isolation precautions
- Also observe respiratory etiquette/hygiene
  - Cover your cough
  - Use tissue to clean respiratory secretions and perform good hand hygiene
ATD Exposure Control Plan (ATD ECP)

Learn about the ATD Exposure Control Plan by clicking each icon.

- **Screening Patients for ATDs**
- **Engineering Controls**
- **Standard & Transmission Isolation Precautions**
- **Personnel Training and Education**
- **Patient and Family Education**

**Personnel Training and Education**
- CA ATD standard requires employers to provide employees with
  - New hire training, annual mandatory training and whenever there is a new information available
  - Respiratory training-fit testing, CAPR training
ATD Exposure Control Plan (ATD ECP)

Learn about the ATD Exposure Control Plan by clicking each icon.

Patient and Family Education
- It is important for our patients and family members to understand the diagnosis, ways to prevent transmission of ATDs and follow isolation protocols
- Documentation of patient and family education should be entered into the electronic record by clinical team members
Learn about the ATD Exposure Control Plan by clicking each icon.

Please click all of the icons to the left before continuing.
ATD Exposure Prevention

Wearing of CAPR, N95, or equivalent is required when performing high hazard procedures (HHPs) or when you are present in the room while an HHP is being done.

Examples of HHP are:

- Sputum induction
- Bronchoscopy
- Intubation
- Open suctioning, tracheostomy suctioning
- Administration of aerosolized pentamidine

- Laboratory procedures/specimen processing
- Autopsy
- Any other clinical, surgical, or laboratory procedures that may cause aerosolization

Report exposure incident to your manager or supervisor immediately.

You may be asked to report to Occupational Health Services for post-exposure medical evaluation, post-exposure prophylaxis, and follow-up.
What To Do If You Are Exposed

1. Report exposure incident to your Manager or Supervisor immediately

2. You may be asked to report to Occupational Health Services for post-exposure medical evaluation, post-exposure prophylaxis and follow up
Access ATD Standard

The California Aerosol Transmissible Diseases Standard is accessible online here: https://www.dir.ca.gov/title8/51

LPCH ATD Exposure Control Plan is available on the intranet and under the Resources tab on right top corner. Policies and procedures are available online here.

I. POLICY STATEMENT

The purpose of the Aerosol Transmissible Disease (ATD) Exposure Control Plan (The Plan) is to provide staff with a comprehensive plan for the early detection and management, isolation and treatment of persons with ATDs. An ATD is a disease spread by the airborne or droplet route as defined by the Centers for Disease Control and Prevention (CDC).
Knowledge Check

How are ATDs transmitted?

- Airborne
- Droplet
- Both airborne and droplet

That is Correct
ATDs may be transmitted via airborne or droplet particles.
What should you do if you are exposed to an ATD?

- Leave work immediately
- Report the exposure incident to your Manager/Supervisor immediately
- Quarantine yourself
- See your primary care physician
Prevention and Elimination of HAIs
A CLABSI is a serious infection that occurs when germs enter the bloodstream through a central line. A central line is a catheter placed in a large vein in the neck, chest or groin that terminates close to the heart. It is used to deliver parenteral medications, parenteral nutrition, or a blood transfusion. A central line can be also used to collect blood for medical tests.
CLABSI Best Practice

Best practice hospital wide:

Daily central line bundle rounds are performed to ensure compliance with all elements of the CLABSI prevention bundle
Central Line Insertion Bundle

Click each step of the insertion bundle

☐ Any provider that will be inserting a line must have Insertion training
☐ Frequently reassess line necessity with the care team
☐ Perform hand hygiene per hospital policy
☐ Use maximal barrier precautions (i.e., mask, cap, gown, sterile gloves, sterile full body drape)

Use >0.5% chlorhexidine gluconate (CHG) with alcohol to prepare insertion site. Scrub for 30 seconds (2 minutes for femoral line) and allow to dry for 30-60 seconds. If use of CHG is contraindicated, use povidone iodine or 70% alcohol to prepare the insertion site

☐ Use prepackaged or filled insertion cart, tray, or box
☐ Choose the best insertion site to minimize infectious and noninfectious complications
☐ Use sterile gauze dressing or a sterile, transparent, semipermeable dressing over the insertion site
☐ Use the insertion checklist and empower Team Member to stop non-emergent insertion if proper procedures are not followed

See the Prevention of Central Line Associated Blood Stream Infections policy
Central Line Maintenance Bundle

Click each step of the maintenance bundle

- Perform hand hygiene per hospital policy
- Frequently reassess line necessity with the care team
- Immediately replace dressings that are wet, soiled, lifting, or dislodged
- Scrub the hub WITH FRICTION immediately, prior to EVERY line entry and prior to curos placement with CHG alcohol for 5 seconds. Allow to air dry (up to 15 seconds).
- Use occlusive transparent dressing with a CHG disk or CHG impregnated dressing (if available and not contraindicated)
- Change occlusive dressing every 7 days. Change gauze dressing every two days. Make sure to date the dressing. An exception is in the NICU - there perform dressing changes as needed, when wet, dislodged, soiled, or no longer intact
- Change needless connectors every 96 hours
- Change tubing sets per policy. Ensure tubing sets are dated and not expired
- Ensure that the line is secured in a clean environment.
- Perform a daily CHG bath for all patients ≥ 48 weeks with a CVC unless contraindicated
Preventing Surgical Site Infections (SSIs)

The following elements are essential in preventing SSIs:

- **Proper skin antisepsis pre-operatively**
  - Use of chlorhexidine gluconate (CHG) preoperatively unless contraindicated
  - Night before surgery
  - Morning of surgery
- **Appropriate use of prophylactic antibiotics**
  - 60 minutes prior to incision (120 minutes for Vancomycin and fluoroquinolones)
  - Right medication, right dose, right time
- **Use of (CHG) for skin preparation prior to skin incision**
- **Appropriate hair removal**
  - Use clippers if hair removal is necessary and perform hair removal outside of the operating room. Never use a razor
- **Immediate postoperative normothermia (post colorectal surgery)**
- **Venous Thromboembolism Prophylaxis (VTE)**
- **Post-operative wound dressing maintenance**
- **Excellent hand hygiene**
- **Patient and family education**
Additional SSI Prevention Strategies

Treat remote infections prior to surgery
• To prevent seeding of infection from one body site to another

Wear surgical attire and PPE
• Proper dress code is important, especially in the semi restricted and restricted areas of the surgical suite

Clean and disinfect medical devices
• Proper cleaning and disinfection of medical devices and instruments in between patients is critical in preventing cross contamination

Clean and disinfect the environment
• Dirty environment and surfaces are a reservoir for microorganisms
• Proper technique and appropriate amount and dwell time of disinfectants should be followed to kill organisms

Limit traffic in the surgical suite
• Limit visitors and traffic in the surgical suite to essential purposes only especially during surgical procedure and when sterile packages are open
• Maintain adequate ventilation & humidity within the surgical suite

For more details, refer to the Guidelines for Prevention of Surgical Site Infections policy in course Resources.
Catheter-Associated Urinary Tract Infection

Best practices must be implemented to prevent CAUTI:

**Prevention Practices**

Protect your patient by avoiding the following:

- Irrigating catheters, except in cases of catheter obstruction
- Disconnecting the catheter from the drainage tubing
- Replacing catheters routinely (in absence of obstruction or infection)
- Replacing the collection system

If any of these are absolutely necessary, use aseptic technique
CAUTI Prevention Evidence-Based Bundle

Learn about CAUTI control by clicking each icon.

- Daily Review
- Hand Hygiene
- Insertion Procedure
- Maintenance
- Best Practices
CAUTI Prevention Evidence-Based Bundle

Learn about CAUTI control by clicking each icon.

<table>
<thead>
<tr>
<th>Bundle Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review urinary catheter necessity daily and remove promptly</td>
</tr>
<tr>
<td>Review and document indication on a daily basis</td>
</tr>
</tbody>
</table>
Learn about CAUTI control by clicking each icon.

- Daily Review
- Hand Hygiene
- Insertion Procedure
- Maintenance
- Best Practices

Bundle Step
- Follow hand hygiene guidelines
Learn about CAUTI control by clicking each icon.

**Bundle Step**
- Insert urinary catheters using aseptic technique
CAUTI Prevention Evidence-Based Bundle

Learn about CAUTI control by clicking each icon.

**Bundle Step**
- Maintain urinary catheters based on recommended guidelines
- Maintain a sterile, continuously closed drainage system
- Keep catheter properly secured
- Maintain unobstructed urine flow
- Keep collection bag below the level of the bladder at all times. Keep the bag off the floor!
- Practice daily patient genital/meatal hygiene.
- Empty collection bag regularly
- Carefully drain urine making sure draining spigot does not come in contact with collecting container
CAUTI Prevention Evidence-Based Bundle

Learn about CAUTI control by clicking each icon.

**Bundle Step**
- Provide daily bath, meticulous perineal care daily and as needed
- Catheters are not to be changed at fixed intervals; they may remain in the patient as long as they are functioning properly AND medically necessary

**Avoid unnecessary use of urinary catheters**
- Use indwelling catheters only when medically necessary
- Remove indwelling catheter 24 hours after surgery
Ventilator-Associated Pneumonia (VAP) Prevention

- Excellent hand hygiene and standard precautions
- Elevation of head of bed to reduce risk of aspiration of secretions unless otherwise contraindicated
- Daily evaluation of sedation medications and readiness to wean from ventilator
- Peptic Ulcer Disease (PUD) prophylaxis
- Oral hygiene every 4 hours and as needed
- Ventilator and endotracheal tube care:
  - Use of closed suctioning (inline)
  - Minimize ventilator circuit disconnections
  - Use of heated wire ventilator circuits to decrease condensation
  - Assess and drain condensation Q4 hours, prior to repositioning patient, and as needed
  - Use of separate suction tubing and canisters for oral and ET tube suctioning
  - Ventilator circuit change Q30 days or machine malfunction or soiled
Human Milk Safety

Always take extra precautions when handling human milk to prevent errors in the preparation, labeling and administration of human milk

Follow these steps when handling human milk:

✓ Ensure milk storage container is properly labeled with patient’s name, MRN, DOB, date and mother’s initials
✓ Check patient identifiers prior to administration
✓ Check human milk identifiers prior to administration

Immediately give human milk to correct patient/mother after scanning

Never leave human milk bottle unattended

Discard remaining human milk after 7 days

Follow the policy on human milk storage and thawing

Remember – Human milk is not just a food, it is a body fluid
Report human milk exposure to Manager or Supervisor immediately

• Notify Infection Prevention & Control Department
• Initiate patient exposure investigation
LPCH best practices for CAUTI prevention includes daily review of catheter necessity and prompt removal.

- True
- False
Knowledge Check

Which of the following precautions should be taken to ensure human milk safety?

- Ensure milk container is properly labeled
- Check patient ID prior to administration
- Check human milk ID prior to administration
- All of the above

That is Correct
All of these are standard precautions.
To ensure compliance with all elements of CLABSI prevention bundle, it is best practice to perform daily central line bundle rounds.

- True
- False
Which of the following are essential elements in preventing SSIs?

- Proper skin antisepsis pre-operatively
- Appropriate use of prophylactic antibiotics
- Use of CHG for skin prep prior to skin incision
- All of the above
Antimicrobial Stewardship
1. Lots of germs. A few are drug resistant.
2. Antibiotics kill bacteria causing the illness, as well as good bacteria protecting the body from infection.
3. The drug-resistant bacteria are now allowed to grow and take over.
4. Some bacteria give their drug-resistance to other bacteria, causing more problems.
Antimicrobial Stewardship Program (ASP) at LPCH Stanford

What is antimicrobial stewardship?

- Antimicrobial stewardship is designed to promote the appropriate selection, dosing, route, and duration of antimicrobials
- Antimicrobials include antibiotic, antifungal, and antiviral medications
Why is Antimicrobial Stewardship important?

Up to 50% of antimicrobial use is inappropriate

Leading to an increased selection of resistant pathogens

Which increases patient morbidity, mortality and health care costs

Antimicrobial stewardship is required of hospitals according to California law and the Joint Commission
Formulary Restriction and Authorization

Formulary restriction and authorization
- The use of certain high-risk or expensive antimicrobials requires Pediatric Infectious Disease approval or consultation
- When you are ordering these medications in Epic, you are required to document the approving Infectious Disease Provider

Prospective audit with intervention and feedback
- Active antimicrobial orders ≥ 48 hours are reviewed by the ASP team
- If the ASP team identifies opportunities to optimize antimicrobial use, these recommendations are communicated directly to the care team
- ASP recommendations are also visible within the Epic ASP Navigator
Restricted Antimicrobial Formulary

These drugs are restricted antimicrobials at LPCHS:

- Linezolid
- Colistin
- Tigecycline
- Daptomycin
- Micafungin
- Posaconazole
- Cidofovir

Due to:

- Potential for development of resistance
- Toxicities
- Limited pediatric data, including dosing information
Did you know?

For these reasons and others, we work to use the correct antibiotic at the right time.

1. Antibiotics are LIFE-SAVING drugs.
2. Some ear infections DO NOT require an antibiotic.
3. Antibiotics only treat BACTERIAL infections.
4. Most sore throats DO NOT require an antibiotic.
5. Green colored mucus is NOT a sign that an antibiotic is needed.
6. There are potential RISKS when taking any prescription drug.
Strategies for optimizing antimicrobial use at LPCH

Antibiogram development and annual update
- The LPCH antibiogram contains valuable information regarding institutional bacterial resistance patterns
- The antibiogram is updated annually and can be accessed as a weblink within Epic or via the Lane Library

Education
- Clinician
- Patient and family
More about the Antimicrobial Stewardship Program

Team members
• Medical Director
• Clinical Pharmacist
• Specialist, Analytics & Clinical Effectiveness
• Other team members: Infection Prevention and Control, Clinical Microbiology, and medical team members

Contact information
• Please refer to the LPCH Antimicrobial Stewardship Policy for more information
• Please direct ASP-related questions to:
  • The main email inbox of pediatricasp@stanford.edu
Conclusion
Reflect on Key Lessons Learned
How can you apply infection control best practices to your job?

Click the lake to reflect on what you learned
You learned about...

The importance of **hand hygiene**, including proper hand-washing technique and the five moments for hand hygiene

**Bloodborne pathogens** and our *Bloodborne Pathogen Control Plan*

**Multi-drug resistant organisms** and how to prevent them

The seven **LPCH isolation signs**: *Contact, Contact+Plus, Droplet/Contact, Droplet/Contact+Plus, Airborne/Contact, Airborne/Contact+Plus, Protective*

**Airborne transmissible diseases**, signs and symptoms, employee vaccination, and our *ATD Exposure Control Plan*

**CLABSI, SSI, CAUTI, and VAP** prevention and exposure control planning
How to reach the IPC team via Email

For non-urgent issues, email:
DL-LPCH-IPC@stanfordchildrens.org
How to reach the on-call IPC

For urgent issues, please either:
• Page 28199
• Call the Hospital Operator and ask for the Pediatric Infection Prevention and Control Specialist to be paged
• Send a Voalte message for non-urgent issues
HOW TO FIND THE INFECTION CONTROL POLICIES REFERENCED IN THESE SLIDES

1. Go to the LPCH Intranet and click policies & Procedures
2. On left hand side click patient care and scroll down to Infection Control
Clean Spaces = Healthy People

To change culture, we must

be the change

we wish to see