Los Angeles County Department of Public Health
Public Health Quarterly

Important Updates from Public Health

Pneumonia from Novel Coronavirus in Wuhan, China

The Los Angeles County Department of Public Health (LAC DPH) is working with the Centers for Disease Control and Prevention (CDC) to respond to the 2019 novel coronavirus (2019-nCoV) that began in Wuhan City, Hubei Province, China in December 2019. Background: Chinese authorities identified the new coronavirus, linking the outbreak to a large seafood and animal market in Wuhan City, suggesting a possible zoonotic origin to the outbreak; however, there is much more to learn about the transmissibility, severity, and other features associated with 2019-nCoV as the investigation continues. As of January 28, 2020, Chinese authorities have reported 4,515 confirmed cases and 106 deaths across the country. The United States have confirmed five cases, including one in Los Angeles and Orange counties, and zero deaths. All US cases traveled to Wuhan City before becoming ill and currently there is no evidence of person-to-person transmission in the US. While the investigation continues, the CDC and LAC DPH urge healthcare personnel (HCP) to ask patients with lower respiratory illness (cough, difficult breathing) about travel history to China, particularly to Wuhan City, and/or close contact with a 2019-nCoV patient. CDC recommends a cautious approach to symptomatic patients. Patients should be asked to wear a surgical mask as soon as they are identified and be evaluated in a private room with the door closed, ideally an airborne infection isolation room, if available. HCP entering the room should use standard precautions, contact precautions, airborne precautions, and use eye protection (e.g., goggles or a face shield). HCP should immediately report any patients that meet the criteria for patients under investigation (PUI) for 2019-nCoV to LAC DPH Acute Communicable Disease Control at 213-240-7941 or 213-974-1234. More information can be found on the LAC DPH and CDC coronavirus websites.

In This Issue:

E-cigarette/Vaping Associated Lung Injury

The CDC, the U.S. Food and Drug Administration (FDA), and state and local health departments continue to investigate the national outbreak of e-cigarette, or vaping, product use-associated lung injury (EVALI). As of January 21, 2020 there have been a total of 2,711 hospitalized EVALI cases and 60 deaths across the United States. Data suggests the outbreak began in Summer 2019 and has been declining since September 2019, but is still ongoing. Laboratory data show that vitamin E acetate, an additive in some THC-containing e-cigarette, or vaping, products, is closely associated with EVALI. Current information can be found on the CDC EVALI Site.

Measles in Los Angeles County

The LAC DPH has confirmed a total of 21 measles cases in Los Angeles County residents since April 2019 and has investigated hundreds of exposures in both adults and children related to these cases. LAC DPH reminds healthcare providers to remain vigilant for measles suspect cases as outbreaks continue worldwide. Furtheremore, LAC DPH recommends everyone who has not been immunized to receive two doses of the measles-mumps-rubella (MMR) vaccine and asks providers to advise patients on vaccination. The CDC provides more information on measles vaccination. For the most current measles information for LAC, go to the DPH Measles Site.

Influenza Season 2019-2020

It is officially flu season, with rates continuing to increase for emergency department visits for influenza-like-illness. As of January 11, 2020 there have been 16 confirmed influenza-associated deaths, including one pediatric. In Los Angeles County and nationwide, influenza B/Victoria began as the most commonly detected virus, until mid-January when influenza A H1N1 became the predominate strain. It is unusual to see predominance of influenza B this early in the flu season, as B normally peaks toward the end of the season; therefore, it may be an atypical flu season. There is still time to get your flu shot and providers should continue to encourage their patients and staff to get vaccinated if they are not already. Both influenza B and influenza A H1N1 can be more severe in children; thus, it is even more important to encorage everyone six months or older to get the flu shot. Updated information can be found here.

Device Reprocessing

Why is it important?

From Marjorie Wall, Director of Sterile Processing and IAHCSMM Board of Directors

The last few years have seen a trend for surgical procedures that were historically inpatient to become outpatient, and technology is becoming more and more innovative, leading to less invasive procedures. This has resulted in surgery centers that typically performed simple procedures performing highly complex procedures. What has not consistently happened is the same transference of sterile processing knowledge and competency into the outpatient setting.

Many surgery/procedure centers do not have the physical equipment to support these complex procedures. For example, a surgery center that did primarily breast surgeries and eye procedures, may not have a washer and may only have a single small autoclave. The department likely does not have a low temperature sterilizer such as a STERRAD or VPro Max. When these departments take on laparoscopic or orthopedic procedures like arthroscopies or total joints, they quickly find out that they do not have the right equipment to process the instruments according to the manufacturer instructions for use.

Remodeling departments is expensive and can take time. It is essential that anytime new procedures or instrumentation is brought into the department that the sterile processing and infection control experts are included in the conversation. They need to be able to have a plan for how to process the equipment in a safe, timely manner or to help the facility develop a plan for additional space or capital equipment to support the new instrumentation. Investment in the beginning will prevent failure in the future.

Additionally, many surgery/procedure centers do not have the human capital to support complex sterile processing. It is common for surgical techs to process surgical instruments in the ambulatory centers. These surgical techs are trained, competent experts in the operating room, but they may not be trained or competent experts in sterile processing or high-level disinfection. This knowledge deficit can lead to practice failures increasing risk of surgical site infections.

With more complex procedures moving into ambulatory settings, it is critical that ambulatory centers invest in the facilities to support evolving practice and instrumentation. Additionally, it is critical that ambulatory centers invest in the human capital and expertise to ensure compliance with standards, regulations, and manufacturer instructions for use.

Cleaning vs. Disinfection vs. Sterilization

After a resuable medical or surgical intsrument has been used, the device must undergo **"reprocessing"** to ensure it does not transmit infectious pathogens to patients. Although the terms “cleaning”, “disinfection”, and “sterilization” are often used interchangeably, they all are different processes and need to be performed appropriately. Because sterilization of all patient-care items is not necessary, healthcare policies must identify, primarily based on the items’ intended use, whether cleaning, disinfection, or sterilization is indicated, because failure to comply with recommended guidelines has led to numerous outbreaks. The CDC defines each as follows(1):

- **Cleaning** is the removal of visible soil (ex. organic and inorganic material) from objects and surfaces and normally is accomplished manually or mechanically using water with detergents or enzymatic products. Thorough cleaning is essential *before* high-level disinfection and sterilization because inorganic and organic materials that remain on the surfaces of instruments interfere with the effectiveness of these processes.
- **Disinfection** describes a process that eliminates many or all pathogenic microorganisms, except bacterial spores, on inanimate objects. In healthcare settings, objects usually are disinfected by liquid chemicals or wet pasteurization. Includes low-level disinfection (ex. stethoscopes) and high-level disinfection (ex. endoscopes).
- **Sterilization** describes a process that destroys or eliminates all forms of microbial life using physical or chemical methods. Steam under pressure, dry heat, EtO gas, hydrogen peroxide gas plasma, and liquid chemicals are the principal sterilizing agents used in healthcare facilities. Needed for instruments that contact sterile body sites (ex. surgical instruments).

Steps of Reprocessing

While each device must be reprocessed according to the manufacturer's instructions, the basic overview of device reprocessing includes:

1. At the point of use, such as in an operating or procedure room, devices receive initial decontamination and cleaning, and steps are taken to prevent drying of blood, tissue, other biological debris, and contaminants on the device.

2. The device is then transferred to the reprocessing work area where it is thoroughly cleaned.

3. Finally, the device is either disinfected or sterilized, depending on the intended use of the device, and the materials from which it is made, and it is stored or routed back into use.

Reprocessing Area

Below are recommendations on how to set up your reprocessing work area. Depending on the size and layout of your facility, the reprocessing space may be limited, but every effort should be made to improve the efficacy of the reprocessing process.

- Reprocessing area should not be in patient care areas, ie. procedure rooms
- "Clean" and "Dirty" areas must be physically seperated (ex. barrier, seperate rooms) or 36 inches apart
- Utilize seperate sinks as "dirty" or "clean"
- Store reprocessing equipment (ex. brushes, towels, test strips, etc.) where it can be easily accessed, but not get contaminated during the process
- People flow must move from clean to dirty
- Equipment flow must move from dirty to clean
- Floors should be seamless, not grout
- Ensure airflow meets the required air exchanges and differentials
- Monitor the temperature and humidity according to ASHRAE standards

Device Storage

Once the item is sterile or high-level disinfected, it should be stored in a way that ensures staff know it has been processed and sterility or high-level disinfection integrity can be maintained.

- Scopes and trays should be tagged with date sterilized or disinfected
- Store flexible scopes in approved cabinets with HEPA filters
- Control access to scope cabinets to ensure they are not being contaminated
- Ensure sterile storage is in a clear designated area where there is no risk of contamination from biohazardous materials
- Items should be stored as to not crush, compress, puncture, or compromise sterility of contents
- Wrapped trays should not be stacked
- First In, First Out (FIFO) - use the tray or device with the oldest processed date first

Certifications

It is important that at least one member of your staff is a certified in Sterile Processing. The International Association of Healthcare Central Service Material Management (IAHCSMM) offers several certifications that are critical in the ambulatory area, including:

- **Certified Registered Central Service Technician (CRCST)** - The CRCST is an introductory certification which demonstrates knowledge and competentency to decontaminate, inspect, assemble, package and sterilize reusable surgical instruments. All staff performing sterile processing duties should have this certification in inpatient and ambulatory settings.
- **Certified Instrument Specialist (CIS)** - The CIS is an advanced certification which shows that the technician is an expert with medical instruments. Typically the CIS will be the team member that is mentoring and proctoring the other technicians.
- **Certified Endoscope Reprocessor (CER)** - The CER certification is important for any area processing endoscopes. Staff have demonstrated the knowledge to pre-clean, test, decontaminate, inspect, disinfect, sterilize, transport, and store endoscopes complying with regulations, standards and manufacturer instructions for use. All staff performing endoscope processing should have the CER Certification.
- **Certified Healthcare Leader (CHL)** - The CHL certification is a key credential for any leader over sterile processing or high-level disinfection processes. This credential includes standards/regulatory compliance, finance, reporting, staffing, human resources, and communication.

The Certification Board for Sterile Processing and Distribution (CBSPD) also offers similar certification exams for sterile processing technicians. Additionally, CBSPD offers the **Certified Ambulatory Surgery Sterile Processing Technician (CASSPT)** certification exam which recognizes individuals who work with sterile processing in ambulatory surgery.

References and Resources

1. The Centers for Disease Control and Prevention (CDC) https://www.cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines-H.pdf
2. International Association of Healthcare Central Service Material Management (IAHCSMM) https://www.iahcsmm.org/
3. Certification Board for Sterile Processing and Distribution (CBSPD) https://www.cbspd.net/
4. Association of periOperative Registered Nurses (AORN) https://www.aorn.org/
5. Association for the Advancement of Medical Instrumentation (AAMI) https://www.aami.org/
6. Society for Gastroenterology Nurses and Associates (SGNA) https://www.sgna.org/
7. American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) https://www.ashrae.org/

SPOTLIGHT

In this issue we highlight the work being done by the Ambulatory GI Lab

Integrity and Passionate Infection Practices

Written by: Beth A. Lopez, BSN, MSN

I am a Director in a very busy procedure center. In our ambulatory surgery center (ASC) we have same day surgical cases spread among four operating rooms (OR), which include cataracts, urology and orthopedic hand cases. We also have six gastroenterology (GI) procedure rooms where we perform approximately 80-100 cases per day which include colonoscopy and esophagogastroduodenoscopy (EGD) under conscious sedation. In addition, we offer Bravo, manometry, Fibroscan and wireless capsules.

In our center we keep our surgical cases exclusively in one of our four ORs and keep our GI cases in one of our designated GI procedure rooms. We do not cross services in the procedure rooms. We do however cross over registered nursing staff for pre-op and post op and utilize transportation orderlies to assist bringing patients into the bays (gurneys) and helping to escort families back and forth as necessary. On the surgical side we have designated surgical staff, such as Certified Surgical Technicians (CST) and surgical Registered Nurses (RN). Surgical instruments receive point of use cleaning by our surgical staff immediately post procedure. The instruments are placed in a biohazardous transport cart and taken to a dedicated decontamination room. Our surgical instrument biohazardous transport cart is picked up by sterile processing department (SPD) two times per day. The surgical instruments are returned in a clean transport cart and stored in a sterile storage location until needed for the next procedure.

On the GI side, we have dedicated gastroenterology staff, such as LVN III tech, specialized RNs and GI attendants. Our scopes, catheters and other GI instruments receive immediate point of use cleaning post procedure. The instruments are placed in a hard-plastic bin, covered with a red plastic cover with biohazardous labeling and taken to our scope reprocessing area where they are leak tested, washed and brushed following the manufacturer instructions for use prior to being placed in the high-level disinfection (HLD) endoscope reprocessor. Our disinfection reprocessing area is centralized and managed within our department and located in the center of our procedure center. Our staff receive annual competency training, and the area is routinely audited in partnership with infection prevention and sterile processing subject matter experts.

Our staff and physicians are very passionate about patient and staff safety. We believe in the utmost care of our patients, our staff, sterilization of our instruments and the integrity of the high-level disinfection of our scopes. With the knowledge of superbugs that can remain in our scopes, causing harm to patients, we pay utmost attention to our manufacturer's instructions, CDC recommendations, AAMI, SGNA and AORN. If there is a conflict in recommendations we fall to the most stringent. Our RN Validators along with our GI Attendants are validated annually by the vendor to ensure they continue to be competent validators and knowledgeable of any new findings or techniques. The RN Validators in turn, validate each of our gastroenterology new hires, to include LVNs, RNs and GI Attendants on the details of scope point of use cleaning, prior to working in the rooms and annually thereafter. Adenosine triphosphate (ATP) testing for cleaning validation is completed on all scopes with elevators and randomly throughout the month on other scopes. Our results are reported quarterly to our quality committee.

In addition to following the above recommendations, we hold daily huddles and discuss safety in each one. We frequently bring up the fact that one of us or one of our own family members will one day be a patient, quite possibly right here in our center. In our business there is no room for error, cutting corners or going fast. Our Chief, has said repeatedly, "I don't need fast, I need accuracy and communication." We believe in integrity and we believe in each other; we look for these traits when we hire.

The content represents my own opinion and not representative of any organizations I am affiliated with.

Healthcare Outreach Unit - Acute Communicable Disease Control Program
Los Angeles County Department of Public Health
313 N. Figueroa Street, Room 212
Los Angeles, CA 90012
Phone (213) 240-7941
Fax (213) 482-4856
outpatient@ph.lacounty.gov
http://publichealth.lacounty.gov/acd/Outpatient.htm