COLA
Clinical Laboratory Accreditation

COLA Primers
Accreditation

COLA PRIMER 6

Laboratory Safety

• Overview – OSHA •

The **Occupational Safety and Health Act (OSHA)** was implemented "To assure safe and healthful working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health."

Laboratory safety is governed by numerous local, state, and federal regulations. Over the years, OSHA has established rules and published guidance to make laboratories increasingly safe for personnel.

Employers "shall furnish to each of his or her employees' employment and a place of employment which are free from recognized hazards that are causing or likely to cause death or serious physical harm to his or her employees."

Therefore, even if OSHA has not implemented a standard that addresses a specific hazard or hazardous operation, protection of workers from all hazards or hazardous operations may be enforceable under OSHA. For example, best practices that are issued by non-regulatory organizations such as the National Institute for Occupational Safety and Health (NIOSH), the Centers for Disease Control and Prevention (CDC), the National Research Council (NRC), and the National Institutes of Health (NIH), can be enforceable.

• Safety Policies and Procedures •

The laboratory is required to have written safety policies and procedures for:

- Blood-borne Pathogens
- Infection Control
- Hazard Communications
- Incident Management
- (FDA) Federal Device Adverse Event

All policies and procedures must be:

- Approved, signed, and dated by the laboratory director prior to use.
- Reviewed, signed, and dated every two years by laboratory director or designee.
  - Located in a section of the procedure manual **OR**
  - Located in a separate safety manual.
  - Located in an area that is easily accessed by all personnel.

• Training and Personal Protective Equipment (PPE) •

All laboratory employees must:

- Receive annual safety training that is documented
  - The training may be in any form such as, but not limited to, videos, quizzes or presentations
- Wear Personal Protective Equipment (PPE) that is appropriate for the circumstances encountered by the employee.
- Not wear PPE outside of the laboratory or take PPE home to launder

• Blood-borne Pathogens •

Blood-borne Pathogen: A microorganism (bacteria, fungi, virus or parasite) capable of causing disease.

Healthcare personnel are at risk for exposure to blood-borne pathogens through:

- Needle sticks and cuts from sharp objects contaminated with an infected patient's blood.
- When placing unsheathed butterfly units into a full sharps container.
- Recapping needles.
- Failing to activate needle safety device immediately.
- Transmission via mucus membranes.
- Splashing to the eyes, nose or mouth.
- Non-intact skin such as skin abrasions.
- Environmental surfaces contaminated with blood or body fluids.
  - Phones,
  - Equipment,
  - Drawing chairs,
  - Trays,
  - Keyboards, etc.
- Transmission via air (e.g. patient coughs on phlebotomist) or by contact with blood or body fluids.
- Some risks include:
  - COVID,
  - Hepatitis B, C & D,
  - Tuberculosis,
  - HIV,
  - Meningitis,
  - Strep,
  - Staph,
  - Pneumonia, and
  - Influenza.

• Infection Control •

Infection Control: Policies and procedures used to minimize the risk of spreading infections, especially in hospitals and other health care facilities.

Occupational exposure: A worker exposed to infection while at work.

Employees must immediately report work related (occupational exposure) illnesses or injuries to supervisor or employee health.

- PPE provided by employer and worn by employee, but not limited to, is listed below:
  - Gloves,
  - Fluid resistant lab coats, and
  - Safety goggles, glasses or face shields.
- No eating or drinking in the laboratory.
- No applying makeup, lipstick, or contact lenses in the laboratory.
- Employer to offer Hepatitis B Vaccine.
  - Free of charge.
  - Employee must decline in writing.
- Warning signs and labels.
- Routine hand cleaning.
  - Before and after each patient contact.
  - Alcohol based antiseptics may be used before and after patient contact unless the hands are visibly contaminated (visibly contaminated hands must be washed with soap and warm water for 20 seconds).
  - After removing gloves.
  - Before leaving the lab.
  - Before and after using the restroom.
  - Whenever hands become contaminated.
  - Before touching hands and mouth.

• Standard Precautions •

Standard Precautions: The prevention of disease transmission through the use of infection control practices for all patients.

It is very important that laboratory workers never let their guard down when it comes to handling patient specimens. This includes the following types of specimens:

- Blood.
- Serum or plasma.
- Semen.
- Vaginal secretions.
- Cerebrospinal fluid.
- Synovial fluid.

- Pleural fluid.
- Pericardial fluid.
- Peritoneal fluid.
- Amniotic fluid.
- Saliva in dental procedures.
- Any body fluid that is visibly contaminated with blood.
- All body fluids in situations where it is difficult or impossible to differentiate between body fluids.
- Any unfixed tissue or organ (other than intact skin) from a human (living or dead).

• Additional Safety Equipment and Practices •

A clinical laboratory must also:

- Have a Fire Extinguisher or Fire Blanket within every 50 feet of the laboratory.
- Have an Eye Wash Station.
  - Attached to faucet- must be a "clean" sink.
  - Pre-purchased bottles that hang on the wall.
    - Note the TWO expiration dates: Shelf Life and Opened Date (generally for one use only).
- Disinfect work areas:
  - After spills.
  - At the end of the work day.
- Maintain or have internet access to current Safety Data Sheets (SDS) for all hazardous chemicals in use. SDS can be obtained from the manufacturer or distributor of the product.
- Maintain a posted notice to employees, advising them how to report concerns related to the safety and quality of patient testing performed in the facility.

MEDWATCH FORM FDA 3500 (2/19) The FDA Safety Information and Adverse Event Reporting Program
https://www.fda.gov/media/76299/download

Resources:
https://www.osha.gov/SLTC/bloodbornepathogens/index.html
https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030
https://www.osha.gov/pls/publications/publication.html