



# **Occupational Health for Laboratory Programs**

2020



# Objectives

At the end of the session participants will;

- Understand what Occupational Health is
- Understand the goal of Occupational Health
- Differentiate between Medical Surveillance program and Occupational Health Program
- State composition of Occupational Health Program

# Occupational Health and Safety



1. Occupational Safety and Health (OSH) is a cross-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment.
2. The goals of an occupational safety and health program:
  1. Foster a safe and healthy work environment
  2. Develop a plan of action to prevent accidents and occupational diseases.

# Occupational Health and Safety (cont'd)



3. Protect co-workers, family members, employers, customers, suppliers, nearby communities, and other members of the public who are impacted by the workplace environment.
4. Reduce medical care, sick leave and disability benefit cost

# Occupational Health and Safety



- Medical Surveillance Program is sometimes used interchangeably with Occupational Health Program.

**but there is a difference**

- Medical Surveillance Programs are prevention focused and attempt to eliminate the underlying causes such as hazards or exposures of discovered trends.
- Occupational Health Program is a definite plan of action designed to prevent accidents and occupational diseases.

# Occupational Health and Safety



- OHS program involves comprehensive employee evaluations to include:
  - Research Investigator and Laboratory Technicians
  - Veterinary and Animal Care Staff
  - Biosafety/Safety Staff
  - Maintenance Staff
  - Other employees that may need access to animal or research areas.

# Occupational Health and Safety



- Implementing safety is everyone's responsibility
- Employers are responsible for ensuring a safe work place
- Basic strategies for protecting workers
  - Implement an Occupational Health Program
  - Conduct a Risk Assessment
  - Ensure Pre and Post Exposure Protocols are in place

***(Advanced planning before work begins)***

# Occupational Health Program



- Work place hazard assessment
- Pre-exposure programs
  - Activities before potential exposure to hazards
- Post-exposure programs
  - Activities after an accident, injury, or incident
- Employee medical evaluations
  - In preparation for starting work
- Re-evaluation of programs and policies





# Risk Assessments

- Minimizing hazards and preventing exposure are critical to protecting workers.
  - This is best accomplished through the a site-specific risk assessment process
  - Critically important in identifying potential hazards:
    - Working in laboratories with infectious substances
    - Working with animals
    - Cleaning laboratory facilities
    - Servicing laboratory equipment
    - Clinical activities / patient care

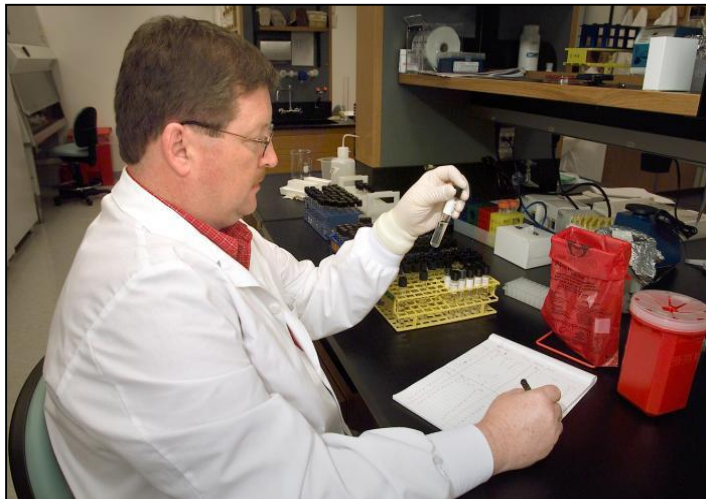
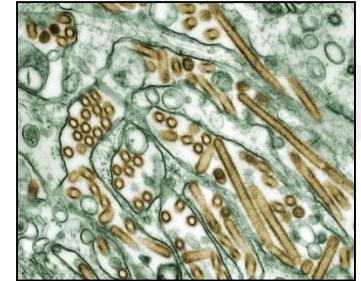
# Hazard/Risk Assessments



## ■ Laboratory activities:

- Evaluate the agent or pathogen
- Assess the laboratory activities and processes

*(Administrative activities vs. laboratory activities)*



# Hazard/Risk Assessments



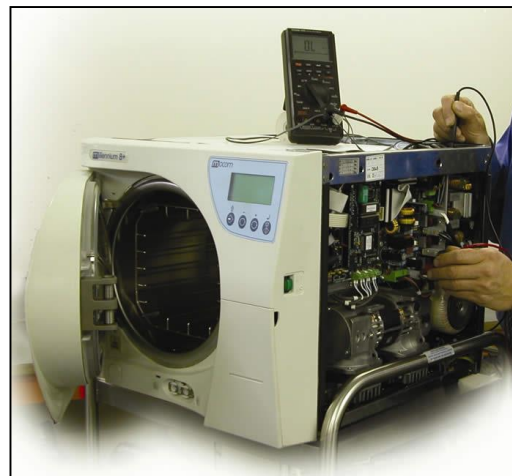
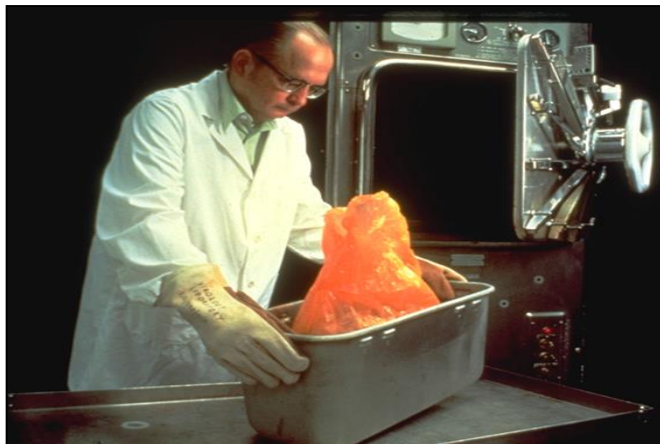
- Building cleaning operations
  - Cleaning laboratory facilities
  - Chemicals and cleaning products
  - Ensure no potential exposure to infectious substances from the laboratory.



# Hazard/Risk Assessments



- Servicing or working with laboratory equipment
  - Is operating equipment dangerous?
  - Has equipment been decontaminated before servicing?
  - Is service worker enrolled in medical surveillance program?





# Hazard/Risks Assessments



## Patient care or field activities

- Exposure to different work environments and activities
- Performing medical examination



# Role of Hazard/Risk Assessments



- In summary:
  - Basis for sound, comprehensive safety decisions
  - Define potential exposure and other risks based upon actual job duties
  - Universal (include all potentially affected staff)
  - Tailored to each setting/space (site-specific)
  - Customized for each process or activity.

# Quick Quiz



- Does Your Medical Surveillance Provider
  - Review protocols and fully understand risks of work being performed
  - Maintain contact lists of your PIs, subject matter experts and referral sources
  - Connect well with both the people and the process?

# Hierarchy of Risk Reduction



- Engineering controls
- Administrative controls
- Workplace practices controls
- Personal protective equipment (PPE)
- Active Training and Surveillance
  - Initial and recurring interventions
  - Awareness and vigilance





# Medical Surveillance Providers



- Knowledge of work risks (protocol, species, intervention)
- Involved in planning pre-work requirements, surveillance needs, PPE, and incident management
- Readily available for consultation (barrier-free access by workers, veterinarians, Pls)
- Familiar with reporting and compliance requirements
- Interested in work being performed
- Willing to actively communicate with leaders and scientists

# Surveillance Begins Before



- Pre-placement medical history
- Medical assessments and interventions
- Training and education enhance self-surveillance efforts
  - Work-specific
  - Species-specific
  - Agent-specific
  - Method-specific



# Pre-placement Medical History



- Evaluation of past medical history
  - Medical, surgical, social and family history
  - Allergies and sensitivities (latex, dander, drugs, foods)
  - Previous occupational history and activity
  - Medications and other treatments
  - Active conditions and review of major body systems
  - Review and record past immunization history

# Pre-Exposure Considerations



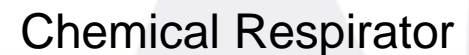
- Discuss / review research protocol with occupational health physician or services
- Adult vaccines (ensure up to date)
  - Examples: MMR, Tetanus, Hepatitis A & B, Influenza, etc.)
  - See below link for recent Adult Vaccine recommendations:
  - American Academy of Family Physicians (AAFP)  
[http://www.aafp.org/online/etc/medialib/aafp\\_org/documents/clinical/immunization/adultsched07-08.Par.0001.File.tmp/adultschedule.pdf](http://www.aafp.org/online/etc/medialib/aafp_org/documents/clinical/immunization/adultsched07-08.Par.0001.File.tmp/adultschedule.pdf)

# Pre-Exposure Considerations



- Discuss additional occupational health needs:
  - Determined by risk assessment
  - Type of research or work activities
  - Vaccinations or titers
    - Vaccinia vaccine (research with certain viruses... smallpox)
    - Rabies vaccine (standard for some animal activities)
    - Yellow fever vaccine (field activities)

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# Pre-Exposure Considerations



- Additional occupational health program needs
  - Discuss need for serum storage
  - Pre-exposure prophylaxis or medications
  - Procure / purchase necessary post-exposure prophylaxis & medications
  - Insurance considerations (Immediate care, Follow-up care, Long term care).

# Post-Exposure & Emergency Procedures



- Develop Exposure Control Plan (post-exposure plan)
  - First-aid protocols
    - Location of first-aid kit; stocking and rotating of content
  - Initial medical services (who will provide)
    - Example: On-site health facilities, contract physician service, local hospital or emergency room
  - Is attending physician aware of research hazards?
  - Is employee provided with hazard information or card?
    - For presentation to health care staff
  - Follow-up medical services
    - Are contracts in place for follow-up care & services?



# First Aid Interventions



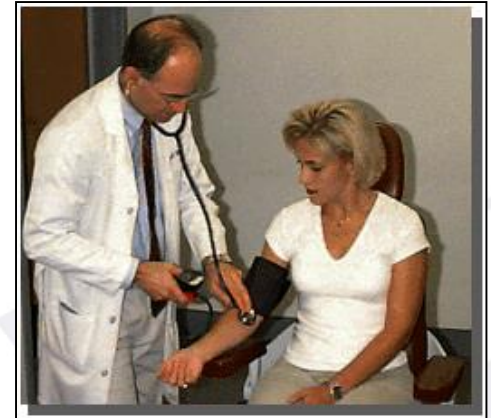
- Pre-defined and pre-arranged
- Simple, easy-to-follow guidance
- Widely known about and reviewed often
- Barrier-free access, available 24/7
- Always linked to further assessment
- Connect seamlessly to reporting & investigations
- Should be drilled and practiced



# First Aid Follow-up



- Assure awareness of first aid and decontamination activities
- Assure availability of prompt medical evaluation and follow-up as necessary
- Pre-plan for consultations with experts if needed
- Plan for “observation” needs of workers
- Assure timely incident investigation and remediation if required



# Post-Exposure Management



- Medical provider evaluation (post-exposure)
  - Repeat or extend first aid measures if needed
  - Evaluate patient, event and agent-specific risks
  - Obtain supervisory, safety, expert or other specialty input
  - Increase or expand vigilance (clinical follow-up, education, after-hours contacts)
  - Aggressive use of prophylaxis/interventions where appropriate.

# Summary

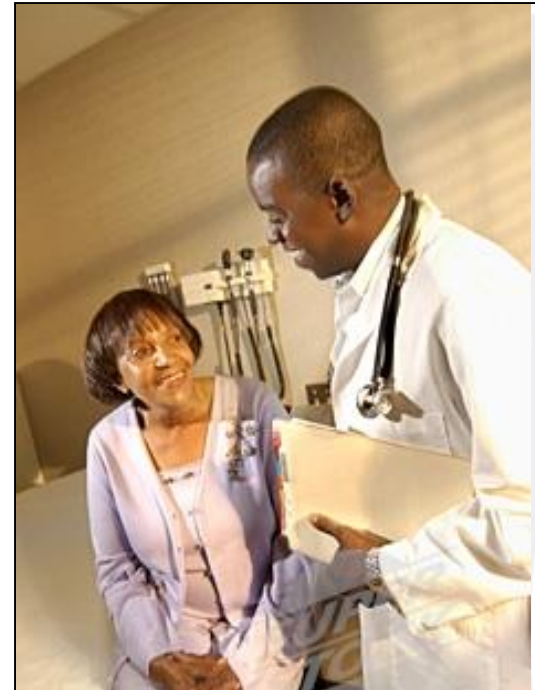


- Comprehensive medical surveillance and intervention plan is key to protecting workers
- Risk assessments continue to be the cornerstone in planning appropriate medical surveillance
- Pre-placement, periodic and post-incident interventions important
- Forethought, training, and drilling lower risks

# \*Never Hesitate to Raise the Red Flag



- Fever and other atypical symptoms should prompt immediate medical evaluation
- Understand incubation periods, modes of transmission and clinical symptoms
- Know the symptoms of work-acquired infection and natural infection may differ



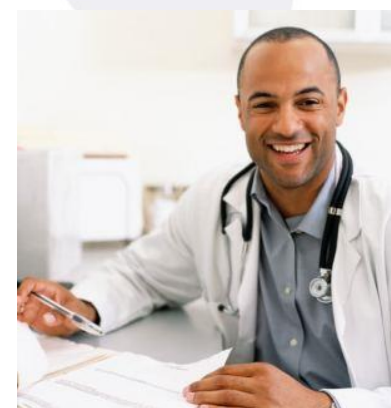


# Training Equals Vigilance

# Safety Training Lowers Occupational Risk



- Training must be fun, interactive, and fresh
- Effectiveness must be assessed
- Messages need repeating often
- Take training beyond the classroom
  - Drills
  - Handbooks/Guides
  - Posters
  - Job aids



# Key Messages



- Management sets tone for safety at the institution
- Attitude and understanding are critical
- Safety culture must be woven into all operations
- Working safely is a repetitive process
- Ongoing investments in worker protection strategies and safety knowledge is invaluable
- Systems management approach to processes and responses to incidents



# Key Messages



- Things to think about:
  - My work culture strongly values safety
  - Incident reporting is encouraged and embraced
  - Safety training is fresh, interactive and delivered in multiple formats
  - Incidents are managed openly and transparently

# Work Safely

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