

COMMUNICABLE DISEASES AND BLOODBORNE PATHOGENS IN THE WORKPLACE

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PRESENTATION OBJECTIVES

Participants will:

- Describe modes of transmission of communicable disease in humans.
- Discuss occupational health concerns related to disease exposure.
- Identify strategies to protect and maintain employee health.



GETTING THE LAY OF THE LAND

Communicable

Infectious

Contagious

Pathogens

Incubation period

Period of communicability

Mode of transmission



WHO IS AT RISK?

Young children

Older adults

People with
low immunity

Direct care
providers

Food handlers

Environmental
exposure

Contact with
human waste

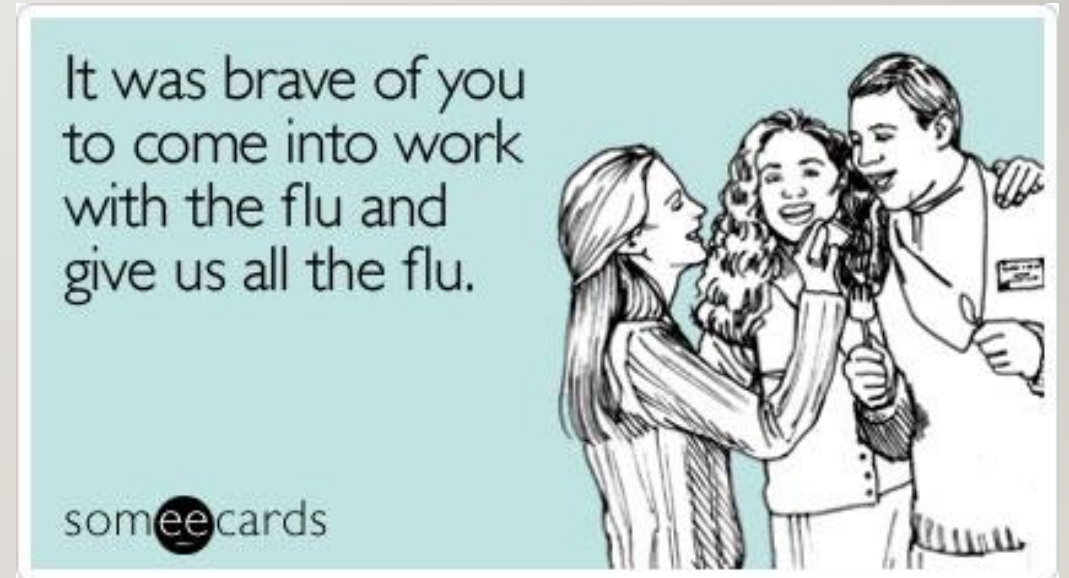
International
travelers

People with
high-risk
lifestyle

MODES OF TRANSMISSION

➤ Airborne

- Droplet nuclei or dust particles containing microorganisms are suspended in air for long periods of time
- Inhaled by susceptible host → Upper/lower respiratory tract
- TB, measles, anthrax, influenza



MODES OF TRANSMISSION

- **Droplet contact**
 - Microorganisms spread by coughing, sneezing, or talking contact the eye, nose, or mouth
 - Too large to be airborne for long periods of time; quickly settle onto objects
 - EX: Common cold, pertussis, influenz
- **FOMITES:** Inanimate objects that carry organisms and transfer disease



MODES OF TRANSMISSION

➤ Foodborne

- May be bacterial, viral, parasitic
- Salmonellosis, Hepatitis A, E. Coli, Campylobacteriosis, Cryptosporidium, Norovirus, Listeria, Shigella



MODES OF TRANSMISSION

➤ **Waterborne**

- Fecal contamination of water
- Cholera, typhoid fever, dysentery, giardia lamblia

** Food- and waterborne illnesses may not resolve without treatment**



MODES OF TRANSMISSION

- **Vector-borne**
 - Passed via carrier (tick, mosquito, flea)
 - Mosquitos: Malaria, Zika, West Nile Virus
 - Ticks: Lyme disease, Rocky Mountain Spotted Fever

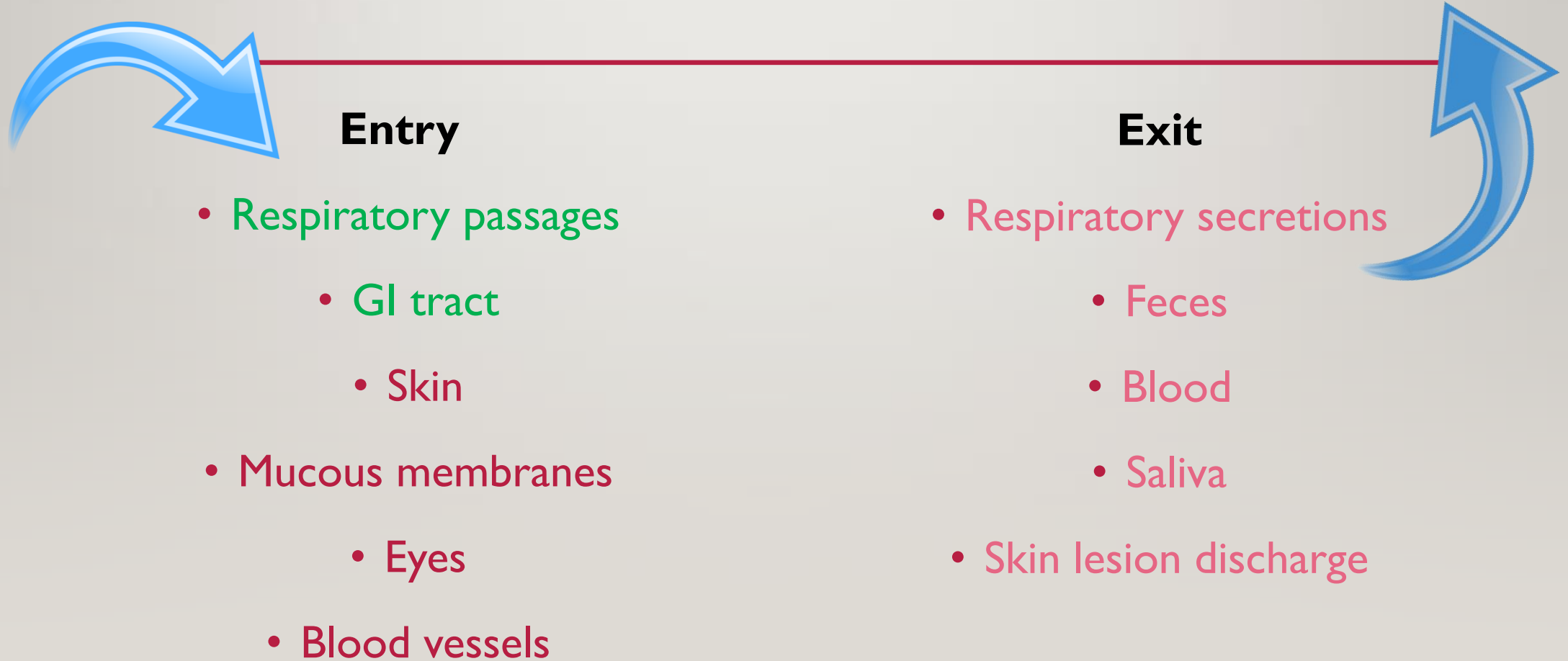


MODES OF TRANSMISSION

- **Direct Contact**
 - Blood, saliva, or other body fluid contacts the recipient's mucous membranes
 - Needle-sticks, cuts, abrasions, human bites, or through mucous membranes
 - HIV, Hepatitis B, C, D, Mononucleosis,
 - Rashes spread through direct contact
 - Scabies, Ebola



PORTALS OF ENTRY AND EXIT



OSHA'S BLOODBORNE PATHOGENS STANDARD: EMPLOYER REQUIREMENTS

- Exposure control plan
 - Exposure determinations list
 - Update annually as tasks/duties change
 - Implementation of safer devices
 - Input from frontlines
- Use of PPE
 - Gloves, gowns, eye protection, mask
 - Repair, replace, maintain
- Universal precautions
 - Treating all human blood and other potentially infectious materials (OPIM) as infectious
- Use engineering controls for isolation and removal
 - Sharps disposal containers, self-sheath/safety needles
- Use practice controls
 - Best practice

OSHA'S BLOODBORNE PATHOGENS STANDARD: EMPLOYER REQUIREMENTS

- Hepatitis B Vaccination
 - 3-dose series
- Post-exposure evaluation and follow-up
 - No cost to exposed worker
- Use of hazard labeling/signage
 - Waste, refrigeration/freezer units, shipment containers, laundry
 - All access doors for HIV/HBV labs or animal testing facilities
- BBP prevention/exposure training
 - Upon initial assignment, annually thereafter
 - Required to have Q&A with trainer
 - Health/language literacy requirement
- Documentation of medical and training records
 - Sharps injury log

A PROACTIVE APPROACH TO COMMUNICABLE DISEASE EXPOSURE: THE BIG PICTURE



Written policies for infection control



Vaccination

All ages
16-44 x ROI



Cleanly environment

Restrooms
Common areas
Eating space



Basic education

Emergency training
Basic infection control
Occupation-specific



Culture

Self-isolation
Non-punitive reporting of
injury/safety issues

VACCINE-PREVENTABLE DISEASES

- ◉ Measles
 - ◉ Mumps
 - ◉ Rubella
 - ◉ Chickenpox
 - ◉ Shingles
 - ◉ Pertussis
 - ◉ Meningococcal disease
 - ◉ Hepatitis A, B
 - ◉ Influenza
 - ◉ Hib
 - ◉ Pneumococcal disease
 - ◉ Tetanus
 - ◉ Diphtheria
 - ◉ Polio
 - ◉ Rotavirus
 - ◉ HPV
 - ◉ Typhoid fever
 - ◉ Yellow fever
 - ◉ Japanese encephalitis
 - ◉ Rabies
 - ◉ TB
-
- ◉ Anthrax
 - ◉ Cholera
 - ◉ Tick-borne encephalitis

A PROACTIVE APPROACH TO COMMUNICABLE DISEASE EXPOSURE

- Environmental exposures
 - Vaccines: Hepatitis A, Tetanus (Tdap)
 - Education: Tick checks, waste water contact protocol, HAZWOPER training, lead/FR exposure education
 - Supplies: Insect repellant (West Nile Virus prevention)



A PROACTIVE APPROACH TO COMMUNICABLE DISEASE EXPOSURE

- Office space
 - Vaccines: Influenza, Pneumonia, Pertussis
 - Education/Policy: Handwashing, wipe-down protocol; kitchen cleaning schedule; prompt food refrigeration practices
 - Supplies: Bleach wipes; hygienic common-use products; quality janitorial services



A PROACTIVE APPROACH TO COMMUNICABLE DISEASE EXPOSURE

- Direct care providers
 - Vaccines: Hepatitis A/B, MMR, Chickenpox, Pertussis, Influenza, Pneumonia / TB Test every 5 years
 - Education/Policy: Universal precautions education; PPE auditing; proper use of safety products; blood/body fluid exposure protocol; feedback on best supplies
 - Supplies: Needleless supplies; needles with safety devices; PPE



Don't forget about environmental services staff!

A PROACTIVE APPROACH TO COMMUNICABLE DISEASE EXPOSURE

- Manufacturing
 - Vaccines: Influenza, Pertussis, Tetanus
 - Education/Policy: PPE auditing; proper use of safety products; blood/body fluid exposure protocol; testing of warm water systems (respiratory illness); Fomite wipe-down protocol at machines/stations
 - Supplies: PPE/safety equipment



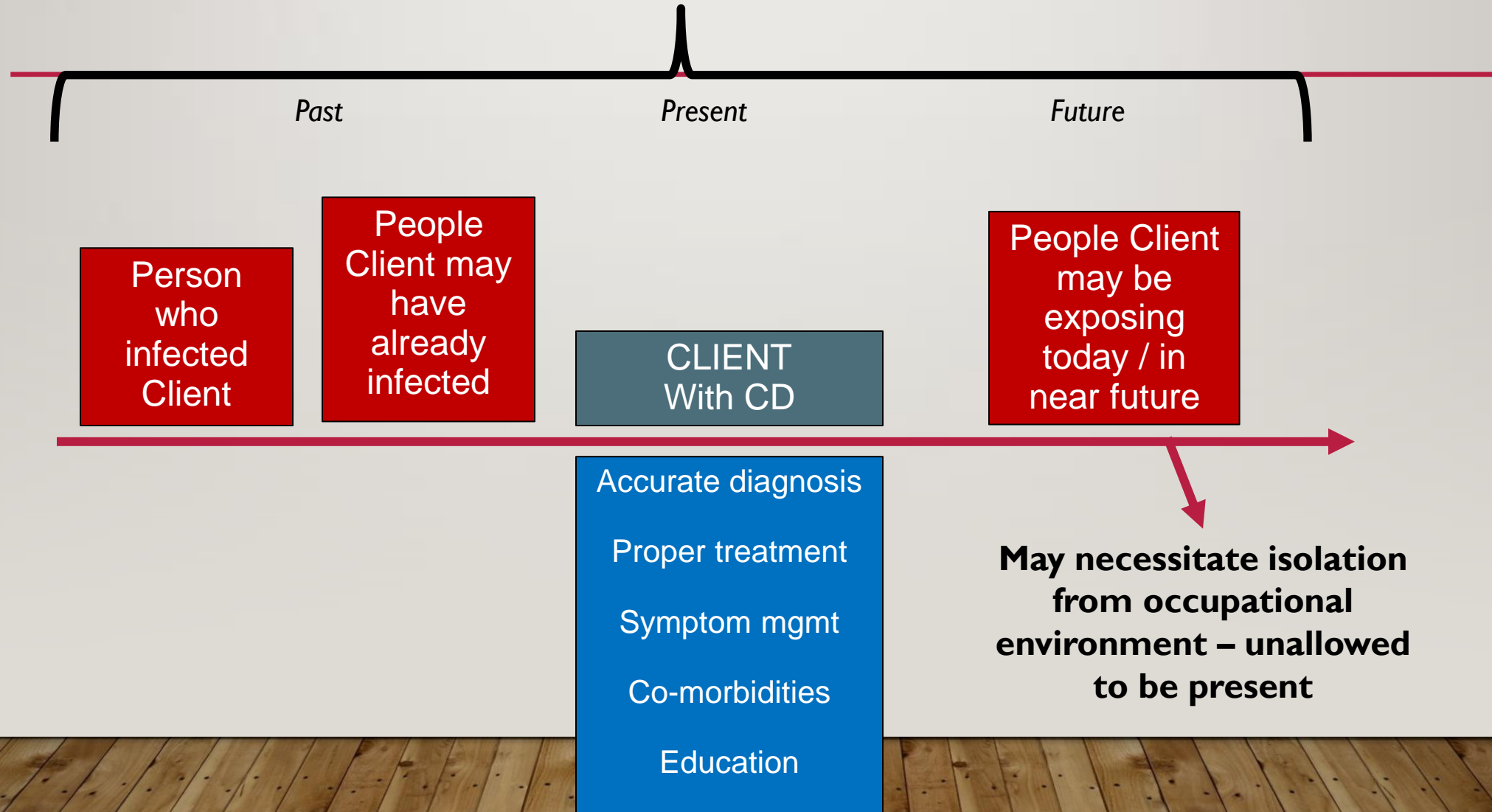
COMMUNICABLE DISEASE: HOW PUBLIC HEALTH CAN HELP

- ~100 Reportable Communicable Diseases
 - Patient interviews & case investigation
 - Outbreak prevention & control
 - Isolation/quarantine
 - Ohio Administrative Code
- ∂ Healthcare Providers are required to release patient medical records in the case of a communicable disease investigation.

“OAC 3701-3-08 Release of patient's medical records. Any person, hospital, clinic, agency or other institution or facility providing care or treatment to an individual suffering from a communicable disease which is required to be reported under Chapter 3701. of the Revised Code and the rules adopted by the director of health, or a disease that the director requires special inquiry be made under sections 3701.13 and 3701.14 of the Revised Code, shall, upon written request by the director provide access to the patient's medical record to the director during an investigation of such disease.”



THE DISEASE INVESTIGATOR'S APPROACH





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