



Choose  
health!

Designated Officer  
Training

 MIDDLESEX-LONDON  
HEALTH UNIT

# History of Designated Officer's (DO) Program

- 1988 - CDC issues document updating Universal Precautions and prevention of transmission of HIV, HBV, and other blood borne infections.
  - First relating to PPE
  - Laboratory Centre for Disease Control endorses recommendations
- 1990 - USA – Ryan White Comprehensive AIDS Resources Emergency Act (CARE)
- 1991 - MOHLTC taskforce recommends use of Universal Precautions be adopted and used in all health care settings and all procedures where risk of exposure exists
- 1994 - MOHLTC release of Notification of Emergency Service Workers Protocol
- 2008 - MOHLTC Exposures of Emergency Service Workers to Infectious Disease Protocol

# Purpose of Designated Officers Program

- This program will provide participants with information about the legislation and guidelines that apply, and how to recognize, assess and control common communicable diseases in the emergency services.
- Emergency Services Workers may come in contact with:
  - Bloodborne disease e.g. Hepatitis B, Hepatitis C and HIV
  - Respiratory diseases e.g. TB, Meningococcal disease and invasive Group A Strep.
  - Emerging drug resistant organisms eg. MRSA



*“If you think that you have been exposed to an infectious disease while attending a victim of an emergency, you should notify your designated officer.”*



ESW (Emergency Service Worker)



Designated Officers



Public Health



# Role of the Employer

- Set standards of practice – SOP
- Provide personal protective equipment (PPE)
- Appoint designated officer (DO)
- Train employees to reduce exposure to blood and other body fluids



# Role of the Emergency Service Worker (ESW)

- Be aware of the risks of exposure to infectious diseases and understand how to prevent or minimize the risk of exposure.
- Prevent exposures by using routine practices, appropriate procedures and/or personal protective equipment (PPE)
- Comply with workplace Health and Safety policies
- Report possible exposures to DO

# Role of the Designated Officer (DO)

- Receive reports from ESW
- Assess whether a significant exposure has occurred
- Consult with the local Medical Officer of Health (MOH) or appointed health unit staff for support and recommended action
- Follow-up with ESWs with recommendations
  - Important:** consultation with MOH does not replace urgent medical assessment and/or the role of the family physician
- Completion of forms – WSIB etc.



# Legal role of the Middlesex-London Health Unit

To Support DO's and ESWs, the public health unit is required to:

- Assist the DO in determining the significance of the exposures
- Have available to DO's and EMS staff, a MOH or designate to receive and respond to calls.
- Have an on-call system for receiving and responding to reports of infectious diseases of public health importance 24/7

Contact – M-F 8:30am-4:30pm 519-663-5317 ext. 2330  
After hours 519-675-7523



# Role of the Middlesex-London Health Unit

- Actively seek out contacts of cases with infectious disease of public health importance
- Inform the DO that an EMS staff may have been exposed to an infectious disease of public health importance.
- Inform DO regarding any specific actions to be taken based on information provided.
- Comply with all existing regulations in the protection of personal information and ensure that confidentiality is respected.



# Supporting Designated Officers

## Local

- Support Designated Officer (DO) in their training of staff
- Create a List Serve for DO (updates, notices, information via email)
- Liaise with local services (individual detachments and organizations)
- DO training days
- MLHU Health Connection Line (services to various programs)  
519-850-2280

## Provincially

- Local IPAC Canada chapter (IPAC-SWO)
- Provincial Designated Officers Group – membership



# Supporting Designated Officers

## Provincially

Public Health Ontario or Provincial Infectious Diseases Advisory Committee (PIDAC)

- Other local public health units (36)
- Professional groups (Police, Fire, Ambulance)

## National

- Infection Prevention and Control Canada (IPAC) formerly CHICA  
Pre-hospital Care interest groups

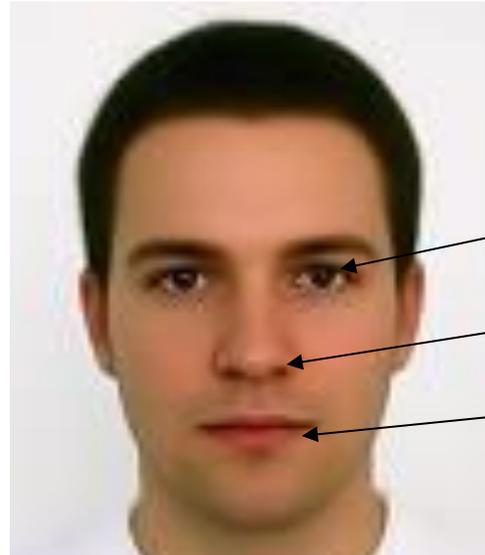
## International

- International Federation of Infection Control



# Only 3 Ways for Infectious Diseases to get into the Body:

- Through inhalation
- Through mucous membranes
- Through non-intact and/or broken skin



Eyes

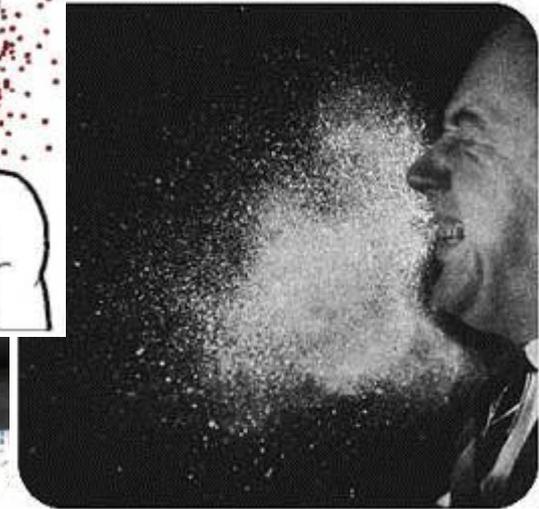
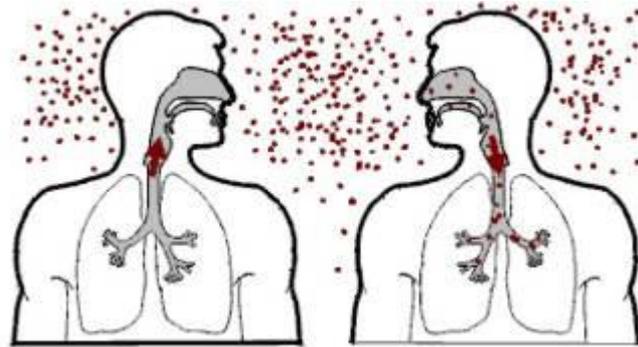
Nose

Mouth



# Only 3 Ways Infectious Diseases are Transmitted

- Airborne
- Droplet
- Contact



# What's the concern?

- **Blood-borne pathogens**
  - Hepatitis B, Hepatitis C, HIV
- **Respiratory Infections**
  - TB, Influenza, Meningococcal
- **Other infections**
  - MRSA, VRE, *C. diff*, Norovirus, etc.

# Prevention is the best protection for the Emergency Worker



# HCW Immunization

Up to date immunization is in the best interest of your clients and other employees

- Tetanus and Diphtheria – every 10 years
- Polio
- Pertussis – Adacel (Tdap) once in adulthood
- Measles, Mumps, and Rubella
- Hepatitis B
- Influenza
- TB skin test - 1-step or 2-step



# Routine Practices

All Clients ...All The Time

- Hand Hygiene
- Personal Protective Equipment (PPE)
- Sharps Handling
- Equipment Disinfection



# Hand Hygiene

The single most effective measure to prevent the spread of disease

- Before and after client contact
- After removal of gloves
- If hands are visibly soiled
- Before touching face



# Hand Hygiene

## Soap and Water

- If hands are visibly soiled

## Alcohol- based hand rub

- Minimum 60% alcohol
- If hands are visibly clean



# Personal Protective Equipment (PPE)

- Gloves
- Face protection
- Gowns/Overalls/  
Bunker gear



# PPE

## Gloves

- Should be worn to prevent exposure to organisms
- Should be worn throughout the procedure and changed for each client



## Things to think about:

- Keep gloved hands away from face
- Avoid touching or adjusting other PPE
- Remove gloves if they become torn; perform hand hygiene put on new gloves
- Limit surfaces and items touched

# PPE

## Face Protection

- Goggles or face shields should be worn to protect from splashes or sprays
- Masks should be worn to protect from splashes, sprays

## Things to think about:

- Eyeglasses do not provide appropriate protection
- Not all masks are the same – N95 respirator

# PPE

## Gown

- Should be worn to protect from splashes, sprays of blood or body fluids

## Things to think about

- How much contact will there be with infectious material?



# Sharps Disposal



- Discard at point of use in designated sharps container



# Bloodborne Diseases

**Hepatitis B**

**Hepatitis C**

**HIV**



Need direct route into body



# Hepatitis

## Hepatitis B

- Virus attacks the liver
- Can cause permanent damage or cancer of the liver
- Half of infected people have no symptoms and can pass the virus without knowing it
- 1 in 10 adults become carriers
- Treatment is available but does not cure infection



## Hepatitis C

- Virus that attacks the liver
- 25% develop symptoms
- 20% of people can clear infection on their own
- Chronic carrier can pass infection and develop complications decades later
- Chronic carriage can lead to development of liver scarring and liver cancer
- Treatment available but does not work for everybody



# HIV

- Transmitted by blood and body fluids
- Alters the bodies ability to fight off infection
- Carried without symptoms for a long time
- Treatment available to alleviate symptoms and prolong life
- Eventually body can not fight off infections leading to the development of AIDS



## Bites

- **Exposure to saliva** - only a risk for hepatitis B, and only if breaks skin
- If bitten person is **exposed to saliva only**, follow-up for hepatitis B
  - biter source; bitten person exposed
- If **blood in mouth of biter and bite breaks skin**, risk to both bitten person and biter as both exposed to other persons blood
- If **blood from bitten person gets into mouth of biter**, biter is exposed to bitten persons blood, bitten person exposed to biters saliva

# Risks of Infection

- **After puncture wound from a **known infected source**:**
  - Risk of HIV - .3% (1 / 300)
  - Risk of hepatitis B - 2- 40%
  - Risk of hepatitis C - 0-10% average 1.8%
- **After a mucous membrane exposure, risk is lower:**
  - Risk of HIV <.1% (1 / 1,000)



# Factors that Increase Risk

- The virus (HBV > HCV > HIV)
- Type of exposure (deep injury more likely to cause transmission than splash)
- Amount of blood
- Amount of virus in source person's blood
- Susceptibility of exposed



# Managing a potential Bloodborne exposure

## ESW - Immediately

- if appropriate, bleed the wound and wash thoroughly with soap and water
- if mucous membrane was exposed, flush area with water for 10 minutes
- if chapped or non-intact skin was exposed, wash thoroughly with soap and water
- Get as much information from source person
- REPORT to Designated Officer and seek Medical Advice

# Managing a potential exposure

## Designated Officer:

- assess the situation
- complete the incident form
- consult the Communicable Disease (CD) staff of the Middlesex London Health Unit if a significant exposure has occurred



# Is it a significant exposure or not?

- Considered an exposure:
  - Cut or poke with blood containing object
  - Blood on skin with cut, rash, open sore
  - Blood in eyes, mouth or nose
  - Bite that breaks the skin
- Not considered an exposure:
  - Blood on intact, normal skin



# Evaluating an Exposure

## Health Unit:

- Determine if an exposure has occurred
- Provide appropriate counselling - Suggest medical follow-up
- Attempt to follow-up on the source patient



# Post-Exposure Follow-up by CD staff

Gather information on exposed employee:

- Hep B vaccine status
- Hep B, C and HIV baseline
- Tetanus and other vaccines
- Counsel re: precautions to reduce transmission during testing period
- Communicate with exposed employees physician



# Post Exposure Follow-up by CD Staff

- Health Unit will contact source patient if possible to determine:
  - if known to have blood borne infection
  - if has risk factors for blood borne infection
  - if willing to be tested for blood borne infection
  - if willing to have results released to exposed person

# Health Unit

- Depending on results of information and/or tests from source patient, Health Unit will:
  - provide more specific advice about testing, treatment and precautions that Emergency Service Worker should take



# Post Exposure Prophylaxis (PEP)

## Hepatitis B

- HBIG within 48 hours (up to 7 days)
- Hepatitis B vaccine asap

## Hepatitis C

- No PEP, no vaccine available

---

## HIV

- 2 or 3 drug regimen for 4 weeks
- 80-90% effective if started within 2 hours
- has many side effects

# What if source will not consent to blood testing?

**EMS workers are eligible to make an application under the Mandatory Blood Testing Act (2006):**

- Correctional employees
- Police officers and civilian employees of a police service, First Nations constables and auxiliary members
- Firefighters (fulltime & volunteer)
- Paramedics and emergency medical attendants
- Paramedic students in field training
- Members of the College of Nurses of Ontario



Testing is restricted to Hepatitis B, C and HIV



# Mandatory Blood Testing Act

Can apply for order to take blood from another person if there is contact with body fluids of another person

- As a result of being a victim of crime
- While providing emergency services
- In the course of his or her duties



# Mandatory Blood Testing Act

You must submit:

- Applicant report
- Physician report

Applicant must submit to examination and counseling



# Mandatory Blood Testing Act

MOH will:

- Review applications
- Seek voluntary compliance from respondent
- Forward application to Consent and Capacity Board



# Consent and Capacity Board

- Commence and conclude hearing within 7 days
- Board decision is final



# Respiratory Diseases

- Tuberculosis
- Meningococcal Meningitis
- Influenza



# Tuberculosis

- A bacterial infection
- Can have latent infection or active disease
- Transmitted by coughing, sneezing, talking or spitting
- Tuberculin Skin Test (TST)- after exposure and then 8-10 weeks later
- Treatment for latent infection- isoniazid for 9 months

# Meningococcal Meningitis

- Bacterial infection of spinal fluid that surrounds the brain
- Highest incidence in children and adolescents
- Transmitted by: direct contact, contact with respiratory secretions
- PEP: ciprofloxacin, rifampin, or ceftriaxone



# Influenza (Flu)

Influenza season: October to April

- Respiratory illness with fever, cough, chills, sore throat, malaise, body aches, tiredness and headache
- Spread through coughing and sneezing and by touching contaminated surfaces and objects

Prevention:

- Yearly immunization
- Good hand hygiene, mask and eye protection with coughing client

FYI:

- Influenza is not “Stomach Flu” (vomiting and diarrhea)

# MRSA

## (Methicillin Resistant Staphylococcus aureus)

- A common bacteria that has become resistant to certain antibiotics
- Staphylococcus aureus lives on the skin and mucous membranes of healthy people
- Common cause of skin and soft tissue infections
- Most skin infections are minor (pimples and boils) but can be more serious (wound infections, blood infections and pneumonia)
- Colonization vs. Infection

# Cleaning and Disinfection

There are many medical devices and equipment used in the pre-hospital environment. The following is a partial list of equipment that may need cleaning and disinfection after a call:

- Airway Roll
- Blood Pressure Cuff
- Bunker Gear
- Cardiac Monitor & Leads
- End Tidal CO2
- Glucometer
- GPS Unit
- Handcuffs
- Hatch Gloves
- Laryngoscope Handle
- Mobile Data Units
- Non-Disposable Cervical Collars
- Oxygen Regulator
- Oxygen Tank
- Pen
- Pen-Light
- Portable Radio
- Portable Suction Unit
- Protective Eyewear
- Pulse Oximetre
- Radio
- Scissors
- Scoop Stretcher / Spinal Board
- Stair Chair
- Stethoscope
- Stretcher & Stretcher Straps
- Unit Suction
- Vehicle Surfaces (Handles, Switches, Steering Wheel)



# Disinfection

- Use hospital-grade disinfectant on items that are non-critical items.
- Hospital-grade disinfectants must have a Drug Identification Number (DIN) from Health Canada

## **IMMEDIATE REPORTING REQUIRED (Confirmed and Suspect Cases)**

Immediate reporting is required for the following diseases due to the need for public health follow-up. Immediate reporting is also required: a) For clusters of any reportable diseases and b) When the Health Unit issues an alert requesting immediate reporting.

Anthrax	Meningitis, acute: bacterial, viral and other causes
Botulism	Meningococcal disease, invasive
Brucellosis	Mumps
Cholera	Paralytic Shellfish Poisoning (PSP)
Clostridium difficile associated disease (CDAD) outbreaks in public hospitals	Paratyphoid Fever
Diphtheria	Pertussis
Food poisoning all causes	Plague
Gastroenteritis, institutional outbreaks	Poliomyelitis, acute
Group A Streptococcal Disease, invasive	Psittacosis/Ornithosis
Haemophilus influenzae b disease, invasive	Rabies
Hantavirus pulmonary syndrome	Respiratory infection outbreaks in institutions
Hemorrhagic fevers, including Ebola and Marburg & other viral causes	Rubella and Congenital Rubella Syndrome
Hepatitis A	SARS (Severe Acute Respiratory Syndrome)
Influenza (health care facility cases)	Shigellosis
Influenza (Novel, not seasonal)	Smallpox
Lassa Fever	Tuberculosis
Legionellosis	Tularemia
Measles	Typhoid Fever
	Verotoxigenic-producing E. coli infection indicator conditions, including hemolytic uremic syndrome (HUS)

**REPORT AS SOON AS POSSIBLE, AND BY NEXT WORKING DAY (Confirmed and Suspect Cases)**

Acute Flaccid Paralysis (AFP) in children <15 years

Acquired Immunodeficiency Syndrome (AIDS)

Amebiasis

Campylobacter enteritis

Chancroid

Chickenpox, varicella

Chlamydia trachomatis infections

Cryptosporidiosis

Cyclosporiasis

Encephalitis primary viral, post-infectious, vaccine-related, subacute sclerosing panencephalitis and unspecified

Giardiasis

Gonorrhoea

Group B Streptococcal disease, neonatal

Hepatitis B

Hepatitis C

Influenza (Community cases)

Leprosy

Listeriosis

Lyme Disease

Malaria

Ophthalmia neonatorum

Pneumococcal disease (Streptococcus pneumoniae), invasive

Q fever

Salmonellosis

Syphilis

Tetanus

Transmissible Spongiform Encephalopathy (eg. CJD)

Trichinosis

West Nile Virus

Yellow Fever

Yersiniosis

# Conclusion

- Clean your hands
- Wear the right PPE at the right time
- Make sure your immunizations are up to date
- Decontaminate and disinfect your equipment



## Final Note:

- ‘Life-Threatening Illness’ doesn’t mean *immediately* life threatening
- You’ve been vaccinated or have antibodies:
  - MMR, DTPP, HBV, Varicella, influenza, HiB, Meningitis
- PEP is available:
  - HIV, Meningococcal, iGAS, iStaph
- The disease is actually hard to catch:
  - TB, HIV, HCV
- Your immune system is pretty darn good:
  - Influenza, iGAS, TB, Meningococcal



Monday to Friday 8:30 to 4:30

519-663-5317 Ext. 2330

After 4:30 and weekends and holidays

519-675-7523

