

# Standard Precautions and Professionalism

Kidney Mentoring and Assessment Program  
For Students (Kidney MAPS)

# Objectives



- How disease transmission occurs
- Standard Precautions
  - Definitions
  - Key elements
- Medical professionalism
  - Principles
  - Responsibilities
  - Patient privacy and HIPAA regulations



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AGAINST KIDNEY DISEASE**

# Disease Transmission

# Methods of Disease Transmission

- **Source** (reservoir) of infectious agents
- **Susceptible host** with a portal of entry receptive to the agent
- **Mode of transmission** for the agent

# Methods of Disease Transmission

- **Source** (reservoir) of infectious agents
  - Patients
  - Healthcare personnel
  - Household members/visitors

# Methods of Disease Transmission

- **Susceptible host** with a portal of entry receptive to the agent
  - Immune state at the time of exposure (presence of chronic diseases, medications that suppress immune function, age)
  - Virulence factors intrinsic to the agent are important predictors of an individual's outcome

# Methods of Disease Transmission

- **Mode of transmission** for the agent
  - **Contact: most common**
    - Direct: Pathogen spread through blood/body fluid contact with caregiver through mucous membranes or broken skin
    - Indirect: Pathogen spread by contaminated intermediate object (hands, medical devices)
  - **Respiratory droplet**
    - Pathogen from respiratory tract of affected individual to mucosal surface (nasal mucosa, conjunctive, mouth) of caregiver
    - Generally 3 to 10 feet
  - **Airborne**
    - Pathogen spread through air and remains infective over time and long distances (spores of *Mycobacterium tuberculosis*, anthrax)



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# Standard Precautions



# Definitions

- **Universal Precautions**
  - Approach to infection control to treat all human blood and blood-containing body fluids as if they were known to be infectious for HIV, Hepatitis B, Hepatitis C, other bloodborne pathogens
- **Body Substance Isolation**
  - Emphasized avoiding contact with all moist and potentially infectious body substances except sweat, even if blood not present
- **Standard Precautions**
  - Incorporates both Universal Precautions and Body Substance Isolation
  - Infection practices that apply to all patient care in all healthcare settings



# Standard Precautions: Key Elements

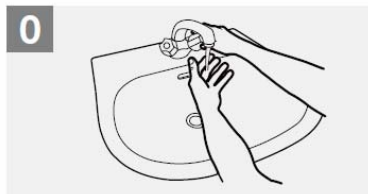
- Hand hygiene
  - Personal protective equipment (PPE)
  - Surgical masks for coughing patients
    - Safe handling of sharps
- Cleaning and disinfection of all patient care areas
- Cleaning and disinfection of all medical devices



# Hand Hygiene

- Soap and water for visibly soiled hands
- Soap and water for suspected *Clostridium difficile* exposure
- Alcohol-based hand sanitizer is appropriate for other exposures

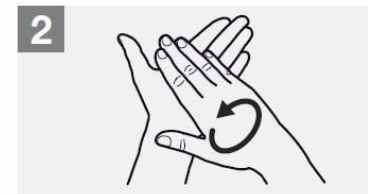
# Handwashing Technique: 40 to 60 seconds



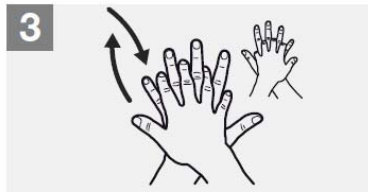
0 Wet hands with water;



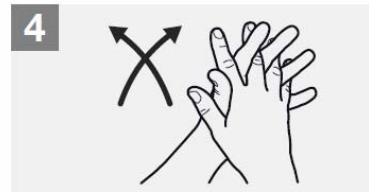
1 Apply enough soap to cover all hand surfaces;



2 Rub hands palm to palm;



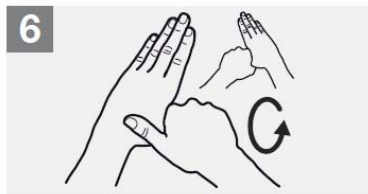
3 Right palm over left dorsum with interlaced fingers and vice versa;



4 Palm to palm with fingers interlaced;



5 Backs of fingers to opposing palms with fingers interlocked;



6 Rotational rubbing of left thumb clasped in right palm and vice versa;



7 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



8 Rinse hands with water;



# Hand Sanitizer: 20-30 seconds

1a



Apply a palmful of the product in a cupped hand, covering all surfaces;

1b

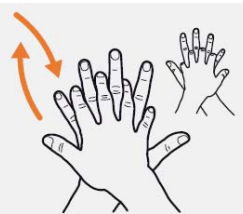


2



Rub hands palm to palm;

3



Right palm over left dorsum with interlaced fingers and vice versa;

4



Palm to palm with fingers interlaced;

5



Backs of fingers to opposing palms with fingers interlocked;

6



Rotational rubbing of left thumb clasped in right palm and vice versa;

7



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8



Once dry, your hands are safe.

# Gloves



- **Health Care Workers should always wear gloves when...**
  - Touching blood and body fluids
  - Touching mucous membranes (i.e. inside mouth, rectum, vagina)
  - Touching any non-intact skin (or when the health care worker's skin is not intact)
  - Handling items or surfaces soiled by blood or other body fluids when processing blood or any body fluid specimen
- **Hands should be washed**
  - Before and after the examination
  - Before gloving
  - Before leaving the examination room
- **Gloves must be changed**
  - After contact with each patient
  - Between tasks and procedures on the same patient after contact with materials that may contain a high concentration of microorganism
- **After removing gloves, perform hand hygiene**

<http://www.cdc.gov/hicpac/2007IP/2007isolationPrecautions.html>

# Bloodborne Virus Transmission

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Virus	Risk from Sharps Injury
Hepatitis B virus	6%-30%*
Hepatitis C virus	Approx. 2%
Human immunodeficiency virus	0.3%

\*Risk applies to unvaccinated workers only

<http://www.cdc.gov/sharpssafety/tools.html>

# Sharps Safety



- **Plan ahead** – use sharps in a safe environment with a sharps container nearby
- **Dispose** of used sharps in puncture proof receptacles immediately after use
- **Do not recap** needles





# If you experience a needlestick injury...



- Immediately **flood** the exposed area with water
- **Clean** any wound with soap and water or a skin disinfectant if available
- **Report** immediately to employer and seek medical attention

<https://www.osha.gov/SLTC/bloodbornepathogens/index.html>

# Hep B Post-exposure Prophylaxis

**TABLE 3. Recommended postexposure prophylaxis for exposure to hepatitis B virus**

Vaccination and antibody response status of exposed workers*	Treatment		
	Source HBsAg <sup>†</sup> positive	Source HBsAg <sup>†</sup> negative	Source unknown or not available for testing
<b>Unvaccinated</b>	HBIG <sup>§</sup> x 1 and initiate HB vaccine series <sup>†</sup>	Initiate HB vaccine series	Initiate HB vaccine series
<b>Previously vaccinated</b>			
Known responder <sup>**</sup>	No treatment	No treatment	No treatment
Known nonresponder <sup>††</sup>	HBIG x 1 and initiate revaccination or HBIG x 2 <sup>§§</sup>	No treatment	If known high risk source, treat as if source were HBsAg positive
Antibody response unknown	Test exposed person for anti-HBs <sup>¶¶</sup> 1. If adequate, <sup>**</sup> no treatment is necessary 2. If inadequate, <sup>††</sup> administer HBIG x 1 and vaccine booster	No treatment	Test exposed person for anti-HBs 1. If adequate, <sup>¶</sup> no treatment is necessary 2. If inadequate, <sup>¶</sup> administer vaccine booster and recheck titer in 1–2 months



# Hepatitis C Post-exposure Management

- Test source patient for anti-HCV
  - Baseline testing for anti-HCV and ALT activity
  - Follow-up testing (e.g., at 4–6 weeks) for HCV RNA
- Follow-up testing (e.g., at 4–6 months) for anti-HCV and ALT activity

<http://www.cdc.gov/mmwr/PDF/RR/RR5011.pdf>

# HIV Post-exposure Prophylaxis

**TABLE 1. Recommended HIV postexposure prophylaxis (PEP) for percutaneous injuries**

Exposure type	Infection status of source				
	HIV-positive, class 1*	HIV-positive, class 2*	Source of unknown HIV status†	Unknown source§	HIV-negative
Less severe¶	Recommend basic 2-drug PEP	Recommend expanded ≥3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP** for source with HIV risk factors††	Generally, no PEP warranted; however, consider basic 2-drug PEP** in settings in which exposure to HIV-infected persons is likely	No PEP warranted
More severe§§	Recommend expanded 3-drug PEP	Recommend expanded ≥3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP** for source with HIV risk factors††	Generally, no PEP warranted; however, consider basic 2-drug PEP** in settings in which exposure to HIV-infected persons is likely	No PEP warranted



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# Medical Professionalism

# Professionalism



“The good physician treats the disease;  
the great physician treats the patient who has the  
disease.”

-Sir William Osler

# Principles of Medical Professionalism



- **Patient welfare** first (altruism)
- **Patient autonomy** (empower patients to make informed decisions about their own treatment)
- **Social justice** (eliminate discrimination in health care)

Medical Professionalism in the New Millennium: A Physician Charter. *Ann Intern Med.* 2002; 136; 243-246.



# Professional Responsibilities

- Professional competence (lifelong learning)
- Honesty (informed consent)
- Confidentiality
- Maintaining appropriate relations with patients
- Improving quality of care
- Improving access to care
- Just distribution of finite resources
- Scientific knowledge
- Maintaining trust by managing conflicts of interest
- Professional responsibility (collaboration, respect)

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# Professional Dilemmas

- Recently, your brother's closest friend has been seeking medical care more frequently. Your brother, who is in medical school in a different state, asks you to check the medical record to see if he has a severe illness. He emphasizes that he is worried about his friend and wants to help in whatever way he can. Do you:
  - Check the medical record, and tell your brother the findings
  - Check the medical record, but keep the information private
  - Do not check the medical record, because you are not the patient's direct medical provider



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# Professional Dilemmas

- You diagnose a severe medical illness that will limit your patient's longevity. Based on your literature review, you conclude that her likely 5-year survival less than 20% unless if she receives a specific treatment with potential severe side effects. Do you:
  - Choose the best treatment for the patient, and inform her of that option only?
  - Inform the patient of all potential treatment options, and give her your professional opinion about the best likely options?
  - Inform the patient of all potential treatment options, and ask her to choose the treatment option without your bias?

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# Professionalism and Health Screenings

- Be on time, neat, clean, and look professional
- Be courteous and respectful of all patients
- Seek advise from your physician mentors if any concerns
- **You represent the medical profession!**



# Health Insurance Portability and Accountability Act: HIPAA

- Effective April 14, 2003
- National standards of handling protected health information (PHI) and medical records
- **PHI is only used to perform your role as medical provider**
- Every institution has a Privacy Officer to oversee HIPAA, implementation, violations

# Concluding Points



- Health care workers are at risk of infectious disease transmission
- Hand hygiene, wearing gloves, careful sharps care, and disinfection are key elements of preventing disease transmission
- Professionalism is a key element of physician's interaction with the community

Thank you for your interest in leading the fight against kidney disease!