Occupational Hazards for Health Care Workers

Photos from Occupational Safety and Health Administration, USA
Who is a Health Care Worker?

- Nurse
- Doctor
- Aide, orderly
- Pharmacist
- Laundry worker
- Housekeeper
- Dentist
- Dental hygienist
- Maintenance staff
- Laboratory technician
- Radiology technician
- Physical therapist
HCWs: Clinical areas

- Bloodborne pathogens
- Airborne pathogens
- Ergonomic
- Slips, trips, falls
- Sharps
Surgical Suite

- Anesthetic gases
- Bloodborne pathogens
- Compressed gases
- Lasers
- Ergonomic
- Latex
HCWs: Lab Workers

- Infectious diseases
- Chemical agents (formaldehyde, toluene, xylene)
- Ergonomic
- Slips, trips, falls
- Sharps
HCWs: Radiology

- Radiation
- Ergonomics
- Airborne pathogens
- Bloodborne pathogens
- Slips, trips, falls
HCWs: Physical Therapy

- Ergonomics
- Trips, falls
- Equipment hazards
- Bloodborne pathogens
HCWs: Pharmacy

- Drug absorption
- Ergonomic
- Slips, trips, falls
- Latex
HCWs: Central Supply

- Compressed gases
- Anesthetic gases
- Chemical agents (sterilizers, cleaners)
- Ergonomic
- Burns, cuts
HCWs: Laundry Workers

- Contaminated laundry
- Noise
- Heat
- Lifting
- Sharps
- Slips, trips, falls
- Fire hazard
HCWs: Housekeepers

- Chemical agents
- Contaminated objects (infectious agents)
- Latex
- Sharps
- Lifting hazard
- Slips, trips, falls
HCWs: Dietary

- Foodborne diseases
- Heat
- Moving machinery
- Fire hazards
- Slips, trips, falls
- Electrical equipment
Infectious Hazards:

Bloodborne Pathogens

- Hepatitis B
- Hepatitis C
- HIV
Hazardous Chemicals

- Employee exposure to hazardous chemicals, such as pesticides, disinfectants, and hazardous drugs in the workplace.
Chemicals: Glutaraldehyde

- Cold sterilant for disinfection and cleaning heat sensitive equipment
- Pathology lab tissue fixative
- Hardening agent in xray development
- Found in many cleaning products: Cidex, Aldesen, Hospex, Sporicidin, Omnicide, Metricide, Wavicide, others
Latex

- Found in gloves, flexible tubing, other materials
- May cause allergic hypersensitivity—dermatitis or respiratory
- Estimated that 8-12% of health care workers are latex sensitive.
- All types of HCWs
Chemicals: Mercury

- Exposure from accidental spills during breakage or repair of broken thermometers, sphygmomanometers, or during sterilization and centrifugation of thermometers in maintenance areas.
- When mercury is exposed to the air, it slowly vaporizes—inhalation risk
- May be absorbed through skin
- Must be vacuumed immediately
Physical: Electrical Injuries

- Electrical hazards including electric shock, electrocutions, fires, and explosions.
- Damaged electrical cords common source.
- A flexible electrical cord may be damaged by door or window edges, by staples and fastenings, by equipment rolling over it, or simply by aging.
Noise: Laundry

- Noisy equipment found in the laundry.
- Hearing loss has been demonstrated in hospital laundry workers.
- Physical injury possible if warnings not heard during machine operation.
Slips, Trips, Falls

- Employee exposure to wet floors or spills and clutter that can lead to slips/trips/falls and other possible injuries.
Stress

- Life threatening illnesses and injuries
- Understaffing
- Malfunctioning equipment
- Patient death
- Hierarchy of authority
- Demanding patients
- Excessive paperwork
- **Health Effects:** loss of appetite, ulcers, mental disorder, migraines, difficulty in sleeping, emotional instability, disruption of social and family life, and the increased use of cigarettes, alcohol, and drugs. Stress can also affect worker attitudes and behavior.
Prevent Infection: Handwashing

Handwashing prevents spread of infection from patient to HCW and from patient to patient.
## Prevent Infection: Immunization

<table>
<thead>
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<th>Recommended</th>
<th>Immuno-prophylaxis</th>
<th>Drug prophylaxis</th>
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<tbody>
<tr>
<td>Hepatitis B</td>
<td>Hepatitis B</td>
<td>HIV</td>
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<tr>
<td>MMR</td>
<td>Meningococcus</td>
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<tr>
<td>Influenza</td>
<td>Hepatitis A</td>
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<td>Varicella</td>
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<td>Tetanus</td>
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* Laboratory workers with specific exposures (typhoid, vaccinia, others)
Prevent Chemical Exposure

• Substitute less hazardous chemicals
• Change to non-spill containers
• Keep containers closed
• Work under hoods
• Wear personal protective equipment (gloves, masks, aprons)
Prevent Ergonomic Injuries

• Use proper lifting techniques
• Have more than one HCW assist on lifts
• Use lifting assist devices
• Change positioning
Prevent Physical Injuries

- Muffle noisy machinery or wear ear plugs
- Guards on machines
- Use “sharps” containers
- Dry wet surfaces
Reduce Stress

• Define aggravating factors
• Establish discussion/support groups
• Change work design
• Involve Employee Assistance personnel