INTRO TO HEALTH CARE CAREERS

Module Three

Personal & Workplace Safety

This program is funded in part/in whole by the U.S. Department of Labor - Employment and Training Administration.

LEARNING OUTCOMES

- Understand and explain personal and workplace safety.

PERSONAL & WORKPLACE SAFETY

- Hazard Communication
- Infection Control & Blood Borne Pathogens
- Walking & Working Surfaces
- Emergency Action Procedures & Fire Prevention & Protection
- General safety & Workplace Violence
- Ergonomics

HAZARD COMMUNICATION

- Focus is on awareness
- Information to enhance safety

HAZARD COMMUNICATION - BACKGROUND

- HC workers are potentially exposed to & work with chemical hazards.
- More than 650,000 chemical products exist
  - hundreds are introduced annually.
- Chemical exposure may cause or contribute to serious health effects
  - heart ailments, CNS damage, kidney & lung damage, sterility, cancer, burns, & rashes.
- Some chemicals may also cause fires and explosions.

PURPOSE OF HAZARD COMMUNICATION

- To make sure chemical hazards are evaluated.
- To assure information concerning hazards is communicated to employers and employees.

- A hazardous chemical, as defined by the Hazard Communication Standard (HCS), is ***any chemical which can cause a physical or a health hazard.***
  - This determination is made by the chemical manufacturer, as described in 29 CFR 1910.1200(d).

HAZARD COMMUNICATION STANDARD (HCS)

- Based on a simple concept
  - Employees have both a need & a right to know the hazards and identities of the chemicals they are exposed to when working.

MATERIAL SAFETY DATA SHEETS

- Prepared by the chemical manufacturer or importer and describe
  - Physical hazards, such as fire and explosion
  - Health hazards, such as signs of exposure
  - Routes of exposure
  - Precautions for safe handling and use
  - Emergency and first-aid procedures
  - Control measures

MATERIAL SAFETY DATA SHEETS CONT'D

- Must be in English and include information regarding the specific chemical identity and common names
- Must provide information about the:
  - Physical and chemical characteristics
  - Health effects
  - Exposure limits
  - Carcinogenicity (cancer-causing)
  - Identification (name, address, and telephone number) of the organization responsible for preparing the sheet
- Must be readily accessible to employees in their work

INFECTION CONTROL & BLOODBORNE PATHOGENS

DISEASE PREVENTION AND CONTROL

- Ways of disease transmission:
  - Environmental contact—pathogens in food, soil, water, and on surfaces
  - Opportunistic invasion—pathogenic organisms already on site respond to change in condition to cause disease
  - Person-to-person contact—pathogens carried through air or present in bodily fluids

HAND WASHING

- Hand washing is the most effective way to prevent spread of disease.
- Hands must be washed:
  - before and after each patient encounter
  - after blowing the nose or coughing into the hands
  - after using the toilet
- Hands and forearms must be washed in hot, running water for at least 15 seconds to remove any infectious organisms.
- Soap or another antiseptic hand-washing product must be used.
- A clean towel is used to dry the hands and forearms.
- If hands are not visibly dirty alcohol based hand cleaners may be used

BLOODBORNE PATHOGENS

- Health care workers are at risk of exposure to bloodborne pathogens
- OSHA's Bloodborne Pathogens standard prescribes safeguards to
  - protect workers against the health hazards from exposure to blood and other potentially infectious materials,
  - reduce workers risk from this exposure

BLOODBORNE PATHOGENS

All HC employees should “reasonably anticipate” as the result of performing their job duties have contact with blood & other potentially infectious materials

BLOODBORNE PATHOGEN DEFINITION

Pathogenic microorganisms that are present in human blood or other potentially infectious materials and can cause disease in humans.

Pathogens include but are not limited to:

- Human immunodeficiency virus (HIV – the virus that causes AIDS),
- Hepatitis B virus (HBV),
- Hepatitis C virus (HCV)

BLOODBORNE PATHOGENS

- How does exposure occur?
  - Most common: needlesticks
  - Cuts from other contaminated sharps (scalpels, broken glass, etc.)
  - Contact of mucous membranes (eye, nose, mouth) or broken skin with contaminated blood

BLOODBORNE PATHOGENS

- All HC employees should "reasonably anticipate" as a result of performing their job duties have contact with blood & other potentially infectious materials
  - Duties may include:
    - Direct Patient Care
    - Phlebotomy/Laboratory
    - Environmental Services
    - Waste Management
    - Other?

BLOODBORNE PATHOGENS

- Universal Precautions
  - Treat all human blood & certain body fluids as infectious
  - Must be observed in all situations where there is potential for contact with blood or other potentially infectious materials

BLOODBORNE PATHOGENS

- Universal Precautions
  - ***shall*** be observed to prevent contact with blood or other potentially infectious materials.
  - …***all*** body fluids shall be considered potentially infectious materials.

BLOODBORNE PATHOGENS HIERARCHY OF CONTROLS

- **Engineering controls** involve making changes to the work environment to reduce work-related hazards.
- **Work practice controls** are procedures for safe and proper work that are used to reduce the duration, frequency or intensity of exposure to a hazard.
- **Administrative controls** include controlling employees' exposure by scheduling their work tasks in ways that minimize their exposure levels.
- **Personal Protective Equipment (PPE)** includes all clothing and other work accessories designed to create a barrier against workplace hazards.

BLOODBORNE PATHOGENS

- Engineering Controls
  - These controls reduce employee exposure by either removing the hazard or isolating the worker. Examples:
    - Sharps disposal containers
    - Self-sheathing needles
    - Safer medical devices
      - Needleless systems
      - Sharps with engineered sharps injury protections

BLOODBORNE PATHOGENS

- Work Practice Controls
  - These controls reduce the likelihood of exposure by altering how a task is performed.

    Examples:
    - Wash hands after removing gloves and as soon as possible after exposure
    - Do not bend or break sharps
    - No food or smoking in work areas

BLOODBORNE PATHOGENS

- Personal Protective Equipment (PPE)
  - Specialized clothing or equipment worn by an employee for protection against infectious materials
  - Must be properly cleaned, laundered, repaired, and disposed of at no cost to employees
  - Must be removed when leaving area or upon contamination

BLOODBORNE PATHOGENS

- Examples of PPE
  - Gloves
  - Gowns
  - Face shields
  - Eye protection
  - Mouthpieces and resuscitation devices

BLOODBORNE PATHOGENS

- Housekeeping and Environmental Services
  - Develop a written schedule for cleaning & decontamination based on:
    - Location within the facility
    - Type of surface to be cleaned
    - Type of soil present
    - Tasks or procedures being performed

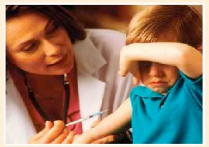
BLOODBORNE PATHOGENS

- Housekeeping and Environmental Services
  - Work surfaces must be decontaminated with an appropriate disinfectant:
    - After procedures are completed,
    - When surfaces are contaminated,
    - At the end of the work shift

BLOODBORNE PATHOGENS

- Regulated Waste
  - Must be placed in closeable, leak-proof containers built to contain all contents during handling, storing, transporting or shipping and be appropriately labeled or color-coded.
  - AKA – Red Bag

BLOODBORNE PATHOGENS



BE PREPARED. Anticipate injury risks. Prepare the patient and organize the work area with prevention in mind.

BE AWARE. Keep exposed sharps in view and under your control. Visually inspect for unprotected sharps in trays, beds and waste receptacles.

DISPOSE WITH CARE. Be responsible for the sharps you use. Activate safety features. Dispose in sharps containers.

sharps safety
BE SHARP. BE SAFE.

www.cdc.gov/sharpssafety

BLOODBORNE PATHOGENS

- Laundry
  - Handle contaminated laundry as little as possible & use PPE
  - Must be bagged or containerized at location where used
  - No sorting or rinsing at location where used
  - Must be placed and transported in labeled or color-coded containers
  - Must be stored separately than clean laundry

BLOODBORNE PATHOGENS

- Exposure?
  - Wash exposed area with soap and water
  - Flush splashes to nose, mouth, or skin with water
  - Irrigate eyes with water or saline
  - Report the exposure
  - GO to a healthcare professional for evaluation

BLOODBORNE PATHOGENS

- Biohazard Warning Labels
  - Warning labels required on:
    - Containers of regulated waste
    - Refrigerators and freezers containing blood and other potentially infectious materials
    - Other containers used to store, transport, or ship blood or other potentially infectious materials
  - Red bags or containers may be substituted for labels

WALKING AND WORKING SURFACES

- Slips, trips and falls cause:
  - the majority of general work accidents
  - 15 % of all accidental deaths
  - more fatalities than all other causes, except motor vehicles

WALKING AND WORKING SURFACES

- Aisles
  - Sufficient safe clearance
  - Must be kept clear & in good repair.
  - No obstruction that could create a hazard
  - Permanent aisles and passageways shall be appropriately marked

WALKING AND WORKING SURFACES

- Challenges
  - Direct Patient Care environments:
    * Wet floors – response/process.
    * Hallways – materials, furniture, supplies.
    * Space in the patient care rooms.
    * Supply areas – storage, aisle and working space.
    * Work surfaces – desk tops, supply room counters
    * Resident apartments – space for movement?
    * Spills?
    * Common areas
  - Support Environments:
    * Kitchen preparation areas – floors,
      prep tables, trays, eating surfaces, etc.
    * Engineering/Maintenance areas.
    * Supply/Materials.

WALKING AND WORKING SURFACES

- Can We?
  - Use sturdy shoes with good traction.
  - Use handrails when walking on stairs.
  - Avoid use of aisles/corridors for storage.
  - Watch for proper placement of electrical cords.
  - Repair or replace damaged carpet or floor tiles.
  - Clean up spills
  - Engage everyone in keeping areas clean and uncluttered.
  - Help patients & families report any spill or other hazard.
  - Strive to eliminate or diminish the hazard quickly!

EMERGENCY ACTION PLANS & FIRE PREVENTION & PROTECTION

EAP & FIRE PREVENTION & PROTECTION

- An estimated 2,500 fires occur each year in medical facilities, resulting in $8.7 million in property loss.
- Injuries per medical facility fire are four times greater than that of all U.S. fires.
  - 2/3 of injuries are from smoke inhalation.
- The leading cause of medical facility fires is cooking
- Most medical facilities are equipped with smoke alarms or sprinklers, or both.

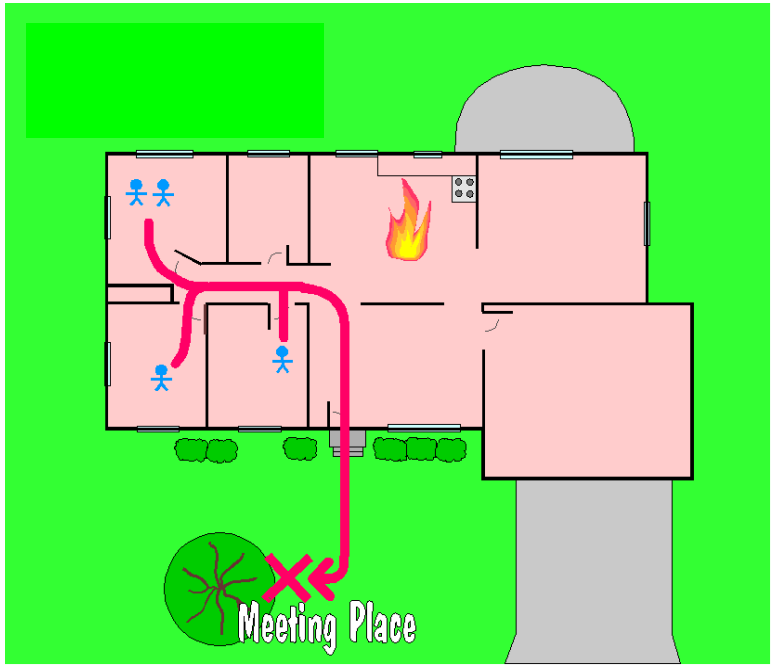
- Sources: NFPA and NFIRS

EMERGENCY SITUATIONS

- Do No Further HARM!!
- Assess the environment
- Obtain consent to treat
- Determine what happened
- Follow Standard Precautions
- Ask for Help
- NEVER move a victim
- Stay Calm

EAP, FIRE PREVENTION & PROTECTION

- Exit Route
  - A continuous and unobstructed path of exit travel from any point within a workplace to a place of safety
  - Consists of three parts:
    - Exit access
    - Exit
    - Exit discharge

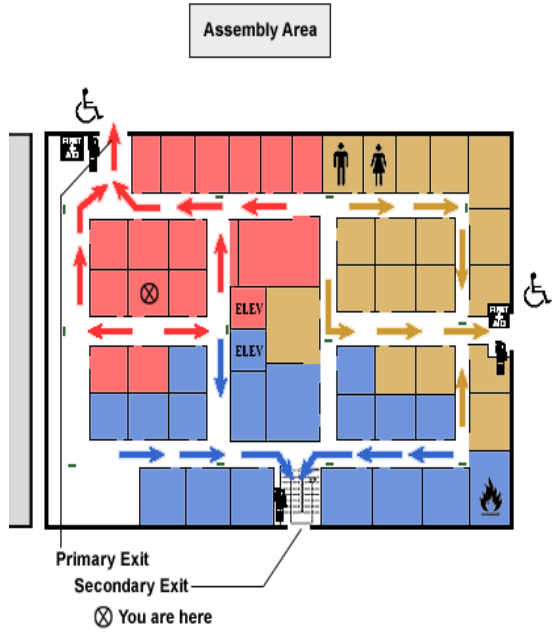


EAP, FIRE PREVENTION & PROTECTION

- Exit Doors

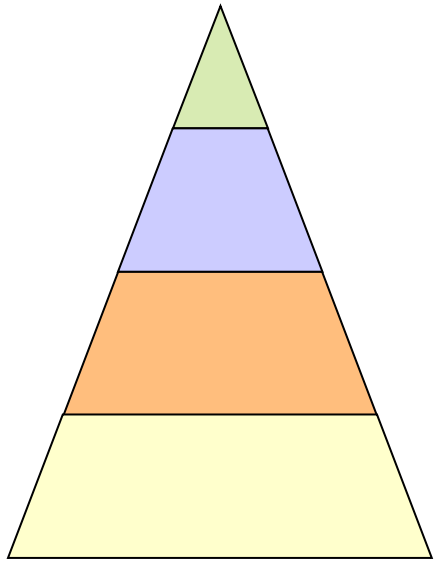
EAP, FIRE PREVENTION & PROTECTION

- Emergency Action Plans (EAP)
  - Describes actions to ensure employee safety in emergencies
  - Includes floor plans or maps showing emergency escape routes
  - Tells employees what actions to take in emergency situations
  - Covers reasonably expected emergencies, such as fires, explosions, toxic chemical releases, hurricanes, tornadoes, blizzards, and floods



FIRE PREVENTION & PROTECTION

- Fire is a rapid oxidation with noticeable heat and light.
- Fire Pyramid
  - Heat
  - Oxygen
  - Fuel
  - Chemical Chain Reaction



FIRE PREVENTION & PROTECTION

- Portable Fire Extinguishers
  - Must be mounted, located and identified for easy access

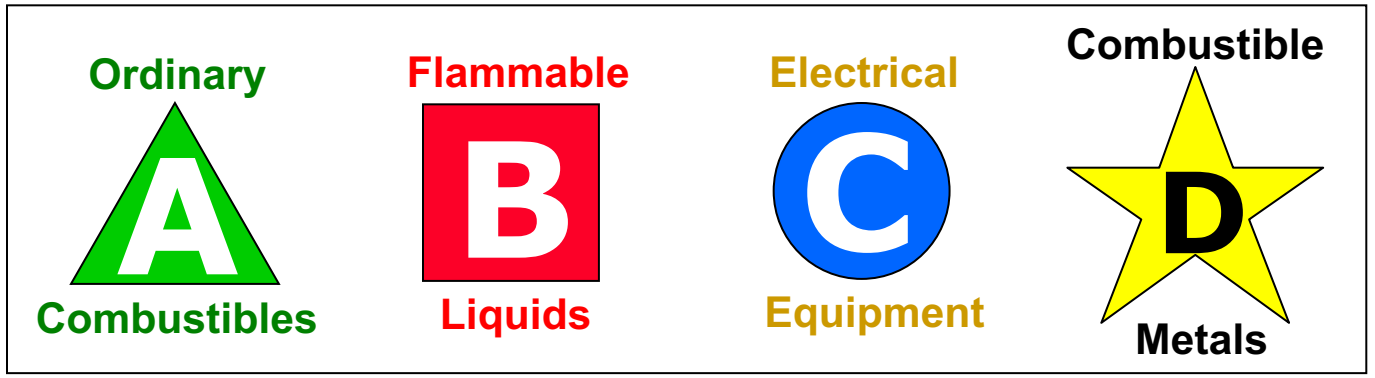
Blocked extinguisher

FIRE PREVENTION & PROTECTION

- Considerations
  - Match the extinguisher to the fuel
    - Match the extinguisher to the hazard
    - Factors to choose wisely " fight or flight"
  - Exposures and hazards
  - Severity of fire/ extension
  - Atmospheric or environmental conditions
  - Personnel available
  - Ease of handling extinguisher
  - Life hazards or operational concerns

EXTINGUISHER CLASSIFICATION

- **Class A** – ordinary combustibles (wood, cloth, paper)
- **Class B** – flammable liquids, gases, greases
- **Class C** – energized electrical equipment
- **Class D** – combustible metals



PASS

Pull

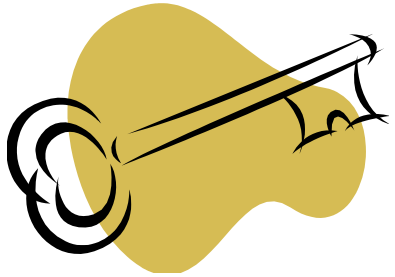
Aim

Squeeze

Sweep

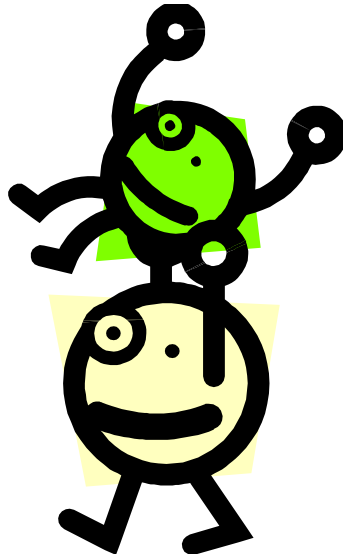
FIRE PREVENTION & PROTECTION

- Prevention is the key
  - Kitchen fires
  - Electrical fires
  - Waste material fires
  - **Fires due to smoking**
    - Talk with patients & visitors about fire hazards related to smoking and smoking policies.
- Be alert to any obstruction to fire exits/fire routes.
- Know where the fire extinguishers are located.
- Recognizing every fire drill as a learning/teaching opportunity.



ERGONOMICS

- Ergonomics is the science of fitting workplace conditions and job demands to the capabilities of the working population.



ERGONOMICS

- Statistics
  - According to the Bureau of Labor Statistics employees in nursing and personal care facilities suffer over 200,000 work-related injuries and illnesses a year.
  - Many of these are serious injuries. More than half require time away from work.
  - Worker's compensation costs for the industry now amount to nearly $1 billion per year.
  - Workers in nursing homes are 2x as likely as other workers to be injured on the job.

ERGONOMICS

- Risk Factors
  - Patients dependent on staff to provide activities of daily living
    - ADL = dressing, bathing, feeding, and toileting.
  - Assisting or transferring patients can result in employee injuries.
  - Employee injuries lead to increased injury costs, higher turnover rates, increased sick/injured days, and staffing shortages.

ERGONOMICS

- Risk Factors
  1. Awkward postures
  2. Forceful exertions
  3. Repetitive motions
  4. Prolonged activities
  5. Contact stress
  6. Vibration
  7. Temperature
  8. Psychosocial stressors

ERGONOMICS

- Employee Participation
  - report unsafe working conditions
  - identifying hazards and potential solutions
  - evaluate equipment
  - participate in developing/updating the organization's Ergonomics plan/processes.
  - prompt reporting of any injury

ERGONOMICS

- Key Considerations
  - Do not over-estimate your ability to lift/move!
  - Do not over-estimate the patient's ability – need to assess carefully.
  - If a box looks light and easy to move, be cautious!
  - Avoid reaching to move a patient or object.
  - Look for ergonomic hazards in every work area, with every work task.

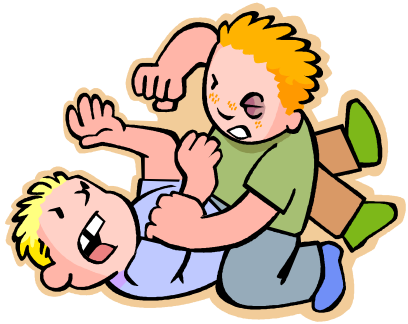
ERGONOMICS

- Workplace Computers
  - Top of monitor at or just below eye level.
  - Head and neck balanced and in-line with torso.
  - Shoulders relaxed.
  - Elbows close to body.
  - Lower back supported.
  - Wrists and hands in-line with forearms.
  - Adequate room for keyboard and mouse.
  - Feet flat on floor.
  - If using a computer on wheels: can height be adjusted, room for mouse, lighting?

WORKPLACE VIOLENCE PREVENTION

Workplace violence:

- physical assault,
- threatening behavior, including bullying
- verbal abuse



WORKPLACE VIOLENCE PREVENTION

- Workplace Violence Statistics
  - Homicide is a leading causes of death in the workplace for over 15 years.
    - In 2010, there were 506 homicides in workplaces.*
  - Almost 2 million assaults and threats of violence a yr
  - About 16,400 threats are made daily in workplaces
  - One in four full-time workers are harassed, threatened or attacked.
    - 723 workers are attacked and harassed.
    - Co-workers accounted for most of the harassment

* Bureau of Labor Statistics, U.S. Department of Labor, News Release, August 2011.

WORKPLACE VIOLENCE PREVENTION

- Types of Workplace Violence
  - Type 1: Criminal Intent

    Violent acts by people who enter the workplace to commit robbery or other crime – or current or former employee who enters the workplace with the intent to commit a crime.
  - Type 2: Customer/Client/Patients

    Violence directed at employees by customers, clients, patients, students, inmates or any others to whom the employer provides a service.

WORKPLACE VIOLENCE PREVENTION

- Types of Workplace Violence cont'd

  - Type 3: Co-worker

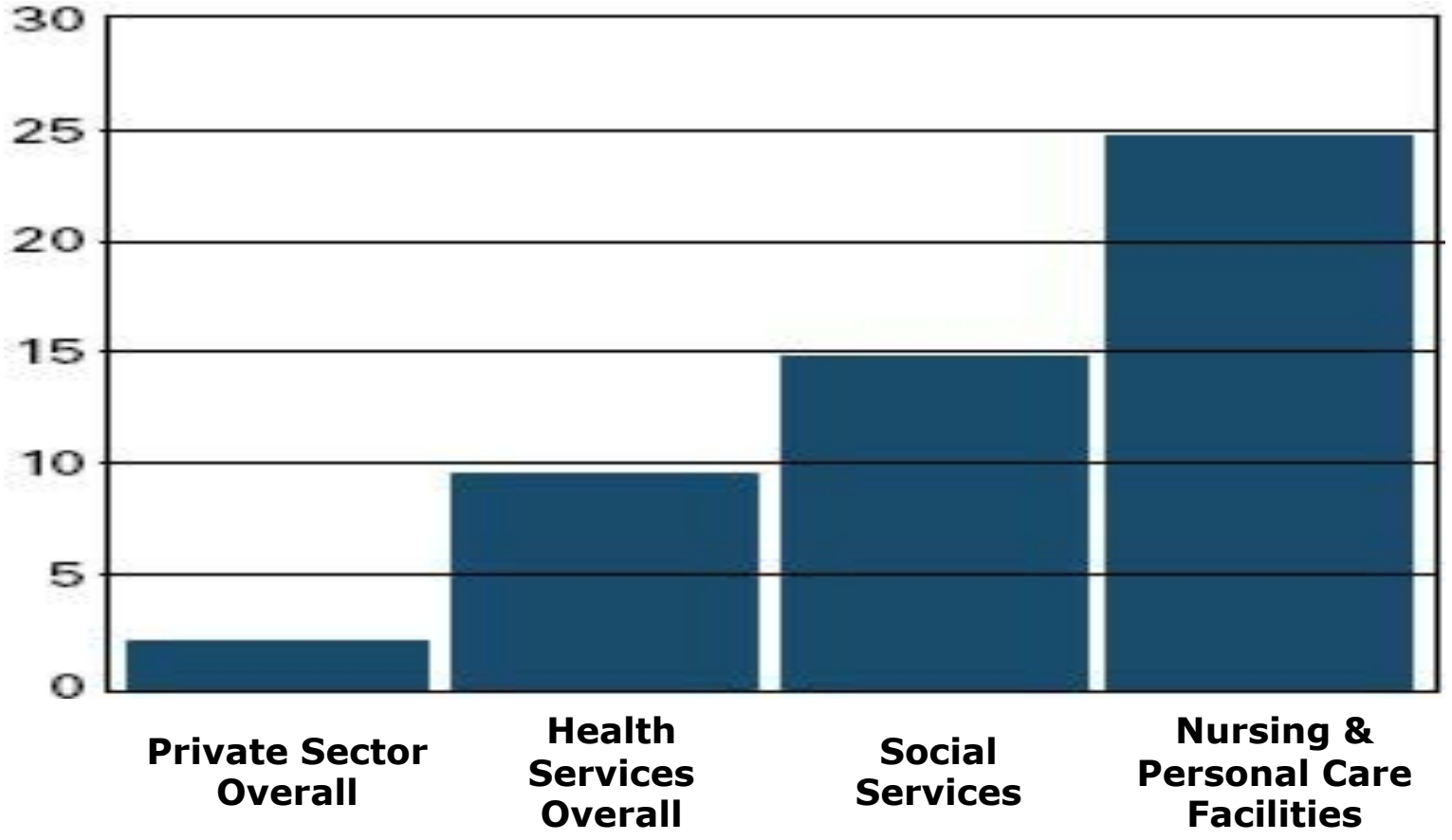
    Violence against co-workers, supervisors, or managers by a current or former employee, supervisor, or manager.

  - Type 4: Personal

    Violence by someone who does not work there, but who is known to, or has a personal relationship with an employee.

WORKPLACE VIOLENCE PREVENTION

Incidence rates for nonfatal assaults and violent acts by industry, 2000
incidence rate per 10,000 full-time workers



WORKPLACE VIOLENCE PREVENTION

- Attitudes and Behaviors
  - Do people just "snap"

    Not Really ….A violent outburst can be better characterized as the result of a "slow burn"…an accumulation of unresolved personal problems that can or have gone on for years.

    Examples:
    - A failing personal relationship
    - Economic hardships
    - Feelings of personal failure
    - Actual or perceived injustice in the workplace

WORKPLACE VIOLENCE PREVENTION

- Prevention Policy
  - Employee involvement should include:
    - Understanding and complying with the workplace violence prevention program and other safety and security measures.
    - Participating in employee complaint or suggestion procedures covering safety and security concerns.
    - Reporting violent incidents promptly and accurately.