

Introduction to Public Health

Module # 18

Injury ,road traffic accident(RTA) it's prevention.

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OBJECTIVES OF THE LECTURE

By the end of this lecture you will be able to:

- *Conceptualize*
 - *Injuries*
 - *Accidents*
 - *Causes of accidents and injuries and health impacts of accidents.*
- *Understand the prevention of accidental injuries and other injuries.*

Injury: Definition

Injuries are caused by acute exposure to physical agents such as mechanical energy, heat, electricity, chemical, and ionising radiation interacting with the body in amounts or at rates that exceed the threshold of human tolerance.

In some cases (for example, drowning and frostbite), injuries result from sudden lack of essential agents such as oxygen or heat.

- Injuries, unintentional or intentional, constitute a major public health problem, killing more than 5 million people worldwide each year and causing many more cases of disability.
- People from all economic groups suffer fatal injuries, but death rates due to injury tend to be higher in those in the lower income groups.
- The poor are also less likely to make a full recovery following an injury.

Injury



- Risk Factors :
- 1) Fatigue
- 2) Alcohol
- 3) Child Behavior
- 4) Medication
- 5) Organic diseases
- 6) Stress
- 7) Emotional

Injury

A decorative graphic consisting of a horizontal bar with a color gradient from dark blue on the left to bright yellow on the right. To the right of the bar is a large, stylized, multi-layered oval shape that tapers to a point, resembling a comet's tail or a lens flare, with a color gradient from dark brown to light yellow.

- Places of Injury: Injury may occur any places. But most common places are @
- 1) At home
- 2) In a Community- Roads, play-ground, ponds, lakes, garden, jungles etc.
- 3) In the industries.
- 4) In Offices etc.

Injury

- Traditionally injury= accident
 - Unavoidable random occurrence
 - Result of antisocial/ incautious behavior
- Fatal injuries
 - Unintentional (accidental)
 - Intentional (homicide/ suicide)
- Types of accidental injuries
 - Motor vehicle injury
 - Pedestrian, motorcyclist & bicyclist
 - Fire
 - Occupational injury/workplace injury

Occupational injury

- Bodily damage resulting from working
- Most common organ involved
 - Spine
 - Head
 - Eyes
 - Hands
 - Skeleton
 - Lung
 - Skin
- Occupational injury can be result from exposure to occupational hazards

Occupational hazard



- Hazard/ danger in work place
- Types
 - Chemical
 - Biological
 - Psychosocial
 - Physical

Chemical hazards & diseases

- Agents

- Acid
- Heavy metal
- Lead
- Petroleum
- Fume

- Diseases

- Gas poisoning
- Cancer
- Respiratory illness

Biological hazards & diseases



- Agents
 - Bacteria
 - Virus
 - Insects
 - Fungi
- Diseases
 - TB
 - Hep B, C
 - Asthma
 - Tetanus

Physical agents & diseases

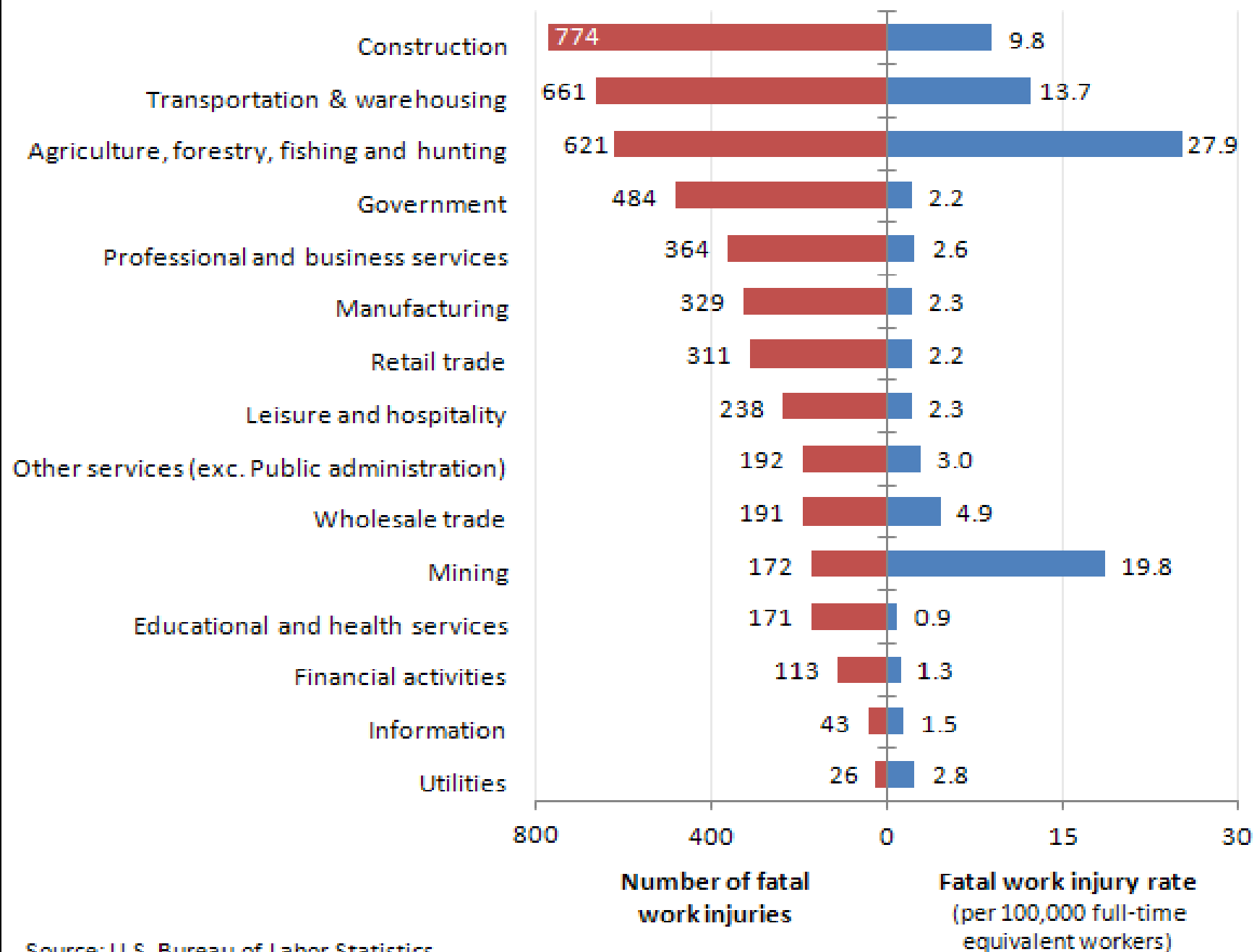


- Heat: heat stroke, heat rash, hyperpyrexia (extreme elevation of body temp)
- Light: occupational cataract
- Cold: hypothermia, frost bite
- Noise: occupational deafness
- Radiation: cancer, genetic changes, aplastic anemia (lack of blood cell due to failure of bone marrow development)

Psychosocial hazards & diseases

- Agents
 - Work related stress
 - Violence
 - Bullying
 - Sexual harassment
- Diseases
 - Trauma
 - Depression
 - Frustration
 - Memory loss

Number and rate of fatal occupational injuries, by industry sector, 2010



Source: U.S. Bureau of Labor Statistics

Some major occupational injury in Bangladesh



- Construction work
 - Building
 - Road
- Tannery
- Day laborer
- Desk job



ঝুঁকি

ঝুঁকিপূর্ণ ও দম বন্ধ করা পরিবেশে এই শ্রমিকেরা এভাবে অ্যালুমিনিয়ামের তৈজসপত্র তৈরির কাজ করছেন। ছবিটি গতকাল ঢাকার কামরাঙ্গীরচর এলাকা থেকে তোলা ● দিলীপ ব্যানার্জি



Prevention



- Awareness through education
- Compliance through enforcement
- Creating a safety culture
- Safety management
- Behavior modification

Ergonomic

A decorative graphic consisting of a horizontal bar with a color gradient from dark blue on the left to bright yellow on the right. To the right of the bar is a large, stylized arrow pointing to the right, filled with a brown-to-orange gradient.

- Ergonomics: fitting the job to the worker
- The adaptation, modification, work environment, work & rest schedule TO SUIT
- The capacity, limitations and expectations of the workers

Injury is a major public health problem

- The most common cause of death
- The leading cause of disability and a significant contributor to the loss of productive years of life and a major contributor to health care cost
- In the U.S. 90,000 unintentional deaths, 20,000 homicides and 20,000 suicides

Injury prevention interventions



- Car safety seats and belts
- Air bags
- Motorcycle helmets
- Bicycle helmets
- Child resistant packaging
- Swimming pool fencing
- Smoke detectors

The 5 “Es” of Incident Prevention

- **Epidemiology:** you can't prevent it if you don't understand it. Data collection is key.
- **Education:** awareness, attitudes, cultural beliefs
- **Enforcement:** rules, life safety codes etc.
- **Engineering:** changing the environment to make it safer
- **Evaluation:** did the changes made in education, enforcement, and engineering have the desired outcome on incidence?



• THANK YOU