



Occupational hazards in the health sector

The health sector is among the most hazardous sectors



Occupational infections



Unsafe patient handling



Hazardous chemicals



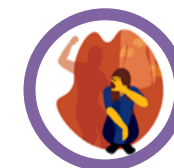
Radiation



Environmental health hazards



Psychosocial risks and
mental health



Violence and
discrimination



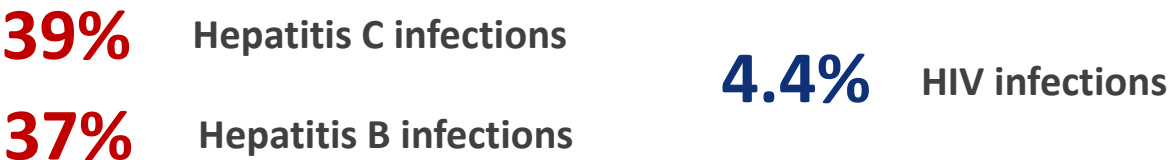
Risks in the ambient
environment



Occupational injuries

TB, Hepatitis B and C, HIV and respiratory infections are among the commonest occupational infections in the health sector

Needlestick injuries contribute to:



- ✓ Adhere to **strict infection prevention and control** measures
- ✓ Observe **standard precautions** for infection control
- ✓ Use **safety-engineered** devices and follow good practices for **safe injections**
- ✓ Provide **immunization** at no cost to health workers
- ✓ Provide **health services** for early detection, diagnosis, treatment, counselling and rehabilitation for **HIV and TB**



- ✓ Provide **systematic LTBI testing and treatment** in countries with a low TB incidence
- ✓ Ensure **adequate ventilation** in indoor health-care settings
- ✓ Consider the use of **UVGI** for prevention of airborne pathogens
- ✓ Use **clinical triage** for **early identification** of patients with respiratory infections to prevent transmission
- ✓ Ensure adequate supply, proper use and maintenance of **well fitted PPE**



Up to **72%** of nurses are suffering from **non-specific chronic low back pain**



Chronic low back pain may contribute to **burnout, increased economic burden, reduced efficiency, absenteeism, decreased quality of life**

✓ **Identify and assess** occupational hazards related to patient handling

✓ **Avoid lifting** or use **fewer** and more efficient lifting operations

✓ **Plan tasks** carefully to reduce ergonomic stress and strains

✓ Use **lifting aids** and mechanical devices for patient handling



✓ In absence of lifting aids, **at least two workers** should lift a patient

✓ Provide **training** on safe patient handling

✓ Adjust the layout of working areas to ensure **enough space** for safe transfers

✓ Install **steps or ramps** at the rear of the ambulance for easy transportation

Cleaning agents, mercury, toxic drugs, pesticides, latex and laboratory chemicals in health-care settings may be harmful to health workers

Cleaning agents and disinfectants have been associated with a **67%** increased risk of new-onset asthma in nurses

2x

Bleach and gluteraldehydes have been associated with **double** the risk of asthma in nurses





Eliminate unnecessary chemicals **or substitute** with less toxic chemicals



Ensure **adequate ventilation** and use of **closed systems** when handling chemicals



Provide **medical surveillance** and regular **training**



Use **mercury free** medical products and equipment and ensure safe disposal



Use **safe work procedures** for handling, storage, transportation and disposal of chemicals



Provide **facilities for personal hygiene** including washing and changing clothes



Ensure **safe disposal** of empty or nearly empty **pesticides containers**

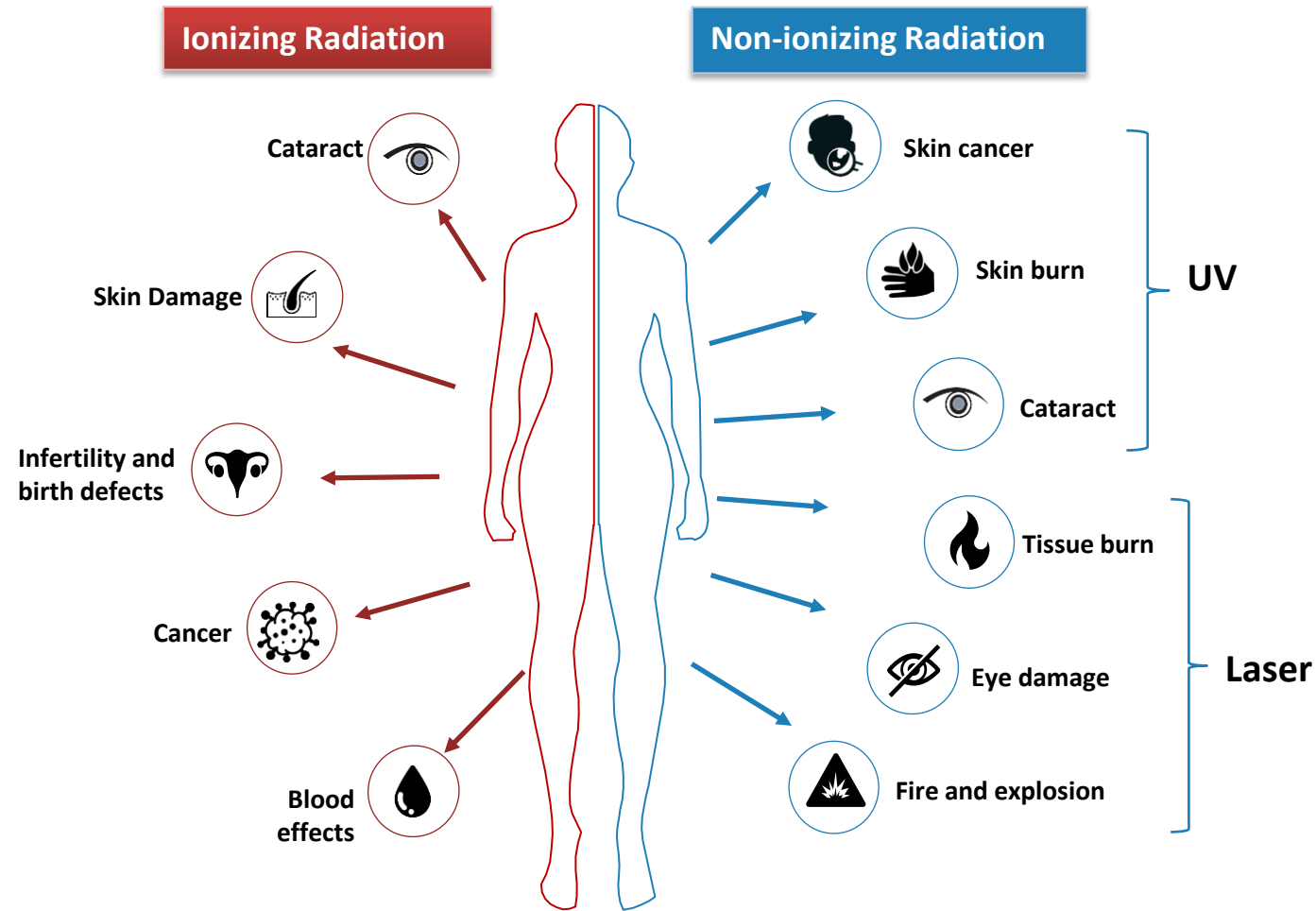


Organize **first aid** and **emergency care** procedures in case of accidental exposures



Provide and ensure usage of appropriate **well fitted PPE**

Ionizing and non-ionizing radiation exposure in health-care settings pose specific risk to health workers



- The probability of radiation adverse health effects is **proportional to the dose** received
- **No level** of radiation exposure **is completely safe**.

Preventing exposure to radiation in health care settings



Use radiation only to cases where the **benefits outweigh the risks**.



Put in place **shielding**, protective **barriers**, safety interlocks, warning signs and signals.



Restrict access to areas where radiation is used to authorised persons only.



Organize **regular inspection** of medical radiation devices by the competent authority.



Determine the level of exposure of different occupational groups for **planned exposure**.



Monitor exposure and organize **medical surveillance** of exposed workers.



Obtain **appropriate permission** for medical use of radiation and follow the recommendations for **safe use**.



Train workers on safe use of equipment and sources of radiation.



Encourage female workers to **report** if they become **pregnant** and **reallocate** them to tasks without radiation exposure.



Develop **SOPs** for action in case of accidental exposure to radiation.



Report all exposures **above the exposure limit** and cases of **occupational injuries** and **diseases** due to radiation exposure



Provide workers with **adequate well-fitted PPE**

Psychosocial risks and mental ill-health may result from poor work organization, long working hours, shift work, moral injury and lack of support

Contributing factors for mental ill-health:



Prolonged occupational stress causes **burnout, chronic fatigue, absenteeism, high staff turnover, reduced patient satisfaction**

Set clear and consistent **goals** for staff.

Provide **work-focused consultations** to staff who are experiencing job stress.

Organize work by **optimizing workload** and working time, **safe staffing** levels, encouraging regular **breaks** and having **flexible schedules**

Optimize **shift lengths** to avoid fatigue, giving preference to shift rotation in a **forward direction**



Provide frequent **training** to increase role effectiveness and coping strategies including training in **conflict resolution**.

Encourage the development of **support groups** and resource exchange networks.

Maximize **staff autonomy** and participation in decision-making

Provide **accommodation** for health workers **during emergency** operations with access to food services, sanitary facilities and recreational opportunities

Violence and harassment **affect all health worker groups** and work settings in the health sector.



Improve work organization

- ✓ Optimal staffing levels, working time, working conditions and workers' support.
- ✓ Buddy system and minimize waiting times.
- ✓ Provide timely information to patients and family.
- ✓ Restrict public movement in health facilities.
- ✓ Alert security if violence is threatened.



Provide security measures

- ✓ Good lighting, security cameras, alarms and panic buttons, emergency signalling.
- ✓ Security escorts to the parking lots at night.
- ✓ Lock drugs and valuables.

Prepare and support workers

- ✓ Train workers in conflict resolution and managing assaults.
- ✓ Provide counselling to recognize the danger of violent behaviour and assistance to change the conduct/attitude.
- ✓ Maintain physical fitness and emotionally stable psychical conditions.

General measures

- ✓ Recognize violent incidents and identify risks of violence
- ✓ Respond quickly to incidents if they occur.
- ✓ Encourage reporting, recording and monitoring of all incidents.
- ✓ Ensure confidential grievance procedure.
- ✓ Monitor violence trends and the effectiveness of preventive measures.

Thermal discomfort , inadequate lighting and noise exposure are ambient environmental hazards that may cause harm to health workers



Thermal discomfort

- Heat stress can arise from prolonged work in full personal protective equipment
- Working outdoors in extreme cold or heat can cause serious health damage



Noise exposure

- Noise exposure above 85 dB(A) may cause temporary and permanent hearing damage
- Lower noise levels causes annoyance, lack of sleep, and increased stress



Poor lighting

Poor lighting in work areas can cause injuries, eye strain and loss of vision



Thermal discomfort

- ✓ Provide adequate heating, ventilation and air conditioning
- ✓ Limit time spent in full PPE to a maximum of one hour, then rest in cool place
- ✓ Allow enough time for acclimatization in workers who move to new regions
- ✓ Schedule heavy work at the coolest time of the day, allow frequent rest breaks in cool areas, limit exposure time, provide cool drinking water, and monitor hydration status
- ✓ Train workers to recognize heat related symptoms and report immediately
- ✓ Establish emergency procedures for workers who exhibit heat-related symptoms



Poor lighting

- ✓ Make better use of daylight and keep windows clean
- ✓ Choose light coloured matte paint which diffuses light and reduces glare
- ✓ Provide sufficient general and local artificial lighting without glare and maintain light sources in good condition



Noise

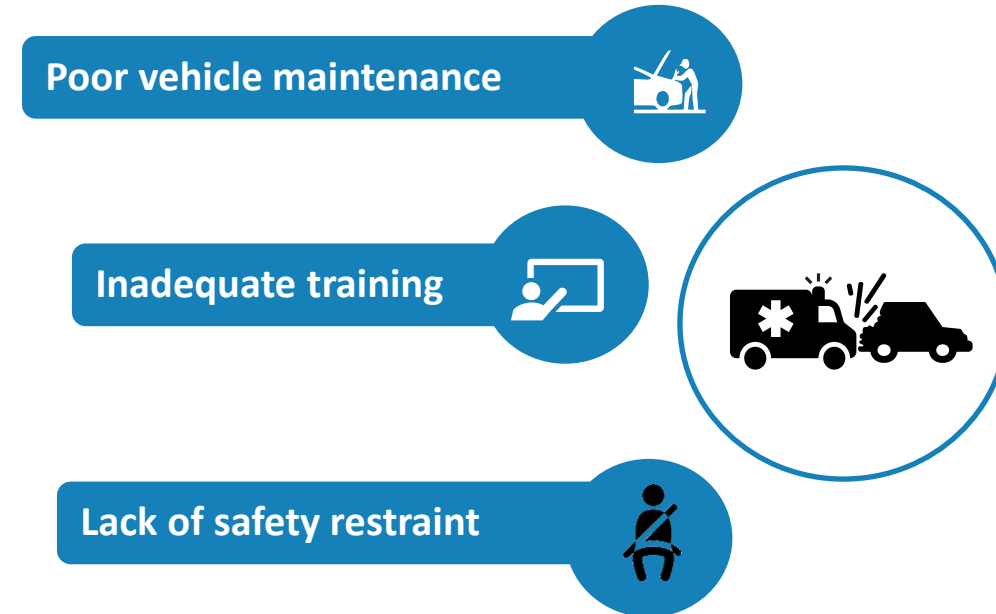
- ✓ Keep noise levels in working areas as low as possible
- ✓ Noise exposure in health-care settings should not exceed 35 dB in most rooms in which patients are being treated or observed

Slips, trips and falls, road traffic injuries, electric shock, explosions and fire are common occupational injuries among health workers

Slips trips and falls are caused by:



Road traffic Injuries are caused by:



Electrical injuries are caused by:





Slips, trips and falls

- Ensure access to and use of slip resistant shoes.
- Install slip-resistant flooring and increase floor cleaning frequency.
- Remove trip hazards in workplaces.
- Ensure safe railings for stairs and heights.
- Support older workers to participate in falls prevention activities.



Road traffic injuries

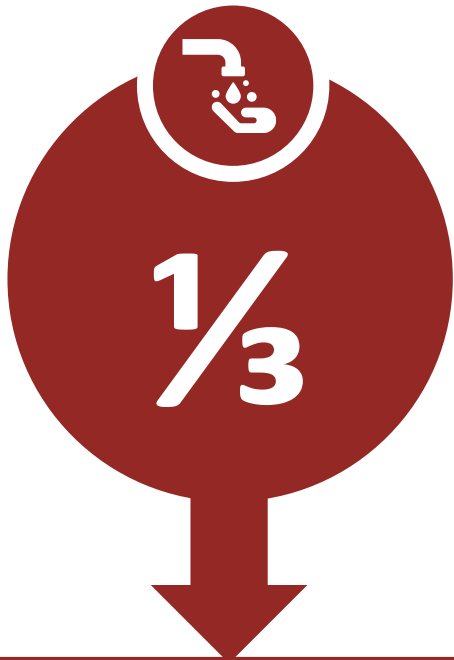
- Adopt safe driving practices e.g., use of seat belts,
- Set speed limits for vehicles
- Develop a system for recording and investigating incidents.
- Employ competent drivers and conduct driving competency and medical fitness tests.
- Maintain vehicles in good condition.
- Consider good driver access or visibility when purchasing or deploying vehicles.



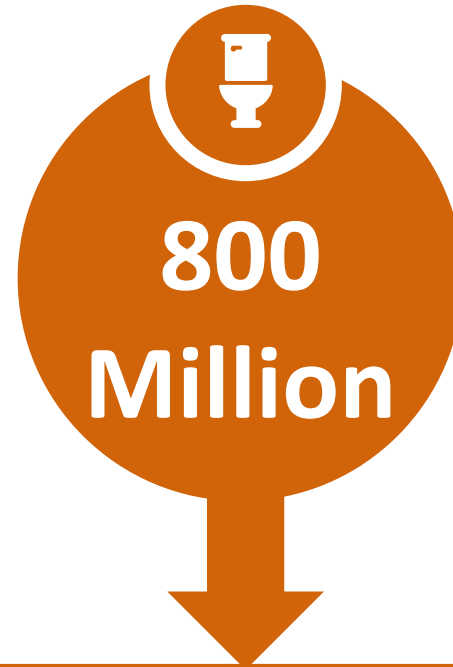
Electrical injuries

- Train workers on safe use of electrical equipment.
- Ensure availability of enough sockets to avoid overloading socket outlets.
- Remove trailing cables that may cause trips or falls.
- Switch off and unplug appliances before cleaning or adjusting them.
- Check for signs of dangers from electricity before using electrical equipment.
- All electrical work should be done by a competent person.
- Stop using faulty equipment immediately and have it checked by a competent person.
- Ensure all electrical equipment are suitable for use before using them.
- Consider using a residual current device (RCD) to reduce the risk of electric shock.

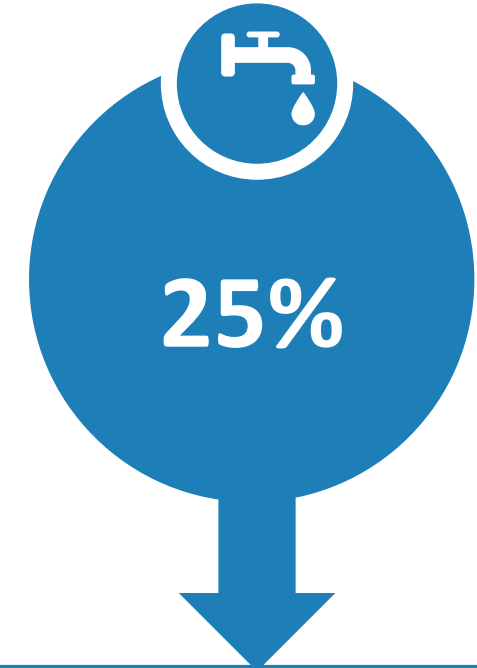
Unsafe water, inadequate sanitation and hygiene, health care waste and climate related hazards constitute risks to health workers



$\frac{1}{3}$ of health facilities **do not**
have what is needed to clean
hands where care is provided



About 800 million people use
health facilities with **no toilets**



One in four health facilities have
no water services



Water, sanitation and hygiene:



01 Ensure availability of safe and adequate supply of water

02 Provide toilets for patients, staff and carers.

03 Ensure safe disposal of health-care waste using environmentally friendly technologies.

04 Keep laundry and surfaces clean.

05 Store and prepare food safely to minimize disease transmission.

06 Design, construct, and manage buildings to provide a healthy environment for patients, staff and carers.

07 Protect patients, staff and carers from vector borne diseases.

08 Encourage correct use of water, sanitation and waste facilities.

09 Ensure adequate ventilation to prevent airborne infections.



Climate-related disasters and emergencies



- 01 Assess the potential workplace hazards and plan mitigation measures.
 - 02 Determine safe staffing levels, with rostering and credential systems to ensure operational sufficiency.
 - 03 Ensure the availability of sustainable water, sanitation, environmental, chemical and health-care waste management services.
 - 04 Develop post-disaster employee recovery assistance programmes and psychosocial support.
 - 05 Establish an early warning system and risk reduction plan for climate-related emergencies.
 - 06 Ensure adequate prevention and management of heat strain and heat-related illnesses.
-
- 01 Develop contingency plan for safe and secure evacuation following an extreme event.
 - 02 Put in place security measures for safe and secure evacuation of staff and patients.
 - 03 Train staff in protecting their health and safety during an emergency.

Please visit:

<https://www.who.int/tools/occupational-hazards-in-health-sector>

