NATIONAL PRIMARY HEALTH CARE DEVELOPMENT AGENCY

MODULE 15: CROSS CUTTING ISSUES

Learning Objectives



By the end of this training, participants will be able to:

1. **Understand Health Security and the interconnection between health security and Primary Health Care**
2. **Understand the concept of health system resilience and the importance of the interconnected components of primary health care resilience.**
3. **Understand the role of community-based surveillance in public health surveillance**

Overview of Cross Cutting Issues

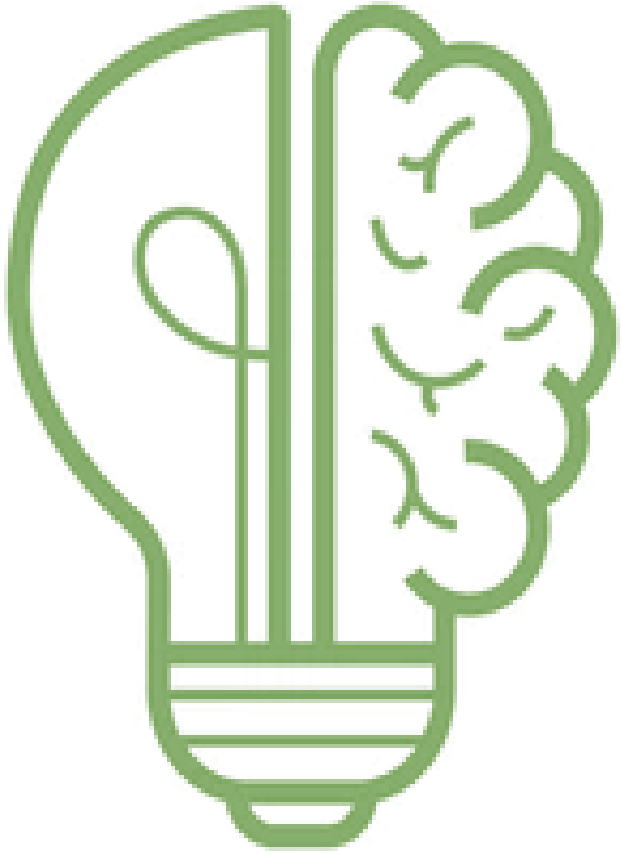
Session 15.1	**Health Security in Primary Health Care**
Session 15.2	**Health System Resilience: A Focus on Primary Health Care**
Session 15.3	**Community-Based Surveillance**
Session 15.4	**Wash**

SESSION 15.1: HEALTH SECURITY IN PRIMARY HEALTH CARE

Session Overview

1. Understanding Health Security
2. Interconnection between health security and PHC
3. Enhancing Health Security through Primary Health Care: Surveillance, Emergency Preparedness and Response, Health Infrastructure, Vaccination Programs, Collaboration, Health Education and Communication, Community Engagement, Biological Threat Reduction, Border Health Security, Psychosocial Support
4. Key Messages

Brainstorming



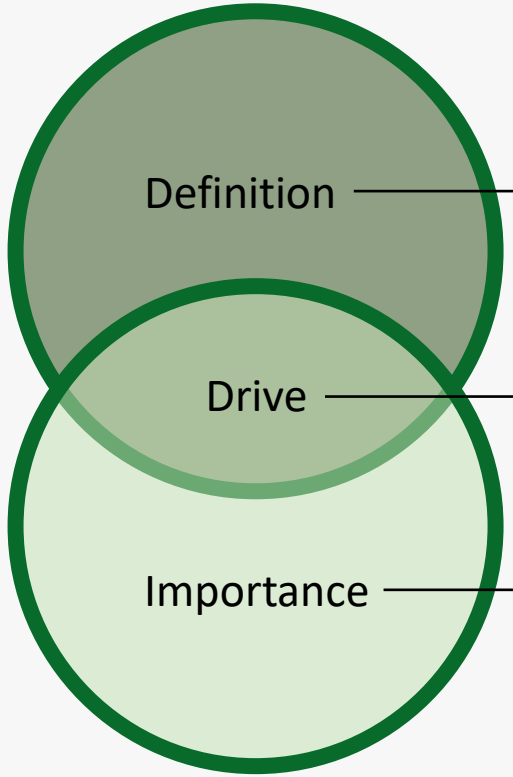
What do you understand

by Health Security?

stand by Health Security?

(Participants to share opinion)

Understanding Health Security



Health security refers to the protection of a nation's health from threats such as infectious diseases, natural disasters, and other public health emergencies

The drive for health security at the PHC level is to prevent, detect, and respond

Ensuring health security is crucial for safeguarding the well-being of communities and preventing the spread of diseases

Primary Health Care



- Primary health care is essential, accessible, community-based care that focuses on promoting health, preventing diseases, and providing basic medical treatment

- The role of Frontline Health Care Workers: Frontline health care workers are at the forefront of delivering primary health care services to individuals and communities

Exercise 1



What is the Interconnection between Health Security and Primary Health Care?

Interconnection between Health Security and Primary Health Care

Health security

Primary health care

- Health Security and Primary health care are interconnected through a shared goal of ensuring overall well-being.
- Primary Health Care, with its focus on accessible, community-based services, plays a crucial role in achieving health security by addressing health needs at the grassroots level.
- Effective PHC systems contribute to early detection and management of health threats, promoting resilience against epidemics and emergencies, thereby enhancing overall health security
- Primary health care facilities serve as the first point of contact for individuals seeking medical assistance, making them critical in the early detection of potential health security threats
- Primary health care workers play a key role in engaging with local communities to promote health security measures and educate about disease prevention

Enhancing Health Security Through Primary Health Care

1 Surveillance

Monitoring and tracking the occurrence and spread of diseases to detect potential threats early.



Key Components Of Disease Surveillance:

- Early Detection and Reporting
- Investigation and Confirmation
- Risk Assessment
- Communication and Information Sharing
- Implementation of Control Measures
- Resource Mobilization
- Monitoring and Evaluation
- Adaptive Management



Enhancing Health Security Through PHC Cont..

2 Emergency Preparedness and Response

Developing plans and capabilities to effectively respond to health emergencies and mitigate their impact.



Exercise 2



What are the components of emergency Preparedness and Response?

The Key Components of Emergency Preparedness and Response:

1	Risk Assessment
2	Training and drill preparedness
3	Early warning system
4	Community engagement
5	Emergency response teams management
6	Public health measures
7	Evaluation and continuous improvement
8	Planning and Preparedness
9	Infrastructure and Resources
10	Communication Strategies
11	Coordination and collaboration
12	Logistics and supply chain
13	Recovery and rehabilitation

Enhancing Health Security Through PHC Cont..

3 Healthcare infrastructure

Ensuring a robust healthcare system with adequate facilities, personnel, and resources to handle emergencies



Healthcare Infrastructure

- ❑ Facility Readiness
- ❑ Resource Availability
- ❑ Workforce Training
- ❑ Emergency Response Teams
- ❑ Communication Systems
- ❑ Evacuation Plans (Isolation centre and IDPs
- ❑ Collaboration with External Agencies
- ❑ Mass Casualty Preparedness
- ❑ Public Health Measures
- ❑ Community Engagement
- ❑ Regular Drills and Exercises
- ❑ Data Security and Continuity of Operations



Enhancing Health Security Through PHC Cont..

4 Vaccination programs

- Implementing comprehensive vaccination strategies to prevent the spread of infectious diseases
- Immunization Schedule
- Vaccine Coverage Goals
- Routine Vaccination Programs
- Catch-Up Vaccination
- Vaccine Accessibility
  - School-Based Vaccination Programs
  - Community Engagement
  - Monitoring and Surveillance



Enhancing Health Security Through PHC Cont..

5 Collaboration

Engaging in international cooperation to address cross-border health threats and share resources and information

- ❑ Early Warning Reporting
- ❑ Data Sharing and Transparency
- ❑ Capacity Building
- ❑ Resource Sharing
- ❑ Coordinated Response
- ❑ After Action Review





Enhancing Health Security Through PHC Cont..

6 Health education and communication

Providing accurate and timely information to build trust, promote awareness, and encourage preventive measures to the public through

- ❑ Disease Prevention and Health Promotion
- ❑ Health Literacy
- ❑ Community Engagement
- ❑ School Health Programs
- ❑ Crisis Communication
- ❑ Behaviour Change Communication
- ❑ Workplace Health Promotion
- ❑ Public health Service Campaign
- ❑ Evaluation and Feedback
- ❑ Advocacy and Community Support
- ❑ Continuing Education for Healthcare Professionals on IPC



Enhancing Health Security Through PHC Cont..

7 Community engagement

Involving communities in health security efforts, fostering cooperation, and addressing local needs

- ❑ Needs Assessment
- ❑ Partnerships and Collaboration
- ❑ Two-Way Communication
- ❑ Empowerment and Capacity Building
- ❑ Community-Based Participatory Research (CBPR)
- ❑ Health Education and Promotion
- ❑ Health Education and Promotion
- ❑ Community Mobilization
- ❑ Local Health Champions
- ❑ Crisis Response and Resilience Building
- ❑ Celebrating Successes
- ❑ Sustainability
- ❑ Feedback and Evaluation



Enhancing Health Security Through PHC Cont..

8 Biological Threat Reduction

Involving communities in health security efforts, fostering cooperation, and addressing local needs

- Implementing measures to prevent the accidental or intentional release of harmful biological agents.
- Surveillance and Early Detection
- Laboratory Safety and Security
- Biosafety Training and Capacity Building (sample collection, packaging and transportation)
- International Cooperation and Collaboration
- Public Health Preparedness
- Biosecurity Education and Community Outreach
- Rapid Response and Containment



Enhancing Health Security Through PHC Cont..

9 Boarder health security

- Implementing measures at borders to detect and prevent the spread of infectious diseases at the border primary healthcare facilities
- Surveillance and Monitoring
- Public Health Screening
- International Collaboration
- Information Sharing and Communication
- Border Quarantine and Isolation activities
- Cross-Border Coordination
- Risk Assessment and Management
- Vaccination and Immunization Programs
- Capacity Building
- IDSR Compliance
- Traveller Education
- Emergency Response Drills (Simulation Exercise)



Enhancing Health Security Through PHC Cont..

10 Psychosocial Support

- Incorporate psychosocial support services for individuals and communities affected by health emergencies
- Train healthcare providers to address mental health needs during crisis healthcare



Community-Based Interventions

1	Implement community-based interventions for health promotion and preventive care
2	Mobilize community health workers to support public health efforts during emergencies

Documentation and Reporting

Establish clear documentation and reporting procedures for healthcare providers

Ensure the timely submission of accurate data to relevant health authorities



Key Messages

1. Public health security is a global imperative demanding collaboration, innovation, and community engagement

2. Emphasizing prevention, detection, and response using adaptable strategies, and ethical considerations, requires a holistic approach involving governments, healthcare providers, communities, and international organizations

3. Timely and transparent communication, along with investment in research and infrastructure, is paramount

4. As we face evolving health threats, fostering resilience, building capacity, and prioritizing the interconnectedness of global health will fortify our ability to safeguard populations, ensuring a healthier and more secure future for all

SESSION 15.2: HEALTH SYSTEM RESILIENCE: A FOCUS ON PRIMARY HEALTH CARE

Learning Objectives

By the end of the session Participants should be able to:



Understand the concept of health system resilience and the importance of the interconnected components of primary health care resilience



Shift roles seamlessly as a response to disaster/disease outbreak

Session Overview

1. Introduction
2. Components of Primary Health Care Resilience
3. Community engagement
4. Data and Information Systems
5. Resource Management
6. Collaboration and Partnerships
7. Emergency Preparedness and Response
8. Continuous Learning and Improvement
9. Conclusion

Brainstorming

What is your understanding of Health system resilience?

(Participants to share opinion)



Introduction

Resilience refers to the ability of an individual, community, or system to adapt, bounce back, and recover from adversity, challenges, or significant stress

What is Health System Resilience?



- Health system resilience is often defined as the capacity to adapt and respond effectively to challenges
- It is crucial in primary healthcare
- Primary healthcare sets the foundation for a community's overall well-being
- Comprehensive approach addressing determinants of health

Introduction Cont..



In general, health system resilience refers to the ability of health systems to prepare for and minimize the negative impact of disruptions.



This includes effectively preventing, surveilling, responding to, and recovering from shocks and stresses.



Developing resilient primary healthcare systems ensures that communities can effectively respond to and recover from public health threats.

Components of Primary Health Care Resilience

Building Blocks of Resilience

- Diverse components forming the building blocks
- Example: Community health center with outreach programs, mental health support, and preventive care initiatives

Integrated Service Delivery

- Incorporate various healthcare services seamlessly
- Example: A primary health care center offering integrated services like vaccinations, maternal care, and chronic disease management under one roof

Adaptive Capacity

Adaptive Capacity in Primary Health Care

- Need for flexibility in strategies and resource allocation
- Example: Community health workers trained in disaster response, seamlessly shifting roles as needed



Exercise 1



Why is adaptive capacity crucial in primary health care?

Answer

Adaptive capacity allows primary healthcare systems to:

- Adjust to evolving challenges,
- Ensure effective response and resource allocation



Robust Infrastructure

Local Infrastructure for Primary Health Care

- Significance of reliable facilities and equipment
  - Example: Local clinic with state-of-the-art medical equipment, reliable power supply, and telemedicine capabilities



Effective Governance and Leadership

Local Leadership in Primary Health Care

- Strong leadership within local health organizations is very important
- Example: Effective governance streamlining processes and enhancing decision-making



Exercise 2



What role does effective governance play in primary healthcare resilience?

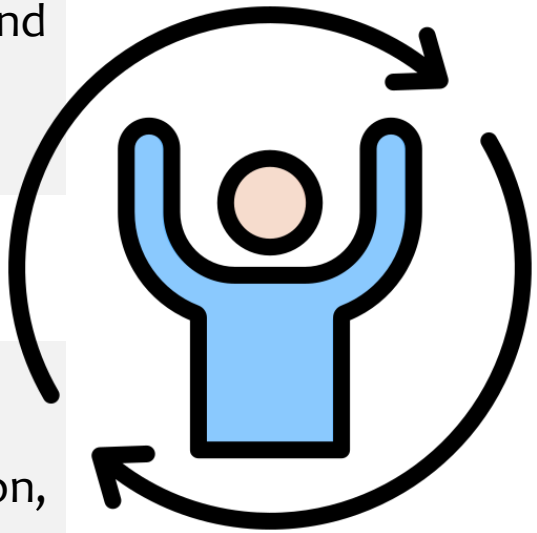
Answer

- Effective governance streamlines processes,
- Enhances decision-making and
- Contributes to the overall resilience of primary health care



Health Workforce Resilience at the Community Level

Adaptable Workforce in Primary Health Care	Need for skilled and adaptable community health workers Example: Team trained in disaster/disease outbreak response and community education, shifting roles seamlessly
Cross- Training of Health Professionals	Equip healthcare professionals with versatile skills Example: Nurses trained in both clinical care and health education, ensuring a multi-functional approach in the community



Community Engagement



Empowering Communities in Primary Health Care

- Involvement of communities in decision-making
- Example: Community health initiative involving town hall meetings for active participation

Exercise 3



How does community engagement contribute to primary healthcare resilience?

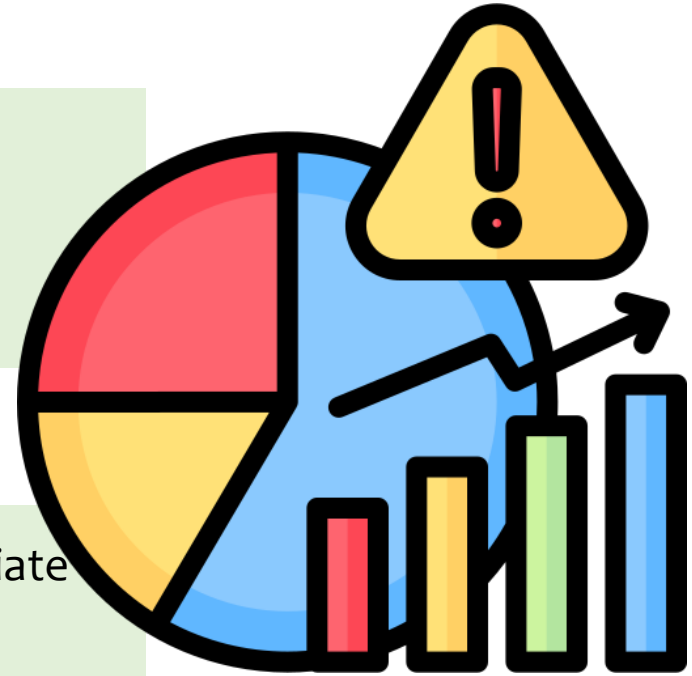
Answer

- Community engagement fosters collaboration
- Ensures that healthcare decisions align with the community's needs, making the healthcare system more resilient



Data and Information Systems for Primary Health Care

Localized Data Systems	Importance of reliable data collection and sharing Example: Community health initiative using data to inform decision-making and targeted interventions
Real-time Monitoring and Feedback	Implement systems for continuous monitoring and immediate feedback Example: Using digital platforms to monitor community health indicators in real-time, allowing for swift adjustments to healthcare strategies



Exercise 4



How do data and information systems contribute to resilience?

Answer

Localized data systems provide accurate information for informed decision-making, contributing to the resilience of primary healthcare systems



Resource Management in Primary Health Care

Efficient Resource Allocation	Need for effective resource management Example: Prioritizing needs based on data to maximize impact with limited resources
Community Volunteer Programs	Utilize local volunteers to extend resources Example: Establishing a program where community members volunteer to support health education initiatives, alleviating the workload on healthcare professionals

Collaboration and Partnerships

Community Collaboration for Resilience	Importance of collaborations between primary healthcare providers and local entities Example: Partnerships creating a network of support and enhancing resilience
Public-Private Partnerships	Collaborate with private entities for enhanced resources Example: Partnering with private businesses to fund and support health initiatives, fostering a collaborative approach to community well-being



Emergency Preparedness and Response



Localized Emergency Plans

Need for well-defined emergency response plans

Example: Primary health care center in a flood-prone area with a detailed emergency plan



Simulation Exercises

Conduct regular emergency response simulation exercises

Example: Simulating a disease outbreak to test the efficiency of emergency response plans and identify areas for improvement

Continuous Learning and Improvement

Learning from Experience in Primary Health Care

Importance of ongoing evaluation and improvement

Example: Primary health care system conducting a thorough review after a disease outbreak/After Action Review (AAR)



Patient Feedback Mechanism

Establish a mechanism for patients to provide feedback

Example: Implementing a patient feedback system to gather insights into the patient experience and identify areas for improvement



Key Messages



The resilience of primary health care is not a luxury but a necessity.

By addressing each component discussed, communities can build a robust healthcare system that withstands challenges and contributes to the well-being of individuals

Learning Objectives

By the end of the session Participants should be able:

- Understand the role of community-based surveillance in public health surveillance
- Identify cases and events of public health importance
- Report suspected cases, conditions, or events to the next level

SESSION 15.3: COMMUNITY BASED SURVEILLANCE

Session Overview

- Introduction to Community-based surveillance (CBS)
- Role Of Community Members in Public Health Surveillance and Response
- Establishing a Community-based Surveillance and Response System
- Steps for Establishing CBS and Response System
- Criteria for selecting CBS Focal Person including Roles and Responsibilities
- CBS Activities, Sources of Information, Case Definitions and Reporting

Brainstorming

What do you understand by community based surveillance?

(Participants to share opinion)



Community-Based Surveillance (CBS)

- This is defined as the systematic detection and reporting of events of public health significance within the community-by-community members
- CBS incorporates both Indicator-based and Event-based surveillance methods
- The entire community population is under surveillance, and not simply a segment of the community



Role Of Community Members in Public Health Surveillance and Response

1. Provide early warning or alerts during the pre-epidemic period
2. Report rumours and information on unusual public health events in the community to the nearest health facility
3. Support in active case detection and response during the epidemic including contact tracing, community mobilization & sensitization
4. Providing a forum for feedback to the community on the outbreak or event assessment
5. Community participation in surveillance and response
6. Sensitize the community on the adoption of behavior to facilitate the containment of the outbreak
7. Verify if public health interventions take place as planned

Exercise 1



Who establishes a community based surveillance and response system?

(Participants to share opinion)

Establishing a Community-based Surveillance and Response System

Who is responsible?

Officer in charge (OIC) of health facility in the catchment area with support from the LGA, state and national

What are their roles?

- Develop CBS structures
- Define the selection criteria for CBS focal persons
- Drawing terms of reference
- Define the roles and responsibilities of the CBS focal persons
- Coordinate, supervise, and monitor all CBS activities implemented by the focal person

Steps for Establishing CBS and Response System

1. Engage all stakeholders
2. Define the sources of information about health events in the community
3. Identify community-based surveillance (CBS) focal persons
4. Compile a list of priority diseases, conditions, and events for CBS
5. Develop simple case definitions for the priority diseases, conditions, and events
6. Develop and Disseminate data collection and reporting tools
7. Define methods of reporting
8. Train all key actors in the CBS system
9. Develop risk communication and social mobilization structures
10. Define methods for supervision, monitoring, and evaluation

Procedure for CBS Focal Person Selection

Who is Responsible?
LGA and ward/village health committee should work with community leaders to identify members of the community to select CBS Focal persons

Who is Eligible to be the CBS Focal Person?
Any community member acceptable by the community can be a CBS focal person

CBS Focal Person Selection Criteria

- Be literate enough to record events/data on the register provided
- Selected irrespective of Gender
- Be recognized by all identified groups where ethnic and religious differences exist
- Mobile phones/ tablets independent from continuous electricity or internet
- Outbreak response task management (including contact tracing)
- Case-based surveillance focal person
- Focal person for a priority disease

NB: once selected, the CBS focal person should be trained in their roles and responsibilities

Roles and Responsibilities of a CBS Focal Person

- Use community case definitions to identify, and record priority diseases/conditions/events
- Report to the nearest health facility/ward immediately within 24 hours
- Support health workers during case/outbreak investigation and contact tracing
- Conduct household visits regularly
- Meet with key informants regularly
- Sensitization of the community on priority diseases, conditions, and unusual events
- Mobilize local authorities and community members to support response activities
- Attend local ceremonies and events and follow up on anything unusual
- Participate in risk mapping of potential hazards



Exercise 2

What are some of the examples of CBS activities that occur?

(Participants to share practical examples)



Example of CBS Activities

1. CBS focal person hears of several cases of acute watery diarrhoea with vomiting in the community
2. The CBS focal person suspects cholera and reports rumour to the health facility and the LGA health officer/DSNO by text messaging
3. Members of the Rapid Response Team (RRT) travelled to the community to verify and investigate the possible outbreak
4. Based on investigation results, the outbreak was quickly contained using implemented control and preventive measures. Thanks to the early warning from the CBS focal person

Monthly CBS Data Form TG Page 590

1. Data collection
   - Register case
   - Report
2. Analyze
3. Interpret
4. Action
   - Investigate
   - Confirm

Annex 11N: Community-Based Surveillance (CBS) Suspected Diseases and Public Health Events Monthly Log Sheet

This form is a summary of all the diseases/events identified during the month. It is completed by the community focal person and submitted monthly to nearest health facility/sub-district surveillance focal person every month.

Community-Based Surveillance Suspected Diseases and Public Health Events Monthly Log Sheet

Community:_____ **Ward/Sub-district**_____

Month_____ **Year**_____

Type of illness/ Event	When did this happen (DD/MM/YYY)	Where did this happen (Community)	How many have been affected	Sex M/F	Age	How many died	Has the event been verified? Yes/No	what action was taken

IDSR Community Case Definitions for Use at the Community Level

1. Inform all members of the community about the priority diseases/conditions/events under surveillance in your area
2. Use key signs and symptoms of case definitions that have simple language and are easy to understand
3. **Sample community case definitions can be found in Chapter 1, Annex 1A of the 3rd Edition IDSR Technical Guidelines**

Exercise 3: Case definitions for use at the community level

Disease, Condition and Events	Community case definition by participants
Acute flaccid paralysis	
Suspected cholera	
Adverse event following immunization	
Diarrhea with blood (Shigella)	
Dracunculiasis	
Malaria	
Maternal death	
Measles	
Meningococcal meningitis	
Neonatal death	
Viral hemorrhagic fever	

Case definitions for Use at Community Level

Acute flaccid paralysis	Any child with a sudden onset of acute paralytic disease control
Cholera	Any person aged 2years or more who has lots of watery diarrhea
Adverse event following immunization	Any unusual event that follows immunization and is thought to be caused by the vaccination
Diarrhea with blood (Shigella)	Any person with diarrhea and visible blood in the stool

Case Definitions for Use at Community Level Cont..

Dracunculiasis	Any person exhibiting or has had a history of skin lesions with worms emerging
Malaria	Any person/child in a malaria-endemic area with a high fever
Maternal death	Death of a woman during pregnancy or within 42 days of termination of a pregnancy
Measles	Any person with an elevated body temperature and widespread rashes on the face and body

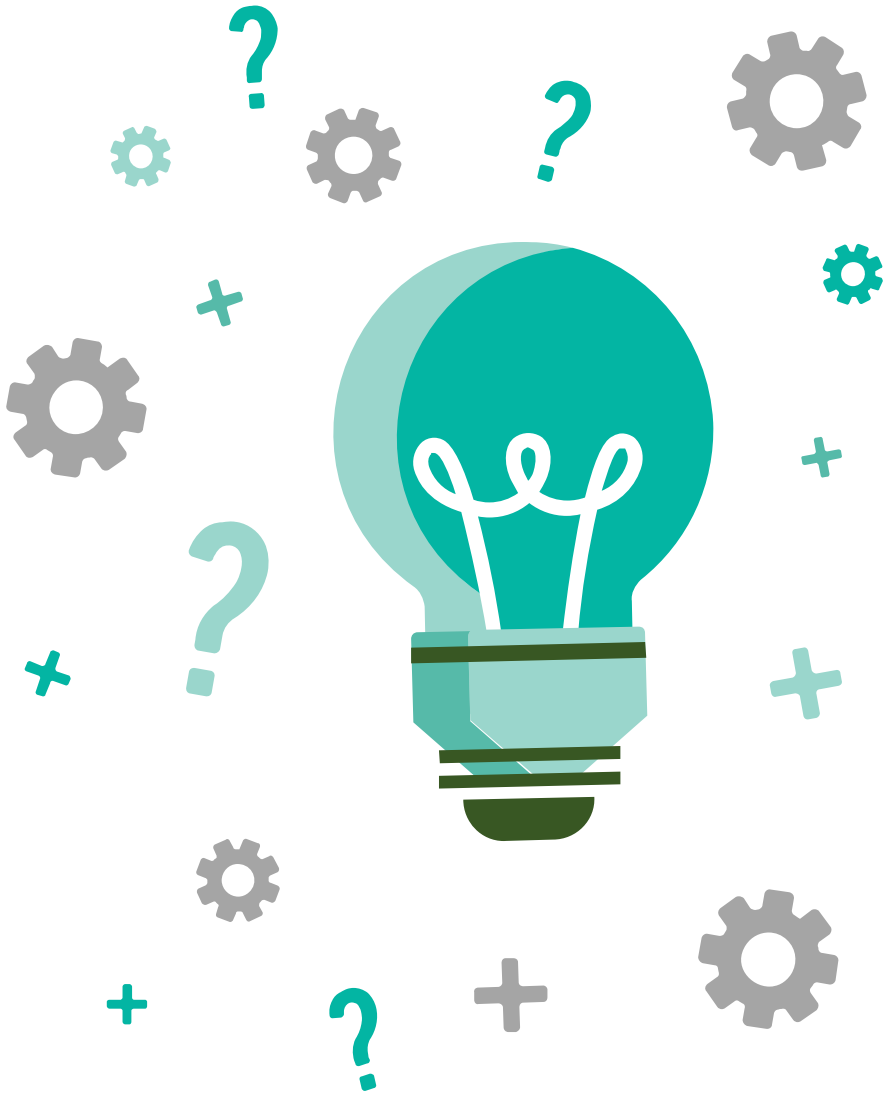
Case Definitions for Use at Community Level Cont..

Meningococcal meningitis	Any person with a fever and a stiff neck
Neonatal death	Death of a child within the first 28 days of his or her life
Viral hemorrhagic fever	Any person with an onset of a fever that does not respond to the usual treatment of fever in an area at risk of transmission, and with at least one of these signs - bloody diarrhea, bleeding from gums, through the skin, eyes, and bloody urine, or sudden death

Exercise 4

What are the possible sources of information for CBS?

(Participants to list practical sources)



Sources of Information for CBS

01 Community-based health workers and Volunteers

02 Traditional birth attendants, schoolteachers, pharmacists /medicine sellers/patent medicine vendors

03 Staff at private clinics

04 Community animal health workers

05 Community Based Organizations (CBOs)

06 Community leaders: traditional/youth/religious

07 Media such as radio & newspapers, social media

08 Traditional medicine practitioners e.g. traditional healers/herbalists and shrine keepers

09 Home Visits

10 Social gathering places such as churches, mosques, markets, schools, etc

What and How to Report in CBS

What to report immediately/ within 24 hours

1. Anyone with the onset of an illness meeting any of the IDSR community case definitions in the catchment area

2. Any sudden death, if the catchment area is experiencing an ongoing public health event of the IDSR priority conditions

3. Any unusual public health event e.g. unexplained cluster of similar severe illnesses within one week, high absenteeism at school

What and How to Report Cont..

How to Report:



Report to the CBS Supervisor or Surveillance officer or nearest Health facility Manager



By phone call/text message/hand delivery/ using vehicle/walking to nearest health facility



Record in community alert forms

Linkage Between Facility-based Surveillance and CBS



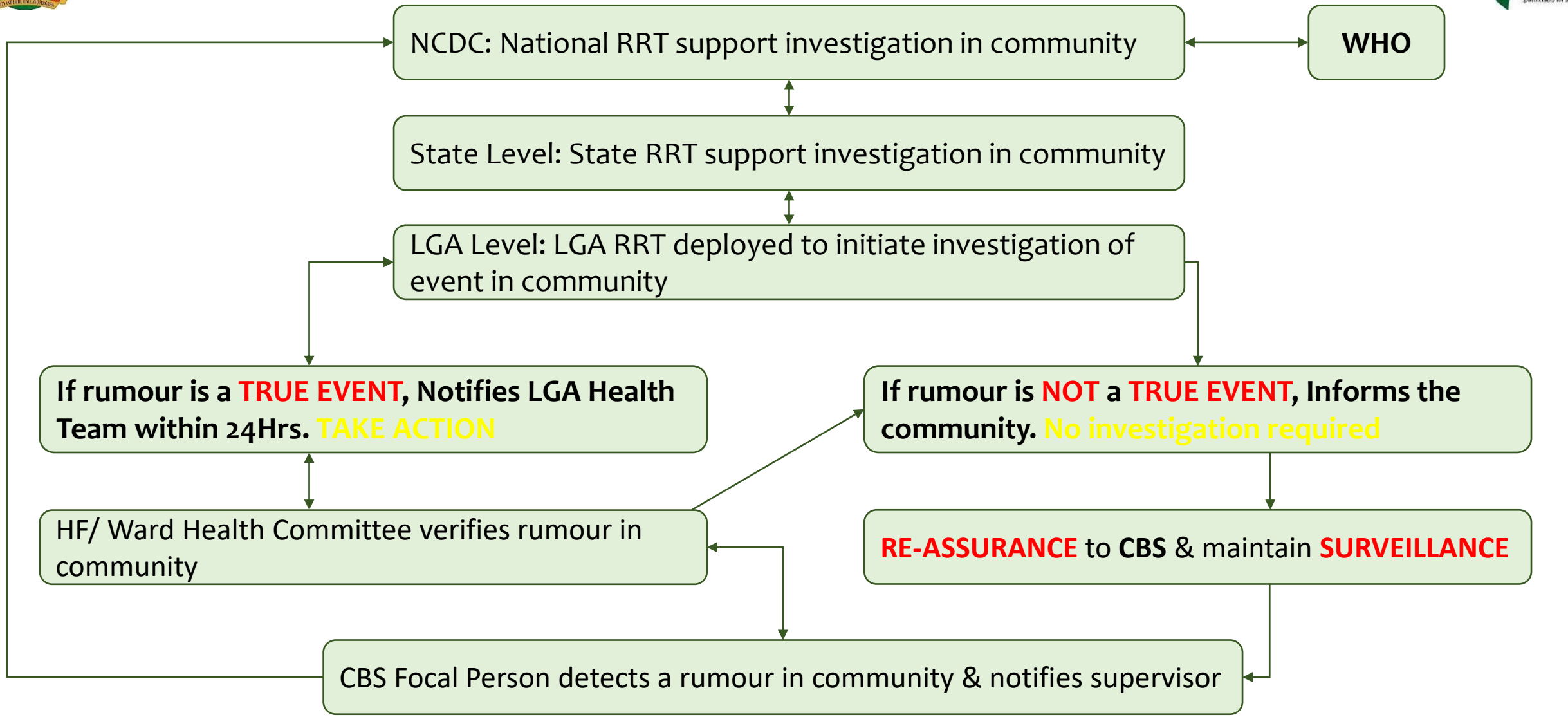
Health facility (HF)/ ward/ village health team with LGA RRT should verify all reports from the CBS Focal person

If it is confirmed as **TRUE**

The HF surveillance focal person captures it on the IDSR Weekly reporting form of the respective HF catchment area

This is then reported to LGA, state, and national authorities weekly and monthly

Verification and Investigation of CBS Events



Community Alert Reporting Form

Community alert reporting form

[Send this form immediately to your supervisor or nearby HF]

Name of person reporting:_____

Designation:_____Community:_____

Contact number:_____

Type of illness/ Event to be reported (please describe):_____

Date reporting (Date: day, month, year)	
What happened?	
When did this happen? (Date: day, month, year)	
Where did this happen? (Location-community, ward/sub-district, district)	
How many have been affected?	
Has anyone died? If yes, how many	
Are there sick or dead animals involved? Is the event ongoing?	
History of travel of affected individuals	
Has the event been triaged? Y/N	
Has the event been verified? Y/N	
Any other relevant information you might have	

Annex 11M: Community Alert Reporting Form *[send this form immediately to your supervisor or nearby health facility]*

Community alert reporting form

[Send this form immediately to your supervisor or nearby health facility]

Name of person reporting:_____

Designation:_____Community_____

Contact number:_____

Type of illness/ Event to be reported (please describe):_____

Date reporting (Date: day, month, year)	
What happened?	
When did this happen? (Date: day, month, year)	
Where did this happen? (Location-community, ward/sub-district, district)	
How many have been affected?	
Has anyone died? If yes, how many	
Are there sick or dead animals involved? Is the event ongoing?	
History of travel of affected individuals	
Has the event been triaged? Y/N	
Has the event been verified? Y/N	
Any other relevant information you might have	

Key Messages

1. Inform all members of the community about the priority diseases/ conditions /events under surveillance in your area



2. Use key signs and symptoms of case definitions that have simple language and are easy to understand

3. Report suspected cases, conditions, or events to the next level

4. Understand the role of community-based surveillance in public health surveillance

SESSION 15.4: WATER, SANITATION AND HYGIENE (WASH)

Learning Objectives

By the end of the session, participants should be able to:

Explain WASH

Understand the components of WASH

Understand the benefits of WASH



Session Overview

1. Overview of water, sanitation and hygiene
2. Components of water, sanitation and hygiene
3. Situational analysis
4. Importance and Benefits of water, sanitation and hygiene
5. Minimum WASH requirements
6. Key Takeaways

Exercise 1

What do you understand by WASH?

Overview Of Water, Sanitation And Hygiene (WASH)



WASH stands for Water, Sanitation and Hygiene. It describes their importance in the health and well-being of individuals and communities. Water is required for domestic purposes, proper sanitation and hygiene.



Water: Clean water is a colourless, transparent, odourless and tasteless liquid fit for consumption. It is a basic necessity of life.



Sanitation: The process of keeping places free from open defecation and urination, wastewater, garbage and harmful materials

Overview Of WASH Cont..

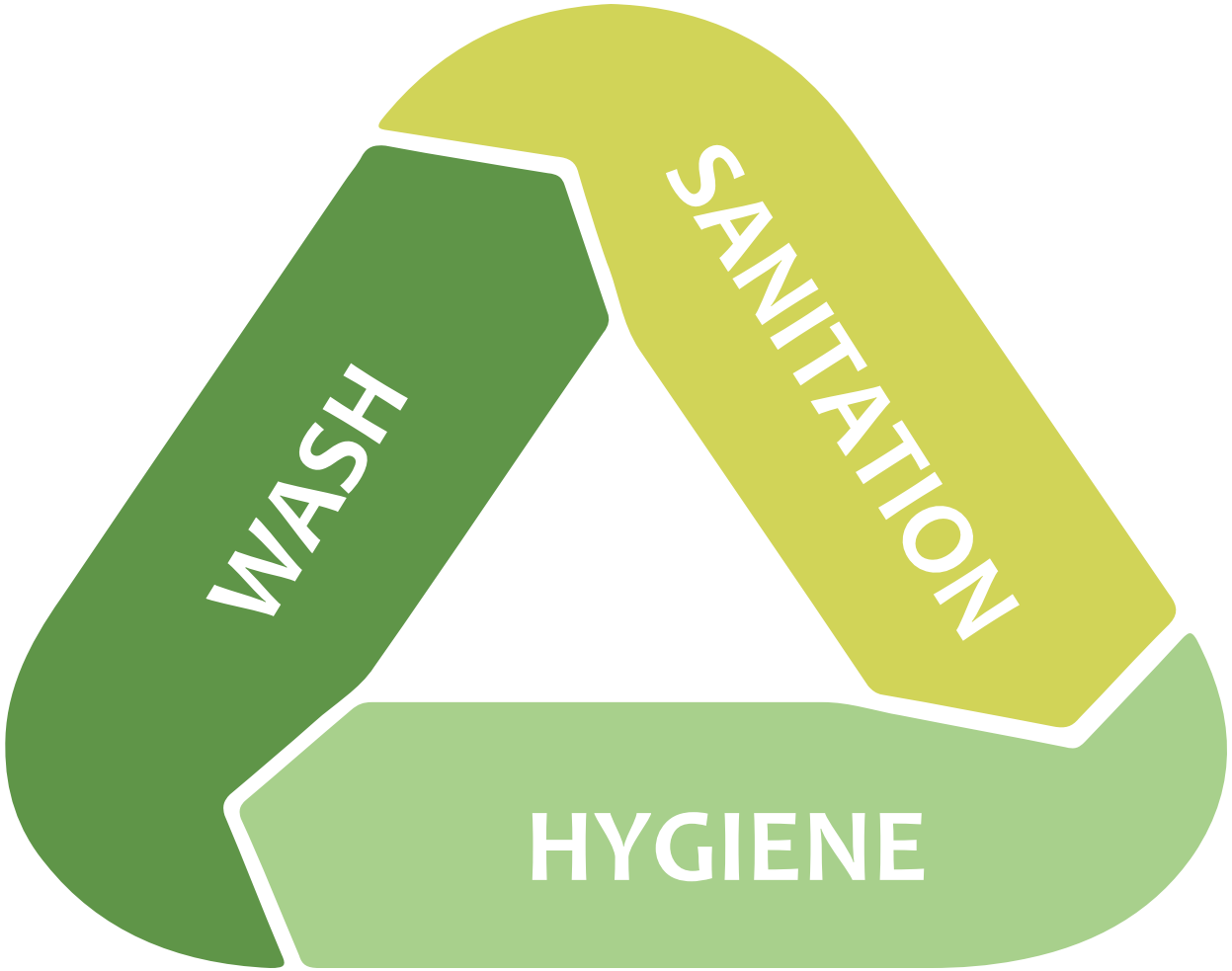


Hygiene: The practice of keeping oneself and the environment clean in order to maintain health and prevent disease



Water, Sanitation and Hygiene are related such that the presence or absence of one affects the other. For example, without toilets, water sources become polluted; without clean water, basic hygiene practices are not possible.

Components of WASH



Situation Analysis

Globally:

- 2.2 billion people still do not have access to safe drinking water
- Every day, over 1000 children die from diseases linked to unsafe water, sanitation and hygiene
- 16.6 million women give birth in health centers with inadequate water, sanitation and hygiene – putting them at risk of infection, disease and death
- 2.3 billion people still don't have basic hand washing facilities with soap and water at home

Situation Analysis Cont..

Nigeria:

- The overall status of the WASH sector in Nigeria is poor
- Only 9% of the population has access to complete basic water, sanitation and hygiene services
- 26% of health facilities do not have toilets/ latrines, 20% of health facilities have basic hand hygiene services and only 4% of health facilities have combined basic water supply, sanitation, and hygiene services
- Only 32% of health facilities have hand hygiene stations with soap and water at points of care, 28% keep a dedicated budget for cleaning and maintaining the WASH facilities
- 33% safely separate their garbage and waste into at least three labeled bins in consultation areas and safely dispose of garbage/waste

Importance of WASH in Health Care Facilities



Ensuring safe, effective and resilient HCFs

- Sustainable WASH is the foundation of effective healthcare facilities
- HCFs without WASH are not HCFs

Healthcare setting without harm (IPC)

No IPC without WASH. WASH domains such as hand hygiene, cleaning and waste management are critical elements for IPC

Contributing to QoC, reducing related morbidities and mortalities, and ensuring a conducive work environment

- Without adequate WASH, impossible to provide QoC services
- For ensuring universal and quality health care including safe, effective, people-centered and dignified healthcare services

Minimum WASH requirements

Facility level	Primary care
Water	Water always available from a source on premises
Hand hygiene	Hand hygiene facilities always available at the point of care/toilets (alcohol-based hand rub and/or water, soap and towels)
Water	▪ Minimum two toilets, one for patients and one for staff. Equipped with menstrual hygiene products ▪ Waste management including waste bins, storage and treatment
Other infrastructure	▪ Space for cohorting/isolation ▪ Adequate natural ventilation ▪ Space for decontamination of reusable medical devices ▪ Sufficient and appropriate IPC supplies (i.e personal protective equipment, mops, detergents etc).

Benefits of WASH



Disease Prevention

WASH practices, such as clean water supply and proper sanitation, help prevent the spread of waterborne diseases

Improved health outcome

Access to clean water and sanitation facilities enhances overall health, contributing to a decrease in water related illnesses and promoting better community well-being.

Maternal and child health

Proper WASH services contribute to safer childbirth and reduced child mortality rates by minimizing the risk of infections and complications related to unhygienic conditions

Community resilience

WASH in primary health care builds community resilience against health crises, ensuring a healthier population that is better equipped to handle health challenges

Cost-saving

By preventing waterborne diseases, WASH measures reduce the economic burden on primary healthcare systems, leading to cost savings in healthcare expenditures

WASH-related diseases and symptoms



Diarrhoea:
Watery stool



Cholera:
Stooling and vomiting



Typhoid:
Fever, headache, stomach pain





Dysentery:
Watery and bloody stool



Eye infection:
Red, itchy eye, pus



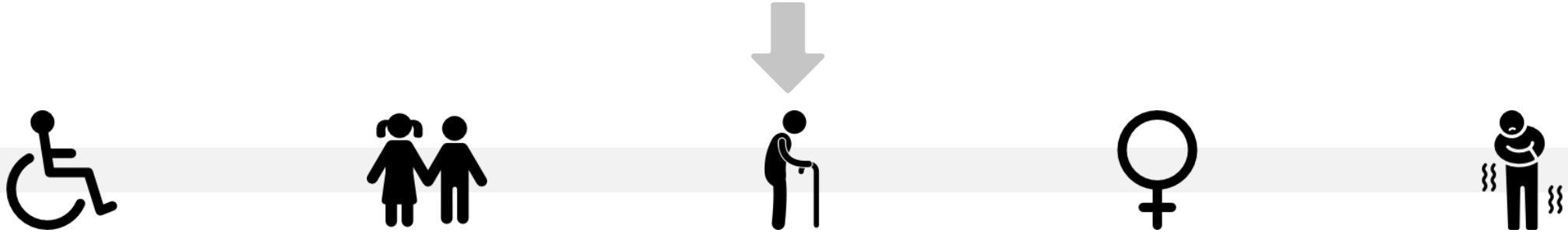
Hepatitis A:
Fever, yellow eyes, itchy skin



Poliomyelitis:
Fever and paralysis of the lower limbs

Special Considerations for WASH

WASH interventions should be safe, user-friendly, people-centred and provide equitable services.



- People with disabilities e.g. visually impaired
- Children, older persons, menstruating, pregnant, and perinatal women
- Public health emergencies (Covid-19, Ebola)

Key Messages

1

Water:
Clean water is a colourless, transparent, odourless, and tasteless liquid fit for consumption.



2

Sanitation:
is the process of keeping places free from open defecation and urination, wastewater, garbage and harmful materials.

3

Hygiene:
is the practice of keeping oneself and the environment clean in order to maintain health and prevent disease

4

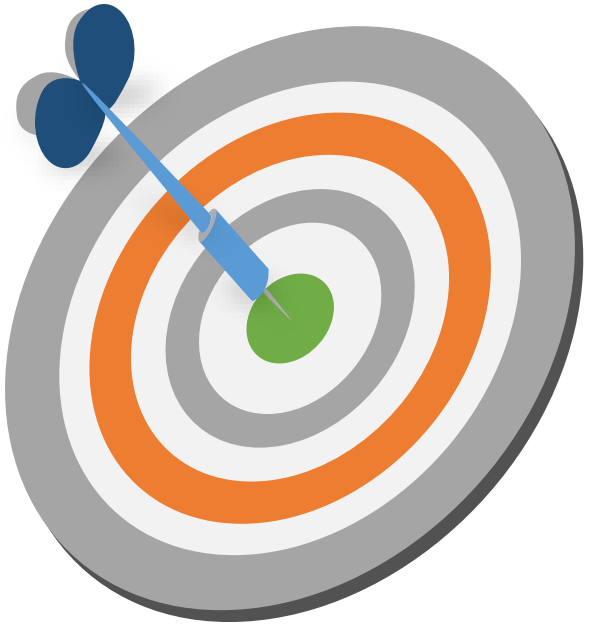
Benefits of WASH are:

- Disease prevention
- Improved health outcomes; and
- Cost saving.

SECTION 15.4.1: WATER

Learning Objectives

At the end of the session, participants should be able to:



1. Identify water sources
2. Identify recommended water sources for PHC
3. Select appropriate water sources
4. Understand effects of inadequate water supply
5. Conduct water purification

Session Overview

1. Water Sources
2. Recommended water sources for PHC
3. Water Minimum Requirements
4. Effects of an inadequate water supply
5. Drinking water
6. Water purification
7. Key Messages

Water Sources

Primary Healthcare Facilities may access water through the following sources:

Groundwater: water is obtained from beneath the surface in rock and soil, e.g. Boreholes, Wells, etc.

Surface water: water is collected on the surface of the earth. They include lakes, rivers, dams, ponds or wetlands

Rainwater: This is an alternate source that can ensure the availability of water in HCFs through the Rainwater Harvesting System(RHS), especially in areas with water scarcity or intermittent water supply



Recommended Water Sources for PHC

- Piped supply inside the building
- Piped supply outside the building
- Tube well/Borehole
- Protected dug well
- Protected spring
- Rainwater harvesting



Minimum Water Requirements

Water should be available for:

- drinking
- personal hygiene including hand washing and bathing
- cleaning
- medical activities
- cooking
- laundry

Water must be **on-site** from an **improved** source and available at all points of care

Water should be **safely treated** and **reliable**

Water must be of sufficient **quantity** to meet the facility's needs for 2 days



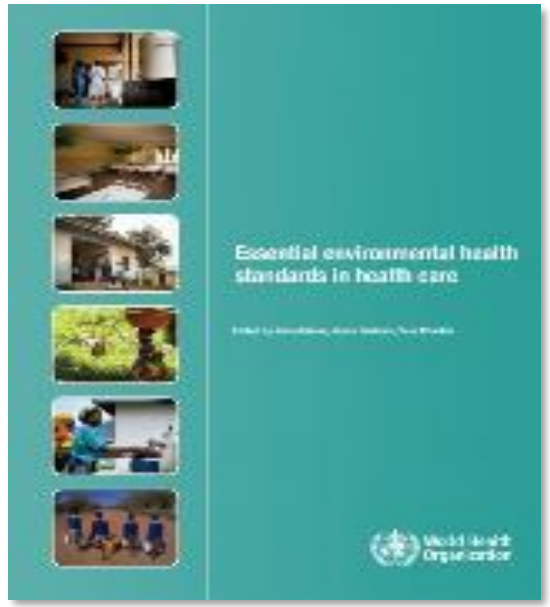
SDG 6 calls for safely managed water and sanitation for all people, in all settings including in healthcare facilities. Read more about UN-coordinated efforts on SDG 6 at UN Water (https://www.unwater.org/)



For global monitoring, WHO/UNICEF have defined core questions and indicators for monitoring WASH in healthcare

Minimum Water Quantities for Healthcare Facilities

Outpatients	5 litres/consultation
Inpatients	40–60 litres/patient/day
Maternity	100 litres/ intervention
Dry or supplementary feeding centre	0.5–5 litres/ consultation
Wet supplementary feeding centre	15 litres/ consultation
Inpatient therapeutic feeding centre	30 litres/ patient/day
Cholera treatment centre	60 litres/ patient/ day
Severe acute respiratory diseases isolation centre	100 litres/ patient/ day



"Sufficient" water –
Enough to meet the needs of the facility for 48 hours

Effects of an Inadequate Water Supply

- **No/ insufficient drinking water**
  - Staff & patient dehydration
  - Inability to take medicines
- **Contaminated water**
  - Diarrhoea
  - Waterborne disease outbreaks (e.g. Cholera)
- **Insufficient water for hand hygiene**
  - Spread of infections; risks to patient and staff safety, inability to control outbreaks
- **Insufficient water for cleaning, showers, toilets**
  - Spread of faecal contamination, antimicrobial-resistant infections
  - Visually dirty, smells, decrease in care seeking and trust in health care, decrease in staff satisfaction and motivation



Drinking Water



Safe drinking water must be present and accessible for staff, patients (including those with disabilities), and caregivers, at all times and locations/wards

Safe:

- no fecal contamination (0 CFU E. Coli/100 ml)
- appropriate chlorine residual (0.2mg/l or 0.5mg/l in emergencies) or not turbid (5 NTU or ideally less)

Safely stored:

- clean bucket/ tank with cover and tap.
- regularly cleaned & disinfected

Accessible:

- clear signs
- pathway to drinking water station clear

Water Purification



The purpose is to reduce or remove all contaminants that are present in the water and to improve water quality so that it is completely safe to drink.



Effective treatment would ensure the removal of all disease-causing agents to reduce the possibility of an outbreak of waterborne disease



Methods of water purification:

- Boiling
- Filtration
- Chlorination

Exercise 2

How much water does this facility need in one week?

Background information - this primary care facility:

- Is open **7 days** a week
- **10 women** give birth every week
- Of these, on average, **two women** spend the night and the rest return home after a few hours
- Treats **40 outpatients a week** (average)
- Holds a vaccination clinic once a week which **50 children** attend



https://www.who.int/water_sanitation_health/publications/ehs_hc/en/

Answer

- 10 births x 100 litres /birth = **1,000 L**
- 2 inpatients x 50 litres /patient = **100 L**
- 40 outpatients x 5 L/patient = **200 L**
- 50 children x 5 L/patient = **250 L**
- Holds a vaccination clinic once a week which **50 children** attend
- **Weekly total = 1,550L**



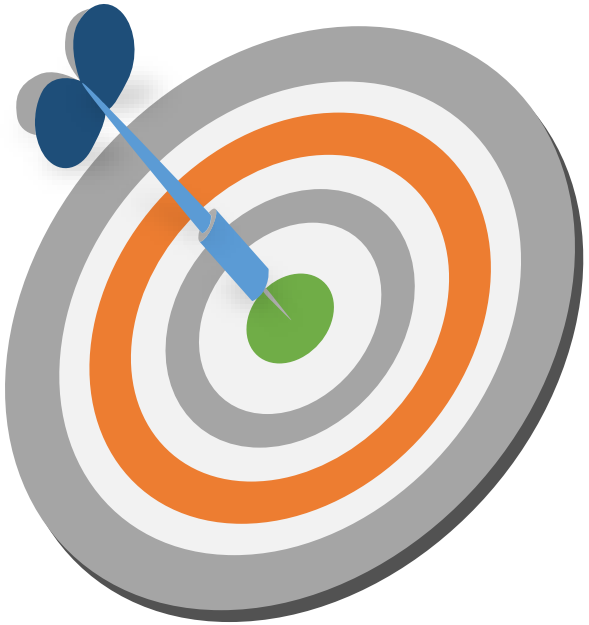
Key Messages

1		Water is fundamental for providing safe and clean care and for respecting the dignity and rights of staff, patients and caregivers
2		Water quantity needs depend on the types of health services provided and the number of patients and their caregivers

SECTION 15.4.2: SANITATION

Learning Objectives

By the end of the session, participants should be able to:



1. Have a good understanding of sanitary management and facilities
2. Understand minimum sanitary requirements
3. Understand Health hazards of inadequate sanitation
4. Maintenance of hygiene

Session Overview

1. Sanitation
2. Minimum sanitation requirements
3. Health hazards of inadequate sanitation
4. Accessing sanitation services
5. Maintenance and hygiene for toilets
6. Practical demonstration of Hand Hygiene Technique
7. Key Messages

Sanitation



Sanitary management of excreta in healthcare facilities is important to ensure fecal pathogens do not contaminate the environment

Sanitary facilities generally fall in any of the following categories:



Pour flush



Water closet



Ventilated improved pit (VIP) toilets

Minimum Sanitation Requirements

Toilets (latrines) should:

- Be **onsite, usable & accessible**
- Offer **privacy** & be **clean**
- Be clearly separated for **male and female** or provide privacy
- At least one should meet the needs of people **with limited mobility** and **menstrual hygiene management needs**
- Functioning **hand washing** station within 5m



Gender-segregated toilet with handwashing station

Health Hazards of Inadequate Sanitation

Number of toilets	**1 per 20 users**	Laboratory cultures; waste from isolation wards; tissues (swabs), materials, or equipment that have been in contact with infected patients; excreta
	Outpatients	▪ **Minimum**: 2 (1 for staff and 1 for patients) ▪ **Ideally:** 4 (male/ female staff & male/female patients; one should be accessible to those with limited mobility)
Showers	Inpatients	▪ **1 per 40 users** ▪ And shower available in the labour and delivery area
	Labour and delivery area	▪ Shower must be available



Minimum Sanitation Requirements Cont..

Safety

- Toilets should be safe to avoid the spread of harmful agents like microbes, physical and chemical contaminants, or disease-harboring vectors to prevent the transmission of infectious diseases
- Measures should be put in place to control flies and breeding grounds for mosquitoes, furthermore, floors should be dry to avoid falling

Reliability

- Toilets should be functional, clean, and in good state of use at all times with the provision of consumables (water, toilet paper, soap, etc.)

Accessibility

- Toilets must be accessible and located not more than 30 meters from intending users

Why is Safe Sanitation Important?



- Human faeces is the **most common source of microbial pathogens** (germs)
- One gram of human faeces has over **1,000,000,000 pathogens**
- The faeces of those seeking treatment in healthcare facilities could be particularly infectious
- **Cholera** easily spreads from faeces of infected individuals
- A fundamental human right that promotes dignity, wellbeing and health seeking behaviors

Health Hazards of Inadequate Sanitation

 **Diarrhoea**	Leading cause of disease and death for children > 5 years
 **Neglected tropical diseases**	Helminth infections, trachoma, schistosomiasis
 **Vector-borne diseases**	Lymphatic filariasis, West Nile Virus, malaria, Zika
 **Spread of antimicrobial resistance**	Through diarrhoea + use of antimicrobials, and in environment when faecal waste inadequately treated
 **Patient and health worker wellbeing, dignity and safety**	Compromised with inadequate sanitation

Special Considerations for WASH



Children



Older people



Women in labour



People with disability/ disabilities

Common problems include:

- Squat toilets with no handrails
- Insufficient space in toilets to move around
- Pathways to toilets (and water facilities) difficult to use, particularly for people with limited mobility such as wheelchair users
- Lack of privacy and safety for women and girls

Overview Of Water, Sanitation And Hygiene (WASH)



There should be a visibly displayed poster to remind users of toilet to flush, cover toilet pits and leave the toilet clean after use to avoid flies' infestation and odour



Toilets should be cleaned using standard cleaning materials such as toilet brushes, detergents and approved disinfectants



Anal cleansing using water is recommended, however, where not available, anal cleansing materials such as toilet paper should be provided along with a bin for sanitary disposal



There should be a cleaning schedule that shows the frequency and duration along with a supervisor's verification



Periodic checks on effective functioning of toilets in the HCF should be carried out to identity and repair any mechanical faults



Adequate lighting and clearing of pathways to prevent exposure of users to hazards

Key Messages

1



Sanitation facilities must be accessible to all users, protect against the spread of infections, and meet the wellbeing needs of patients

2



A clean well functioning toilet is important but not enough – faecal waste should be safely collected, transported, treated and disposed of

3



Regular cleaning and maintenance of toilet facilities is a low-cost, high-impact measure to manage risks from fecal waste

SESSION 15.4.3: HAND HYGIENE

Learning Objectives

By the end of the session, participants should be able to:

Understand basic hand hygiene services



Practically demonstrate Handwashing





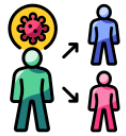
Session Overview

1. Hand Hygiene
2. Why perform Hand Hygiene?
3. Basic Hygiene Services
4. Hand hygiene in patient handling for Health Workers
5. Types of Hand Hygiene
6. Practical demonstration of Hand Hygiene Technique

Hand Hygiene



Effective hand hygiene in healthcare facilities has been the cornerstone of infection prevention and control



Healthcare workers and visitors to HCFs can spread pathogens through their hands



Healthcare facilities should provide adequate information and education on hand hygiene practices, in addition to the provision of hand-washing facilities with soap and water at all designated locations



What do we know about the problem and solution?

Healthcare-associated infections



10%

1 in 10 patients get an infection while receiving care

Preventing infections



70%

Effective IPC reduces healthcare-associated infections by up to 70%



Problem: '… even in resource-rich settings, hand hygiene compliance can be as low as 0%, with levels most frequently below 40%'



Solution: Effective hand hygiene improvement strategies can prevent up to 50% of avoidable infections in health care and generate economic savings



Why Perform Hand Hygiene?



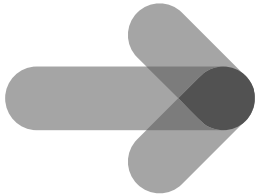
Contaminated hands (bare and gloved) are the most common way to transfer contaminated material to mucus membranes (eyes, nose, mouth)

BARE HANDS



GLOVED HANDS

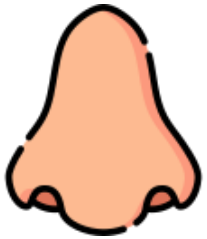




EYES



NOSE



MOUTH



Basic Hygiene Services/Facilities



A hand hygiene facility is any device that enables staff and patients to clean their hands effectively under running water such as a sink with a tap, water tank with a tap, bucket with a tap (Veronica bucket), or other similar device.



Alcohol-based hand rub dispensers are also hand hygiene facilities, whether they are fixed or portable

Basic Hygiene Services/Facilities Cont..

To provide basic hygiene services in HCFs the following conditions must be satisfied:

1. All the hygiene facilities must be functional.

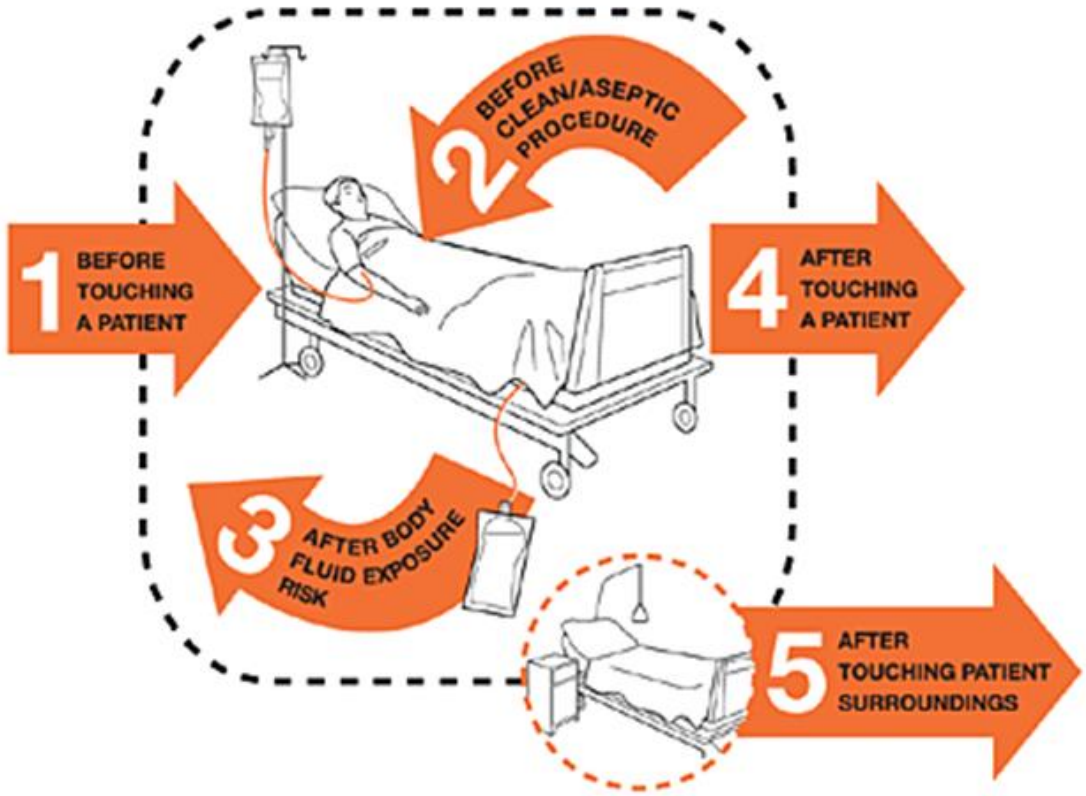
2. There must be functional hand hygiene facilities at points of care (e.g. consultation/examination rooms) with soap and water or either alcohol-based hand rub however, when alcohol-based hand rub is used, healthcare staff may carry a dispenser around between points of care.

3. **Accessibility:** There must be functional hand hygiene facilities in the toilets or (5meters of toilets and must have soap and water available always.
Alcohol-based rub is not considered adequate for hand hygiene at the toilet as it does not remove faecal matter from the hands.

4. Hand hygiene facilities should be located at every strategic point in the facility e.g. entrance gate, reception, walkways, etc.

Hand Hygiene in Patient Handling for Health Workers

- Before client contact
- Before clean procedure/aseptic task
- After bodily fluid exposure task
- After client contact
- After contact with the client's surroundings



Hand Hygiene for Non-healthcare Workers in Healthcare Facilities

- Before and after caring for the sick in any form
- Before, during, and after preparing, eating food, and feeding a baby
- After changing diapers or cleaning up a child who has used the toilet
- After using the toilet

Hand Hygiene for Non-healthcare Workers in Healthcare Facilities

- Before and After using your facemask
- After blowing your nose, coughing, or sneezing
- After touching and disposing of waste
- After touching items or surfaces that may be frequently touched by other people, like doors, tables, or electronic cashier register/screen

Brainstorming



Who should perform hand washing?

Give examples……

Answer

- **Everybody, Everyday!**
- **Any healthcare worker, caregiver, or person involved in direct or indirect client care needs to be concerned about hand hygiene and should be able to perform it correctly and at the right time every day**

How should hand washing be done?





Clean hands by washing with soap and water, especially when visibly dirty or visibly soiled with blood or other body fluids or after using the toilet



Where soap and/or running water is not available, clean hands by rubbing with an alcohol-based hand sanitizer



If exposure to potential spore-forming pathogens is strongly suspected or proven, hand washing with soap and water is the preferred means

Types of Hand Hygiene



Washing hands with soap and water



Rubbing hands with alcohol-based hand rub

Hand Hygiene Technique Soap and Water

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



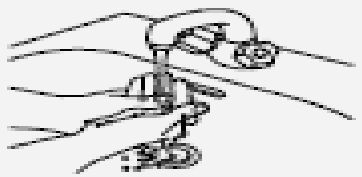
Rotational rubbing of left thumb clasped in right palm and vice versa;

7



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

8



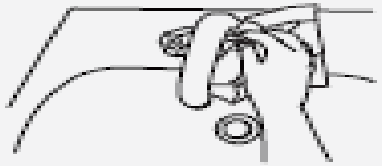
Rinse hands with water;

9



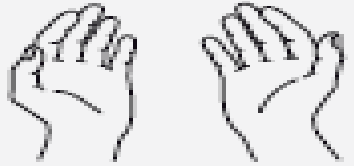
Dry hands thoroughly with a single use towel;

10



Use towel to turn off faucet;

11



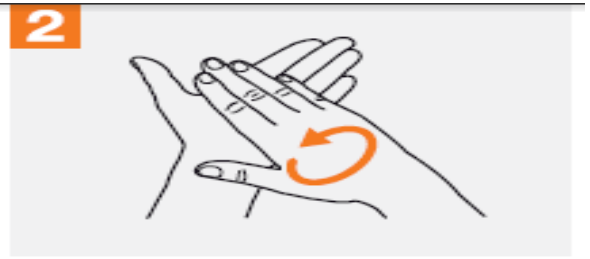
Your hands are now safe.

Ensure both wrists are also thoroughly cleaned

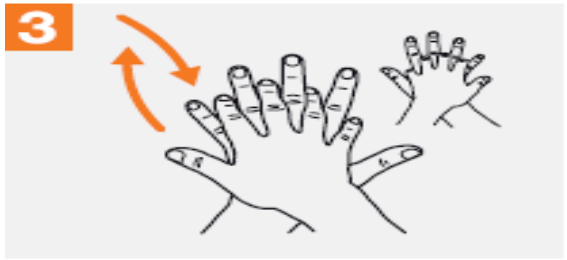
Hand Hygiene Technique: Alcohol-based Hand Rub



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



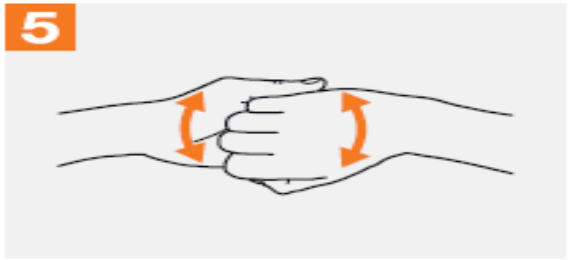
Rub hands palm to palm;



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



Palm to palm with fingers interlaced;



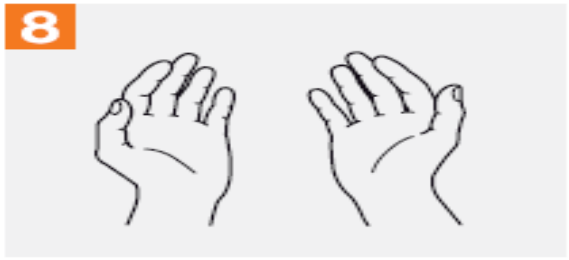
Backs of fingers to opposing palms with fingers interlocked;



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



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



Once dry, your hands are safe.

Ensure both wrists are also thoroughly cleaned

Hand Hygiene Technique: Alcohol-based Hand Rub

A Participants to demonstrate hand hygiene using soap and water

B Participants to demonstrate hand hygiene using Alcohol-based hand rub

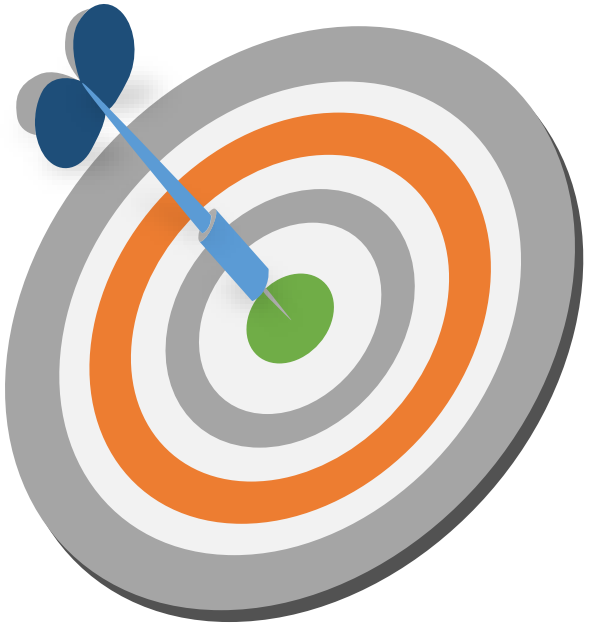
KEY MESSAGES

1		Effective hand hygiene in healthcare facilities has been the cornerstone of infection prevention and control
2		There must be functional hand hygiene facilities at points of care (e.g. consultation/examination rooms) with soap and water or either alcohol-based hand rub
3		All healthcare workers should be able to perform hand hygiene using soap and water or Alcohol-based hand rub.

SESSION 15.4.4: BASIC WASTE MANAGEMENT

Learning Objectives

By the end of the session, participants should be able to:



1. Define healthcare waste
2. Classify the types of healthcare waste
3. Understand the Key method in healthcare waste management
4. Understand the risks and implications of healthcare waste

Session Overview

1. Healthcare waste and its categories
2. Benefits and implications of Healthcare waste
3. Environmental implication of healthcare waste
4. Method in healthcare waste management
5. Classification, segregation, treatment and disposal of waste

What is wrong in this picture?



HealthCare Waste (HCW)



WHO defines HealthCare Waste (HCW) as the total waste stream from a healthcare or research facility that includes both potential risk waste and non-risk waste materials.



It is also defined as any waste that is generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biological.

Health Hazards of Inadequate Sanitation

Waste category	Description	Examples
 **Infectious waste**	Waste suspected to contain pathogens	Laboratory cultures; waste from isolation wards; tissues (swabs), materials, or equipment that have been in contact with infected patients; excreta
 **Pathological waste**	Human tissues or fluids	Body parts; blood and other body fluids; fetuses
 **Sharps**	Sharp waste	Needles; infusion sets; scalpels; knives; blades; broken glass.
 **Pharmaceutical waste**	Waste containing pharmaceuticals	Pharmaceuticals that are expired or no longer needed; items contaminated by or containing Pharmaceuticals (boxes, bottles)

Benefits of HCW Management

- Controls disease-causing agents in HCF
- Creating a favorable environment for Healthcare Workers
- Controls Nosocomial diseases and Zoonoses in HCF
- Reduction of cycle of infections or epidemics
- Improves operational safety in Healthcare facilities

Implications Of Healthcare Waste

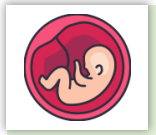
Health implications to the healthcare providers and patients


Needle-stick injuries (accidental or intentional as in re-cap, reuse or wrong technique)


Cuts from other sharps not properly disposed


Blast injury


Exposure to radioactive materials


Abnormalities of the fetuses in pregnant women

Implications Of Healthcare Waste contd…

Infections

Transmission of infections e.g. hepatitis A, B, C, HIV/AIDS

Enteric infections transmitted by flies feeding on wastes e.g. cholera, dysentery



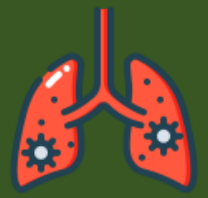
Skin and blood infections resulting from direct contact with waste and infected wounds

Zoonosis resulting from bites by wild or stray animals feeding on wastes

Eye and Respiratory infections resulting from exposure to infected dust, especially during landfill operations

Implications Cont..

Chronic diseases



Incinerator operators are especially at risk of chronic respiratory diseases, including cancers resulting from exposure to dust and hazardous compounds

Accidents



- Wounds, most often infected, resulting from contact with sharp items
- Poisoning and chemical burns resulting from contact with small amounts of hazardous chemical waste mixed with general wastes
- Burns and other injuries resulting from occupational accidents at waste disposal sites, or methane gas explosion at landfill sites

Environmental Implications

- Injury from improperly disposed sharps
- Environmental pollution or degradation, e.g. air, water
- Exposure to radioactive waste
- Injuries from blasts
- Hazards of scavenging
- Toxic waste effects
- Fires
- Public nuisance (offensive smells, unsightly debris)

Method In HCW Management

Plan	Have a HCW Management Plan
Waste minimization	Avoid unnecessary waste e.g. use oral drugs instead of injections as much as feasible
Segregation	Implement a system of separating sharps, infectious and general waste
Access	Waste Segregation Materials
Safety	Make and use personal protective equipment

Waste Segregation

- At least three clearly labelled and colour-coded bins should be in place to separate 1: Non-infectious/ general waste (**Black**) 2: infectious waste (**Yellow**) and 3:highly infectious waste (**Red**).
- For other categories of waste e.g. pharmaceutical, an additional colour coded bin (**brown**) with relevant signage is recommended.
- Bins should not contain waste other than that corresponding to its label, and should not be more than three quarters (75%) full before disposal.
- Bins should be appropriate to the type of waste they are to contain; sharps containers should be puncture-proof and others should be leak-proof. Bins for all waste should have tight fitting lids and corresponding bin liners.

Waste Segregation Cont..



- Can significantly reduce the amount of waste that requires treatment
- Segregate at source where waste is generated

3-bin standard system:	General	Infectious	Sharps

Plastic | **Paper** | Glass

+ additional bins for recycling of general waste



Black container (lined)



Yellow container (lined)



Sharps box (needle cutter)

Generation/ Minimization → Segregation → Collection → Transport → Storage → Treatment → Final disposal

Classification and Colour-coding of Healthcare Wastes

Category	Examples	Colour of bin & liner	Marking
General/non-infectious	Paper, packaging materials, Plastic bottles, food, cartons	Black	No recommended marking
Infectious	Gloves, dressings, blood, body fluids, used specimen containers	Yellow	
Highly infectious or anatomical/ pathological	Laboratory specimens and containers with biological agents, anatomical waste, pathological waste	Red	
Chemical	Formaldehyde, batteries, photographic chemicals, solvents, organic chemicals, inorganic chemicals	Brown	Marking will vary with classification of the chemical
Radioactive	Any solid, liquid, or pathological waste contaminated with radioactive isotopes of any kind	Yellow	 Radioactive symbol

Treatment and Disposal of Waste

Waste should be safely treated and disposed appropriately using any of the following approved methods:



Incineration: municipal solid waste, hazardous waste, and medical waste



Autoclaving: Used medical sharps and sharps containers, Bloody bandages or gauze. Masks or gowns (worn by doctors or patients)



Buried in a lined, protected pit: Contaminated biomaterials



Collected and transported off-site for medical waste treatment: By incineration and Land disposal offsite

Treatment and Disposal Cont..



NOTE: Healthcare Wastes should not be treated in any of the following ways:



Open dumping



Open burning



Any other way that can impact negatively on the environment

Exposed Sharps and Other Wastes





Key Messages

1

Health Care Waste (HCW) is any waste that is generated in the diagnosis, treatment or immunization of human beings or animals



2

Health Care waste is classified into infectious, pathological, sharps and pharmaceutical waste.

3

A major benefit of Health Care Waste management is it controls infections and disease-causing agents in HCF

4

Waste should be safely treated and disposed appropriately using incineration, autoclaving, treatment and burial in pits.

SESSION 15.5: INFECTION PREVENTION AND CONTROL (IPC)

Learning Objectives

1

Understand Infection prevention and control

2

Assess the risk of infection to self, and others, and decide on the appropriate personal protective equipment (PPE) to use.

3

Describe key elements of Transmission-based precautions and key elements of IPC To facilitate the early identification of cases and apply standard precautions.

SESSION 15.5.1: OVERVIEW OF INFECTION PREVENTION CONTROL (IPC)

IPC is everyone's business

All hospital staff

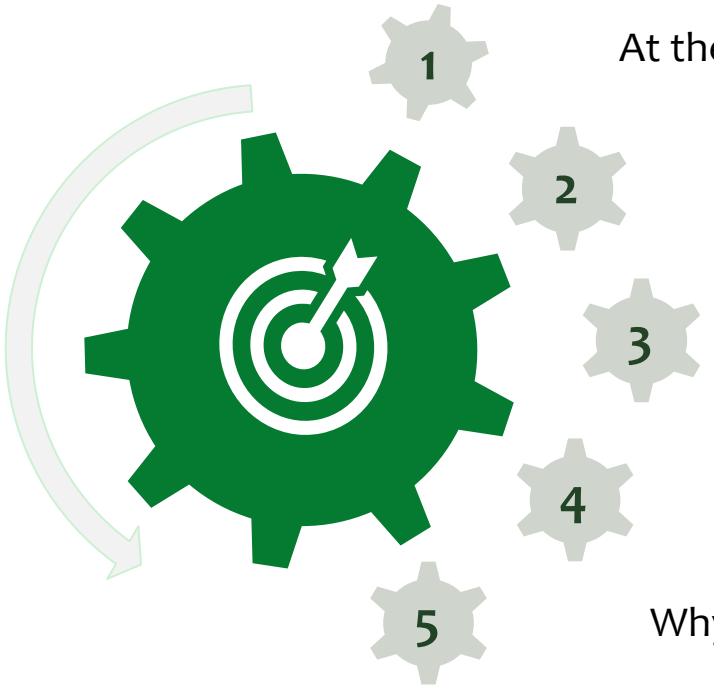
- Clinical staff: doctors, nurses, laboratory and pharmacy
- Cleaners, porters, and environmental service staff








Session Objectives



At the end of this session, participants should understand

- The meaning of Infection Prevention Control
- Importance of IPC
- Why practice IPC in a health facility
- Why practice IPC in a health facility

Goals of Infection Prevention and Control

01 Protect yourself



02 Protect your community



03 Protect your patients



Question

Why practice IPC in the healthcare facility?





Why practice IPC in the healthcare facility?

Why practice IPC in the healthcare facility?



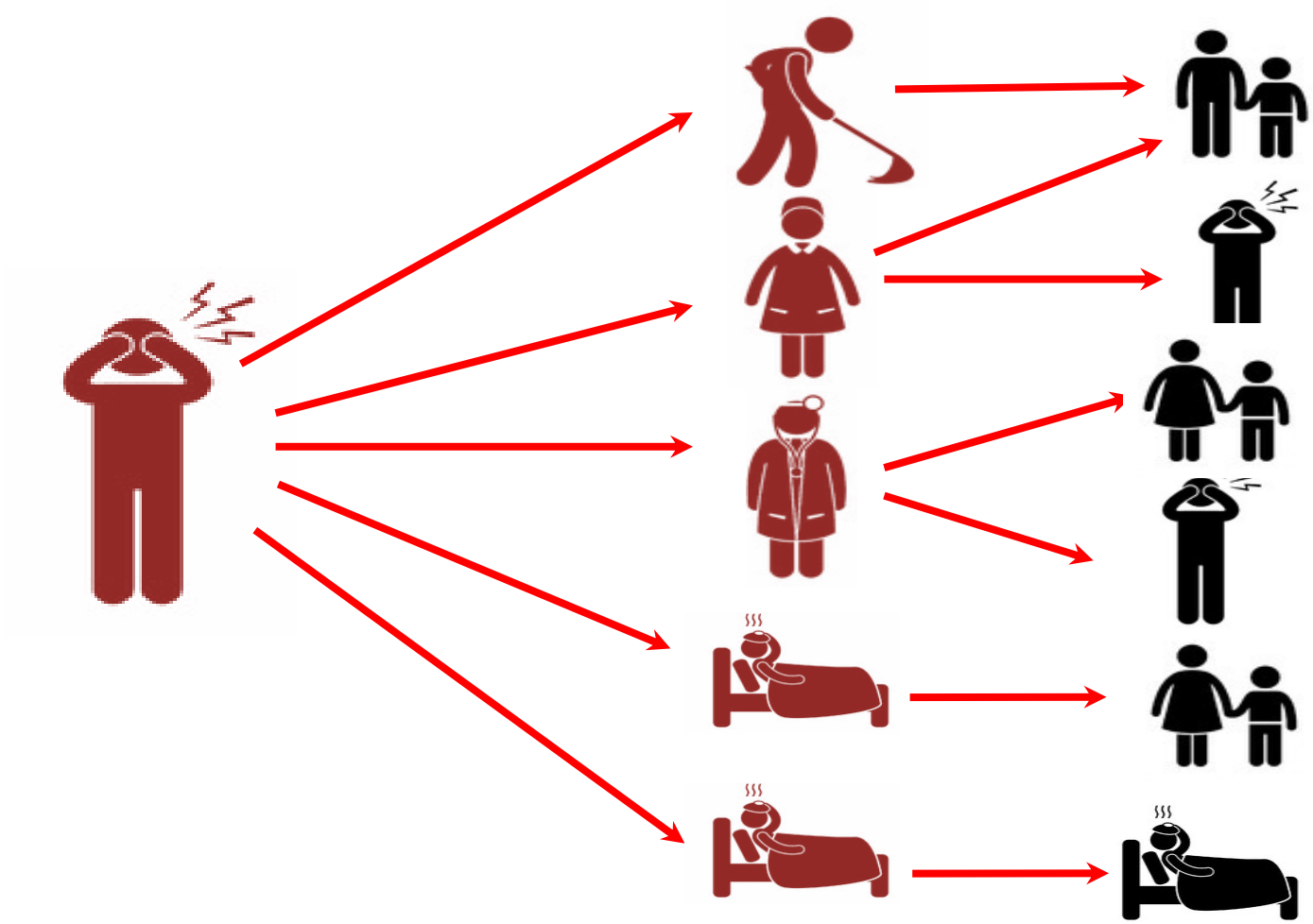
You do not know who has an infection



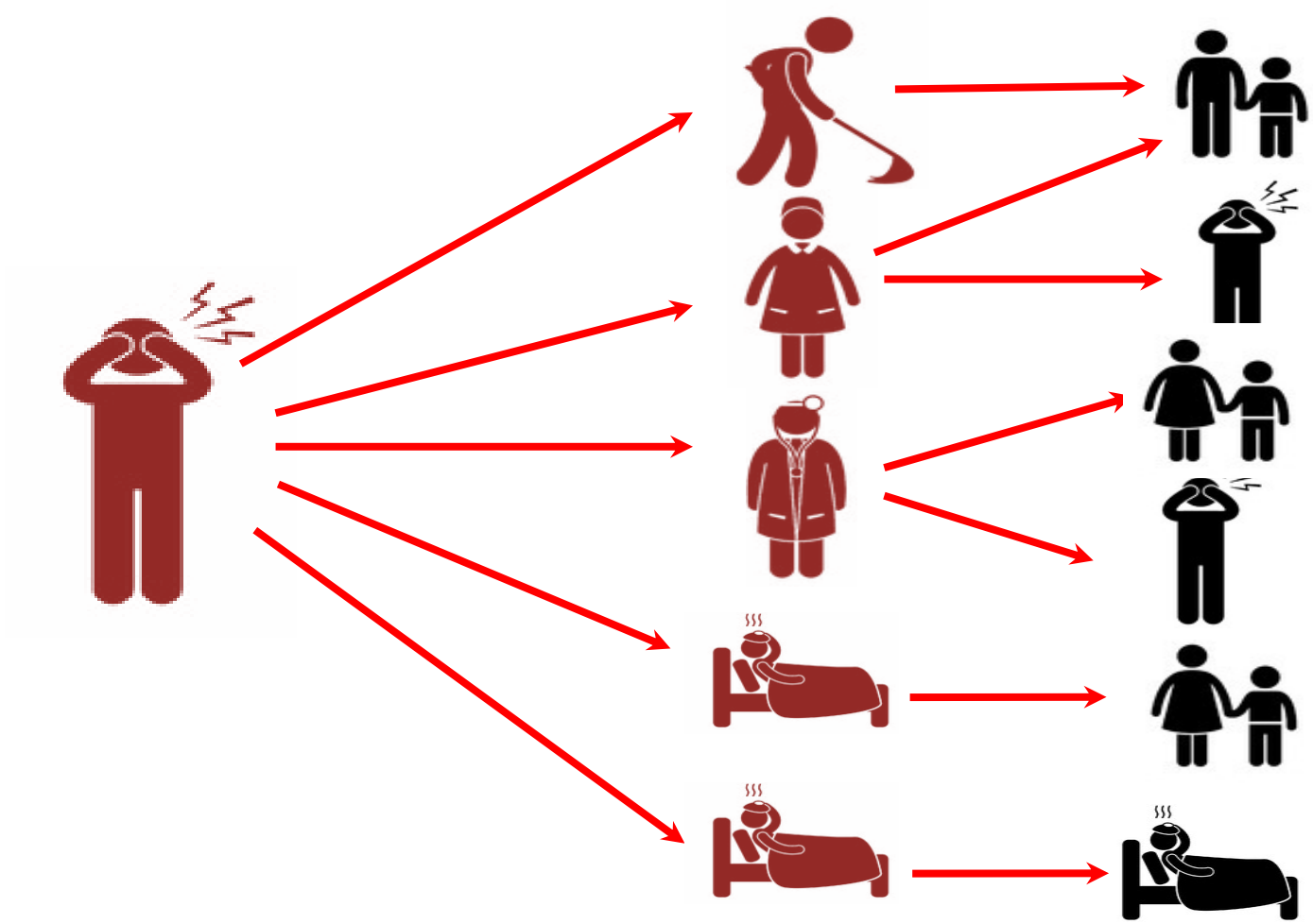
IPC can prevent the spread of pathogens from person to person



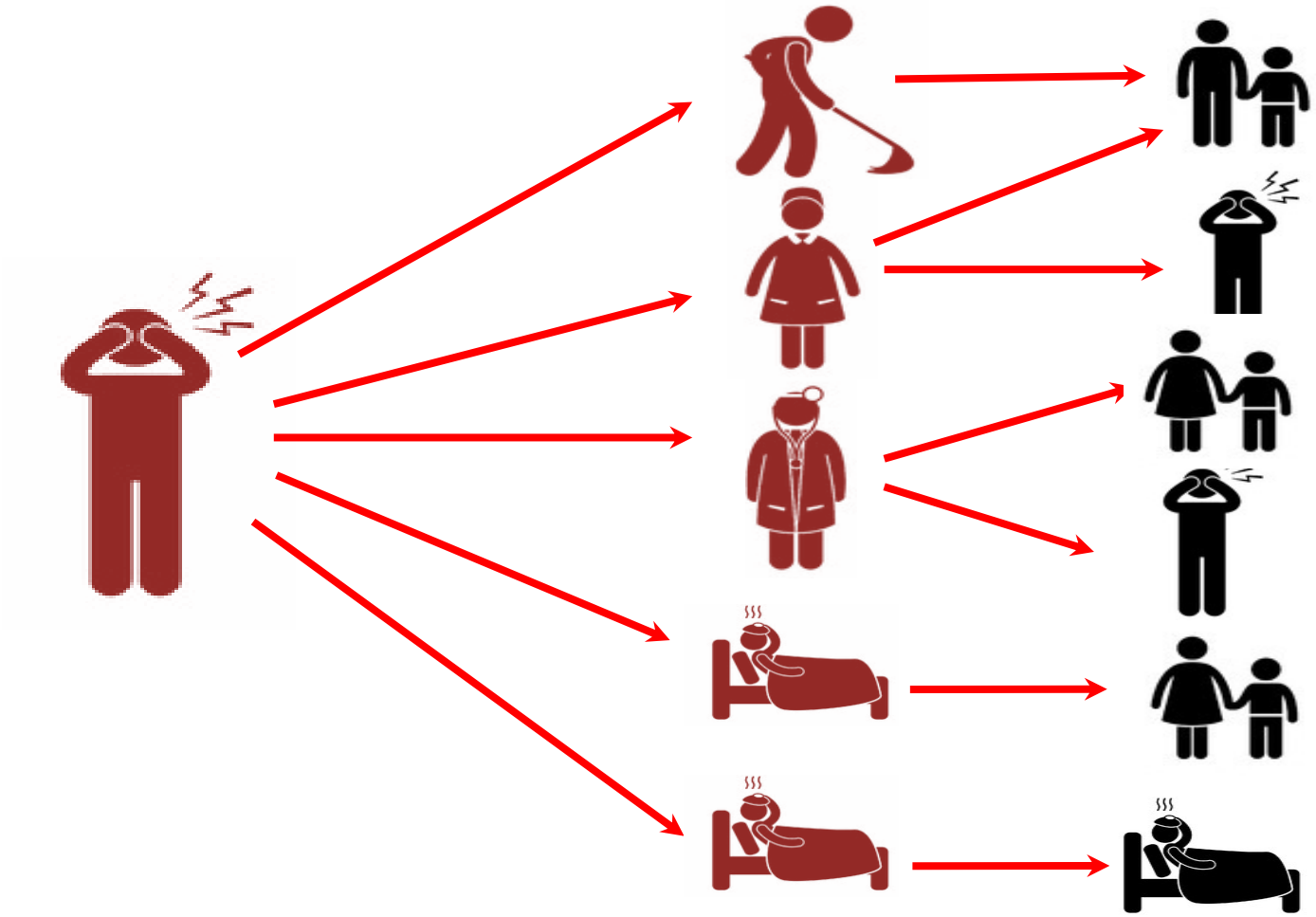
Question: How can One Person make so many people sick?



Question: Who is at Risk of Infection in the Healthcare facility?



Question: Who is at Risk of infection in the Healthcare facility?



Answer: Everyone

Consequences of Healthcare Worker Infections

01 Tragedy for healthcare workers, their families, their communities

02 Healthcare facilities close

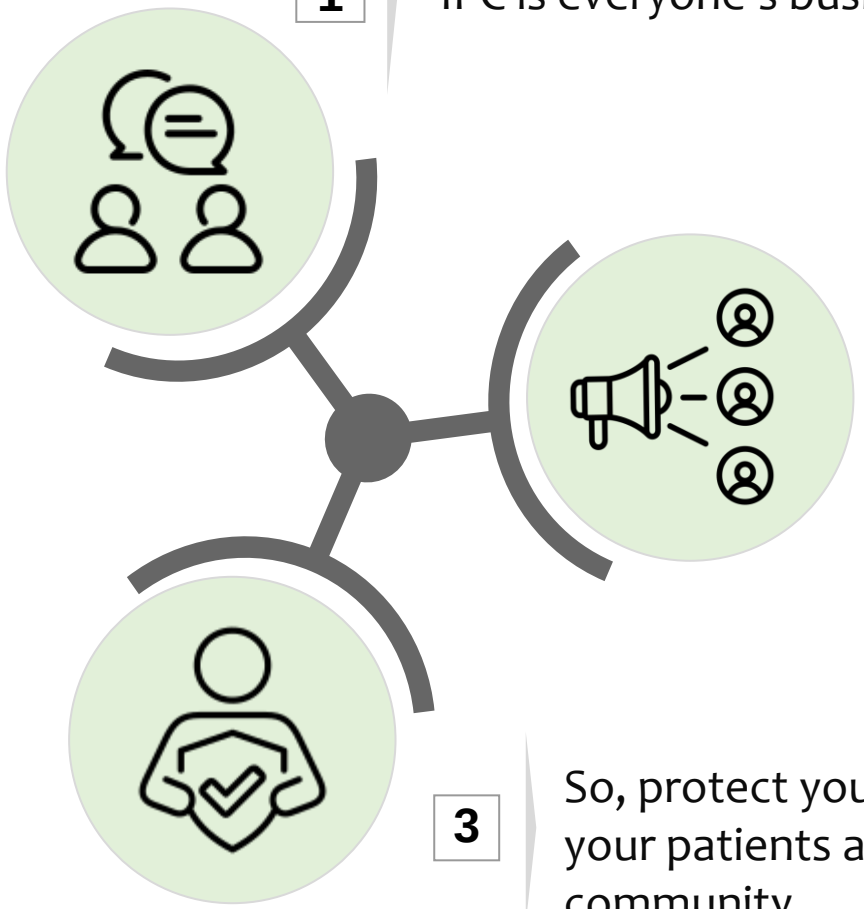
03 Essential services disrupted, e.g. vaccination, maternal and childcare







Key Messages



1. IPC is everyone's business
2. if Infection Prevention Control is given attention it deserves, it will result to tragedy for individuals, families and communities
3. So, protect yourself, protect your patients and protect your community

SESSION 15.5.2: RISK-BASED APPROACH TO THE USE OF PERSONAL PROTECTIVE EQUIPMENT

Session Objective

At the end of this session, participants should

1. Know the risks for infections
2. Factors that increase the risk of infection

What are the Risks for Infection?

01 Contaminated hands





Direct contact with blood/body fluids 02

03 Contaminated clinical equipment





Dirty environment 04

05 Soiled linen





Medical waste 06

07 Sharps





Injection, indwelling devices 08

09 Clients with communicable diseases





Clients colonized/infected with resistant micro-organism 10

What increases Risk?

- Invasiveness of procedure
- Refilling containers
- Duration of exposure
- Sharing Items
- Inadequate facilities



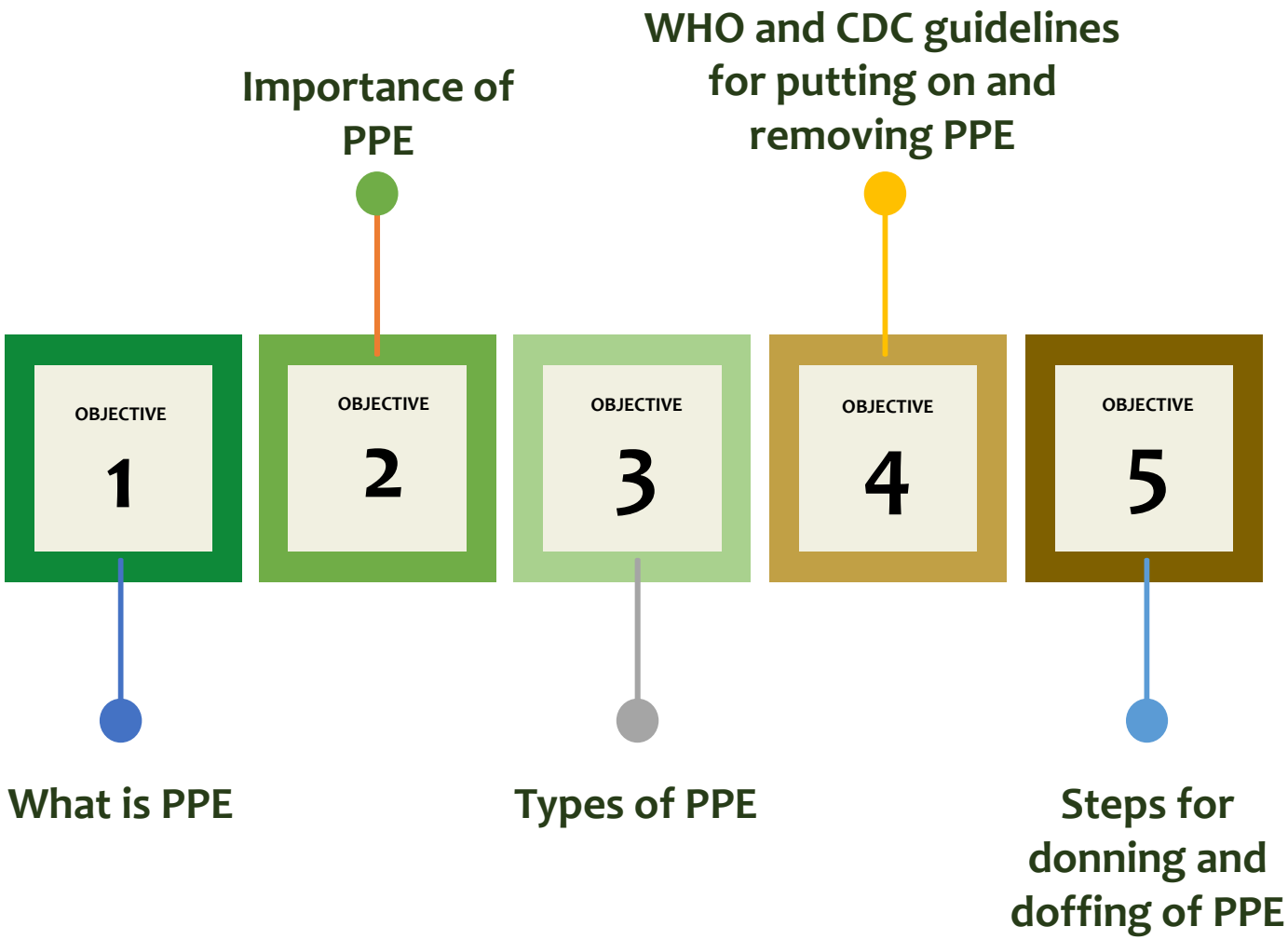
Key Messages

When the risk factors for infections are known, we can be sure that the IPC will be achieved

Reducing the risk factors for infections is key in our health facilities

SESSION 15.5.3: PERSONAL PROTECTIVE EQUIPMENT (PPE)

Session Objectives



What is PPE? (Answer)

- PPE is specialized clothing or equipment worn by health care workers for protection against microorganisms like Ebola, COVID-19, etc.
- PPPE provides barriers to protect your eyes, nose, mouth, skin, and clothing from contact with a patient's body fluids (blood vomit, urine, faeces, or sweat)
- PPE refers to any piece of protective clothing and NOT necessarily to the entire PPE suit that is worn in the isolation area

Importance of PPE

- Protects you and your patients from exposure to germs
- Lowers the risk of transmission between patients, visitors, and everyone who works in the healthcare facility
- Protects parts of your body where microorganisms are most likely to enter

SOURCE: Team analysis
[1]Solina centre for international development and research

Types of PPE Used in Healthcare Delivery/Settings

Gloves



Gowns

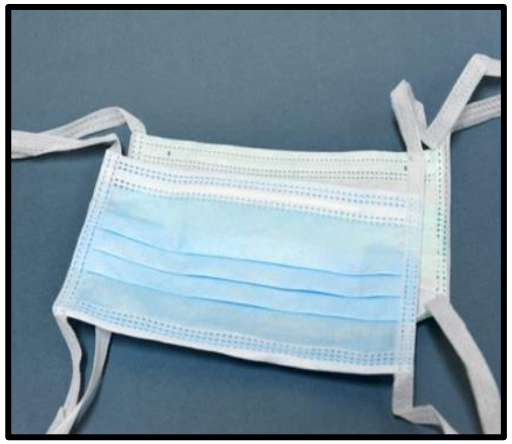




Apron



Face Mask



Respirator



Goggles



Face shields



QUESTION: What does each piece of PPE protect?



PPE component	Body part it protects
Face shield	
Goggles	
Face mask	
Gloves	
Gown	
Apron	

What does each Piece of PPE protect? (Answer)

PPE component	Body part it protects
Face shield	Eyes and face
Goggles	Eyes and face
Face mask	Nose and mouth
Gloves	Hands
Gown	Upper body, skin, and clothes
Apron	Additional protection for upper body, skin, and clothes Use if exposed to a lot of body fluids

WHO and CDC guidelines for Putting On and Removing PPE

- **Steps may differ slightly**
  - All follow the same infection prevention and control principles
  - All are designed to protect mucus membranes and cover as much exposed skin as possible
- Regardless of what PPE is available and putting on/removing order, always put on and remove PPE slowly and carefully to avoid mistakes

Steps for donning and doffing of Personal Protective Equipment (PPE)

When preparing to don (wear) PPE, the following must be put into consideration:

1. Ensure you have all the PPE laid out
2. Always make sure you have the right size for you
3. Plan where to don and doff (different entry and exit)
4. Plan for waste disposal
5. Remember to perform hand hygiene (see session 2.3 below)

Always have a Buddy (Observer) when putting on and removing PPE

A person putting on or removing PPE must be paired with an observer/ buddy



Question: What is the Role of a Buddy?





What is the Role of a Buddy? (Answer)

- **Ensures that PPE is put on and removed safely and correctly**
- **Provides instructions and assistance**
- **Performs visual inspection of each piece of PPE and checks each piece for integrity**
  - No holes or tears in gloves, boots, gown, or suit
- **Looks for gaps and exposed skin**
  - Line of hood or head cover under goggles or mask
  - Goggles over the top of the mask
  - No exposed skin or gaps around mask, goggles, or face shield
  - No gaps between gloves and gown
  - Mask not inside out / upside down

Before putting on PPE

Remove all Accessories

- Rings, watches, bracelets, earrings, and necklaces
- Accessories can tear PPE and affect the integrity of fit



Perform hand hygiene

- Use soap and water, weak (0.05%) chlorine solution, or alcohol-based hand rub
- Always wash your hands first with soap and water if they are visibly soiled



Donning of Gown

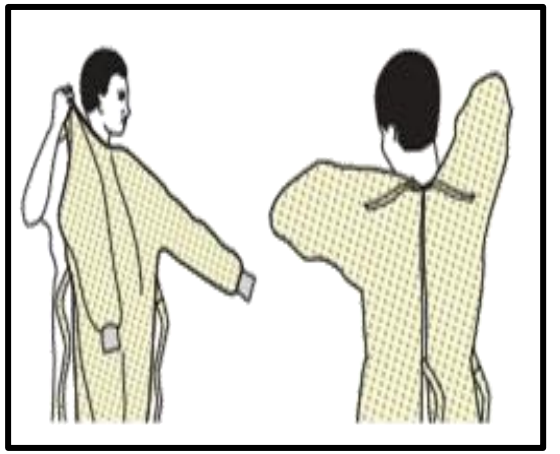
1. Wear a scrub, remove every personal effects on you e.g. bangles/bracelet, wristwatch

2. Put arms in sleeves, pull gown towards shoulders to fully cover torso from neck to knees, arms to wrists and wrap to the back

3. Fasten at the back of the neck and tie around the waist

4. Tie gown securely but in a manner that it can be easily untied when you begin the doffing process

5. Leave some length of the tie so that it can be pulled and untied without much effort





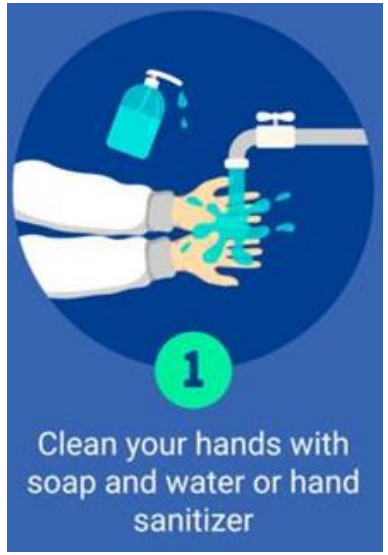
Note: An instructor and job aids on donning are required to monitor and ensure it is properly done

Donning the Mask

Perform hand hygiene, remove a mask from the box, and make sure there are no obvious tears or holes in either side of the mask

Identify the top - the side of the mask that has a stiff bendable edge is the top and is meant to mold to the shape of your nose

The colored side of the mask is usually the front and should face away from you, while the white side touches your face



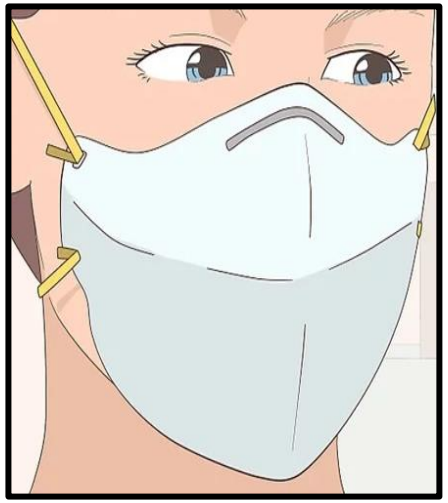




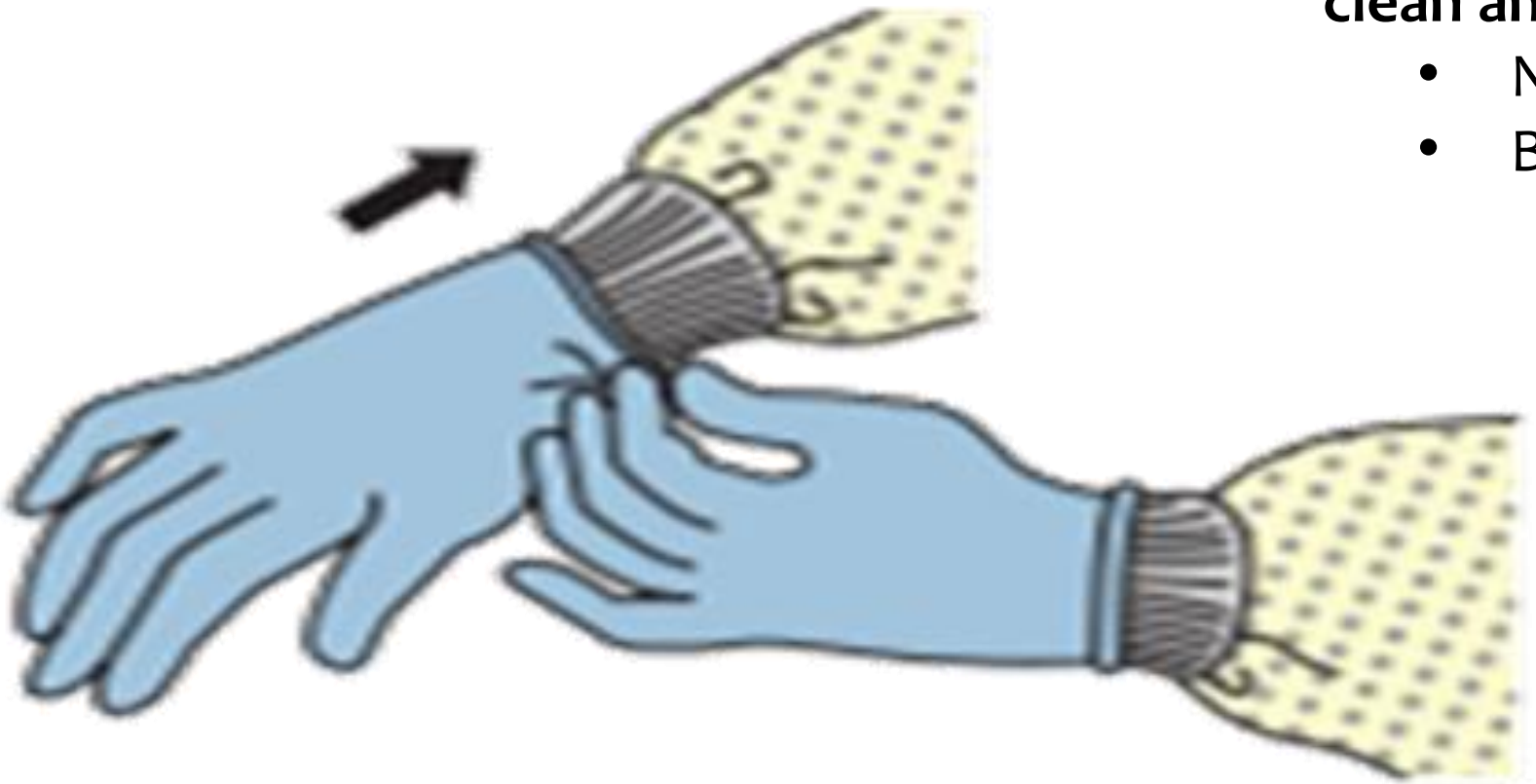




Types of Masks and how to wear them

Face Mask with Ear loops	○ Hold the mask by the ear loops ○ Place a loop around each ear	
Face Mask with Ties	○ Bring the mask to your nose level and place the ties over the crown of your head and secure with a bow	
Face Mask with Bands	○ Hold the mask in your hand with the nosepiece or top of the mask at your fingertips, allowing the headbands to hang freely below your hands ○ Pull the top strap over your head so that it rests over the crown of your head. Pull the bottom strap over your head so that it rests at the nape of your neck ○ Fit flexible band to the nose bridge and snug to face & under the chin	

Donning Gloves



Insert clean, dry hands into clean and unused gloves

- Nitrile preferred
- Be sure to select correct size



Putting off/Doffing of PPE

- Remove all PPE before exiting the patient room except a respirator, if worn
- Perform hand hygiene between steps if hands become contaminated and immediately after removing all PPE



Question: Why should you be careful when removing PPE?

Why you should be careful when taking off PPE? (Answer)

- Removing PPE is a high-risk activity
- PPE is already contaminated
- Potential for contamination from PPE to hands, mucous membranes, and skin
- You may be overheated and have difficulty remembering the correct order for removing
  - Your buddy/observer will provide instructions during removing

Principles of Safe Removing

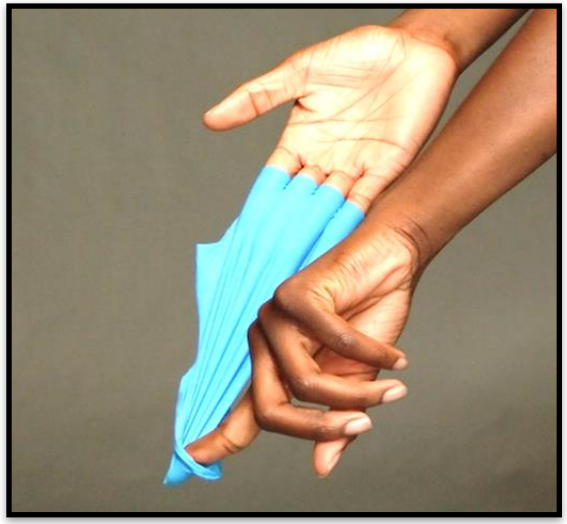
- When removing, ensure the outside of PPE does NOT touch your skin or any part of your body
- Remove the outermost PPE first; it is likely to be the most contaminated
- Protect your eyes and mucus membranes
- Always close eyes and mouth when removing PPE over the head
- Perform hand hygiene on bare hands thoroughly and immediately after removing PPE

Removing Gloves









1
Grasp glove at the palm with opposite gloved hand; peel off

2
Hold first outer glove in opposite gloved hand

3
Slide fingers of ungloved hand at wrist

4
Dispose of gloves in medical waste bin

Remove your gloves <u>slowly</u>

Remove Disposable Face Shield

1. Till your head forward slightly
2. Remove face shield from behind the head, pull it forward and over your head

    - Keep eyes closed!

3. Let the face shield fall from your face
4. Place disposable face shield in a bucket designated for medical waste





Removing a Medical Mask or a Respirator



- Perform hand hygiene
- Only touch the ear loops/ties/band
- Be careful NOT to touch the front of the mask

Removing a Gown



1

- With clean hands, untie or break ties at the back and neck
- Touching only the inside of the gown, pull from neck and shoulders, then arms, turning inside out as gown is removed



2

Roll gown into bundle



3

Discard in appropriate waste



4

Perform hand hygiene

How do you know what PPE to wear?

- Based on your assessment of risk of exposure to body fluids and contaminants
  - Choose PPE items to use according to the procedure performed and anticipated risk
- Should protect parts of your body where microorganisms are most likely to enter
- Not all PPE items are needed at the same time

PPE to Be Used: Screening

Screening:

- Gloves
- Face shield
  OR Goggles with face mask
- Boots, closed shoes, or shoe covers



For healthcare workers and cleaners

PPE to Be Used: Consultation rooms

General Nursing Care (including Maternity)

No invasive procedures or birthing

- Gloves
- Gown
- Boots, closed shoes, or shoe covers

PPE to Be Used: In-patients settings

General nursing care with invasive procedure and/or potential for blood or body fluid exposure

- Gloves
- Gown
- Face shield OR Googles with Mask
- Boots or shoe covers or closed shoes





PPE to Be Used: In-patients settings

Maternity care with invasive procedures or with birthing

- Gloves plus elbow gloves
- Gown
- Apron
- Face shield OR Googles with mask
- Boots or closed shoes or shoe covers

KEY MESSAGES

1. Regardless of what PPE is available and putting on/removing order, always put on and remove PPE slowly and carefully to avoid mistakes

2. Choose PPE items to use according to the procedure performed and anticipated risk

3. Not all PPE items are needed at the same time

Session 15.5.4: Transmission-Based Precautions

Session objectives

At the end of this session participants should be able to understand

- Standard precaution
- Transmission-based Precautions
- Contact precaution
- Contact isolation

Standard Precautions

- Infection prevention precautions apply whenever providing client care, irrespective of the client diagnosis
- In preventing unprotected contact with body fluids including blood, respiratory and other secretions/excretions
- Useful for all contact with body fluids regardless of the infection status
- Minimizing or preventing spread of infection to health care workers, other clients and visitors



Transmission-based Precautions

- Precautions used to prevent transmission of infectious diseases with known modes of transmission include:
  - Contact Precautions
  - Droplet Precautions
  - Airborne Precautions



Contact Precautions



Direct transmission

Hands – contact

Nasal – droplet

Throat - droplet

Indirect transmission

Bedpans/urinals

Dressing trolleys

Mattresses

Drip stands

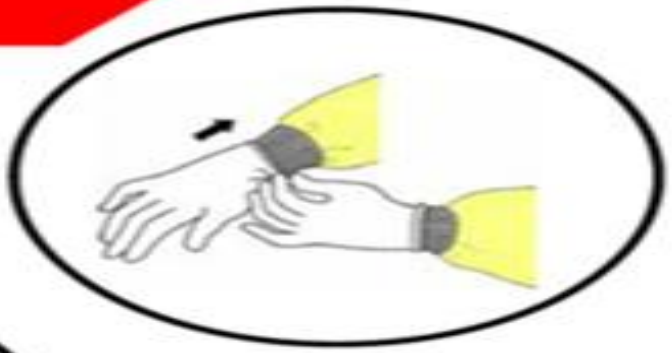
Mops & buckets

Hand disinfection equipment

Contact Precautions



Clean hands with alcohol-based hand rub or soap and water



Wear gloves when providing direct care



Wear gown when providing direct care

Contact Isolation

- Private room or cohorting with signage indicating restricted access
- Dedicated toilet or commode
- Dedicated equipment or disinfected between client use
- Access to hand washing stations



Examples of Precautions to Reduce Disease Spread through Contact

- Wash hands before and after every patient contact
- Limit patient movement
- Isolate or cohort patients
- Wear appropriate PPE for all contact with patients
- Do not touch eyes, nose, or mouth with gloved or ungloved hands
- Do not share equipment among patients
  - If shared, clean and disinfect between uses



KEY MESSAGES

- Standard infection prevention are precautions applied whenever providing client care, irrespective of the client's diagnosis



- Precautions used to prevent transmission of infectious diseases with known modes of transmission include: Contact Precautions, Droplet Precautions and Airborne Precautions

Session 15.5.5: Screening and Triage of Clients

Session objectives

- What is triage
- Transmission-based Precautions
- What should be done when Clients arrive at the Health Facility
- Hierarchy of Control of Hazards
- Standard precaution

What is Triage?

This is the process of rapidly examining sick individuals on arrival at the health facility in order to place them in defined categories



Defined categories

1. **Based on priority signs -** The client is given priority in queue, rapid assessment is done to determine if the client will be treated/moved/isolated without further delay
2. **Based on emergency signs -** The client requires immediate and urgent treatment
3. **Based on non-urgent cases -** This forms majority of clients; they are non-priority neither do they require emergency treatment

Transmission-based Precautions

- Trained and competent staff that have a high level of clinical suspicion
- Well-defined area
- Appropriate distance >1 meter
- Infrared thermometer
- Personal protective equipment (for staff and cases)
- Waste bins and access to cleaning/disinfection



Transmission-based Precautions(cont'd)

- Algorithm for triage
- Protocol/flow charts
- Screening questionnaire
- Clear signage/job aids
- Documentation forms/books
- Important contacts; National and state toll-free numbers or hotlines



What should be done when Clients arrive at the Health Facility?

- A health worker should always be stationed at the entrance of the Health Facility, to ask clients about their symptoms

  - Community Volunteers linked to the Primary Health facility should also be available to assist, especially in crowd control

- The health workers/volunteers must put on the appropriate personal protective equipment before attending to any client



What should be done when Clients arrive at the Health Facility?

- A health worker should always be stationed at the entrance of the Health Facility, to ask clients about their symptoms
  - Community Volunteers linked to the Primary Health facility should also be available to assist, especially in crowd control
- The health workers/volunteers must put on the appropriate personal protective equipment before attending to any client



What should be done when Clients arrive at the Health Facility?(cont'd)

- Maintain at least an arm's length distance from clients.

  - Ensure that other clients waiting to be assessed do the same
- If an infrared thermometer is available check the temperature of every client
- Triage to identify clients with fever, cough, or shortness of breath
- Prioritize any client with any of these symptoms for further assessment



Hierarchy of Control of Hazards

1

Implementation of Administrative Controls

a. Provides adequate training for Healthcare workers (HCW)

b. Monitor HCW compliance with standard precautions and provide mechanisms for improvement needed

2

Engineering/Environmental Control

a. Looks into the basic infrastructure of the healthcare facility

b. Adequate ventilation

e. Safe and effective laundry services

f. Care of food service, preparation and utensils

g. Safe medical waste management

Summary (Contd.)

Adhere to standard guidance on appropriate hygiene and infection control measures through:

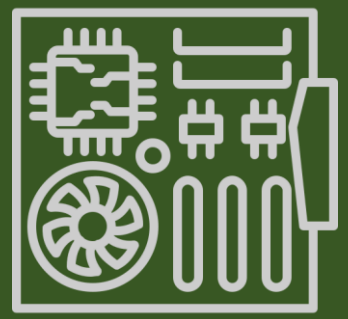
- Regular cleaning and disinfection of all hard surfaces, floors, chairs and door handles using detergent disinfectant or bleach
- Ensure appropriate waste disposal - stores should have adequate waste bins and used tissues or disposable cleaning cloths should be double-bagged before disposal
- All personal protective equipment should be disposed of as clinical waste

Standard Precautions

- Basic level of infection control precautions
  - Use as a minimum for all patients, regardless of their infection status



Components of Standard Precautions



01 Hand hygiene

02 Personal protective equipment (PPE)

03 Respiratory hygiene

04 Prevention of needle-stick injuries

05 Safe waste management

06 Cleaning and disinfection of patient-care equipment and linens

07 Cleaning and disinfection of the patient care environment

Key Messages



- Standard precaution is a basic level of infection control precautions used as a minimum for all patients, regardless of their infection status
- All personal protective equipment should be disposed of as clinical waste

SESSION 15.5.6: BREAKING THE CHAIN OF INFECTION

Session Objectives



Specific objectives

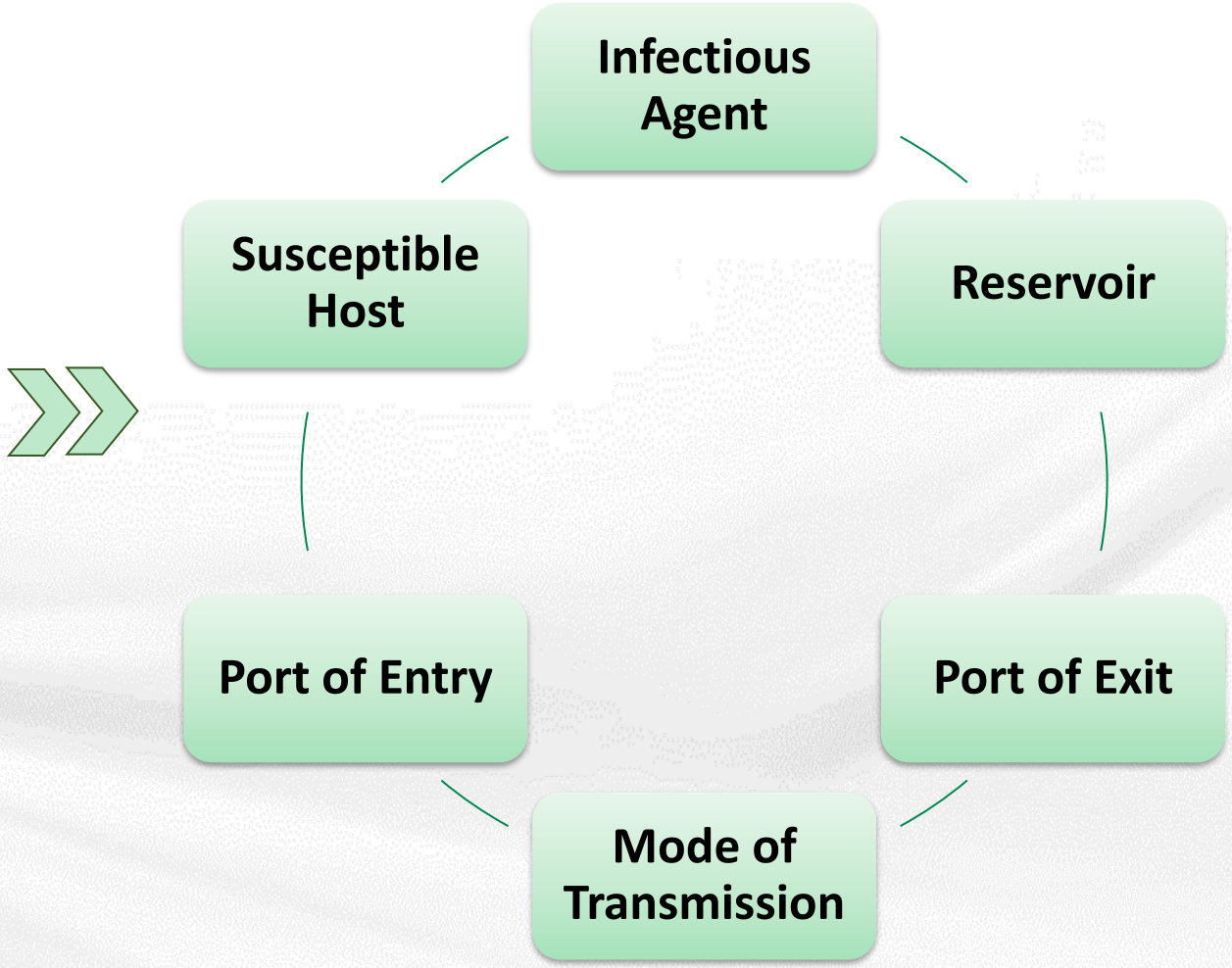
1	Chain of disease transmission for infectious agent
2	Chain of disease transmission for Reservoir
3	Chain of disease transmission for the port of exit
4	Chain of transmission for mode of transmission
5	Chain of disease transmission for susceptible host
6	HCWs role in the prevention of disease transmission



How can you break the chain of infection?

Chain of Disease Transmission

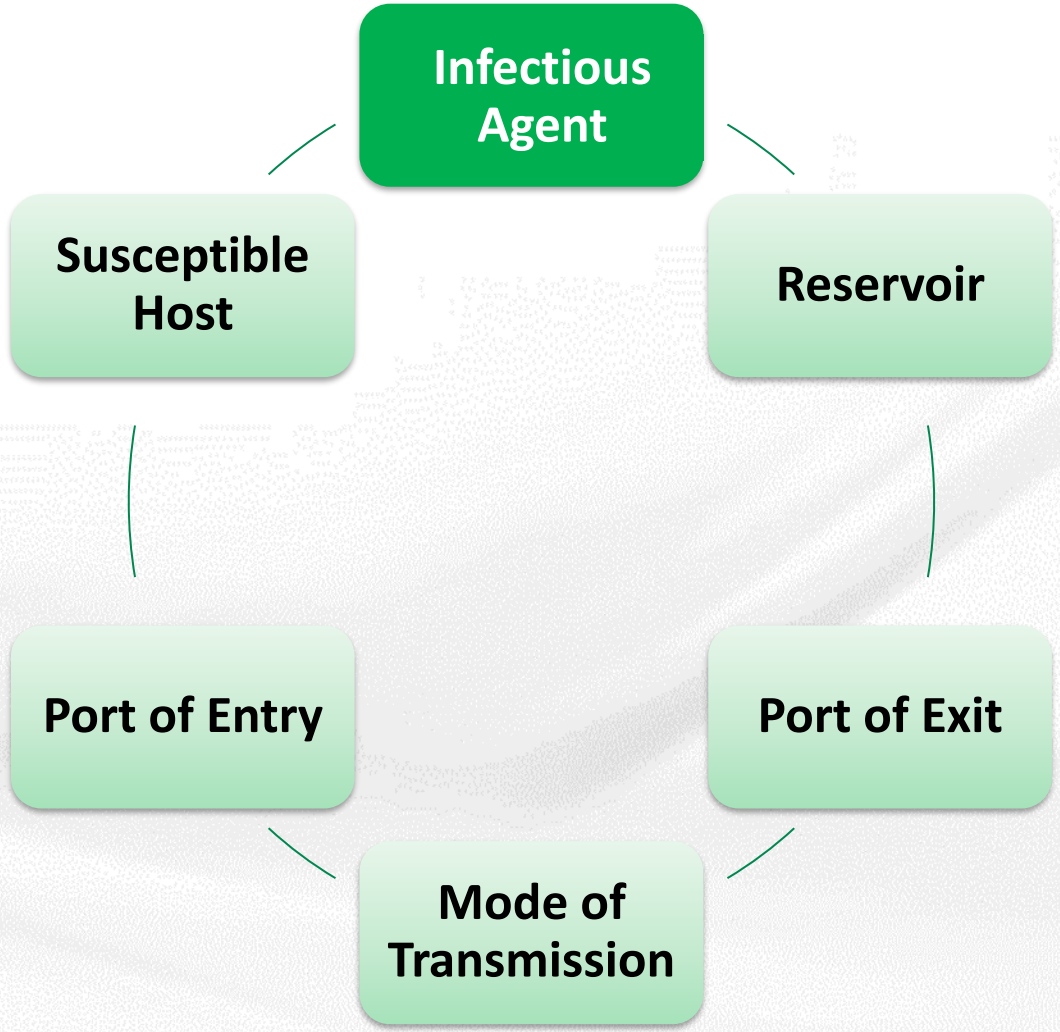
- For infection to spread, all the steps **must** be connected
- **Disrupting** this chain will stop the transmission of infection



Chain of Disease Transmission: Infectious Agent

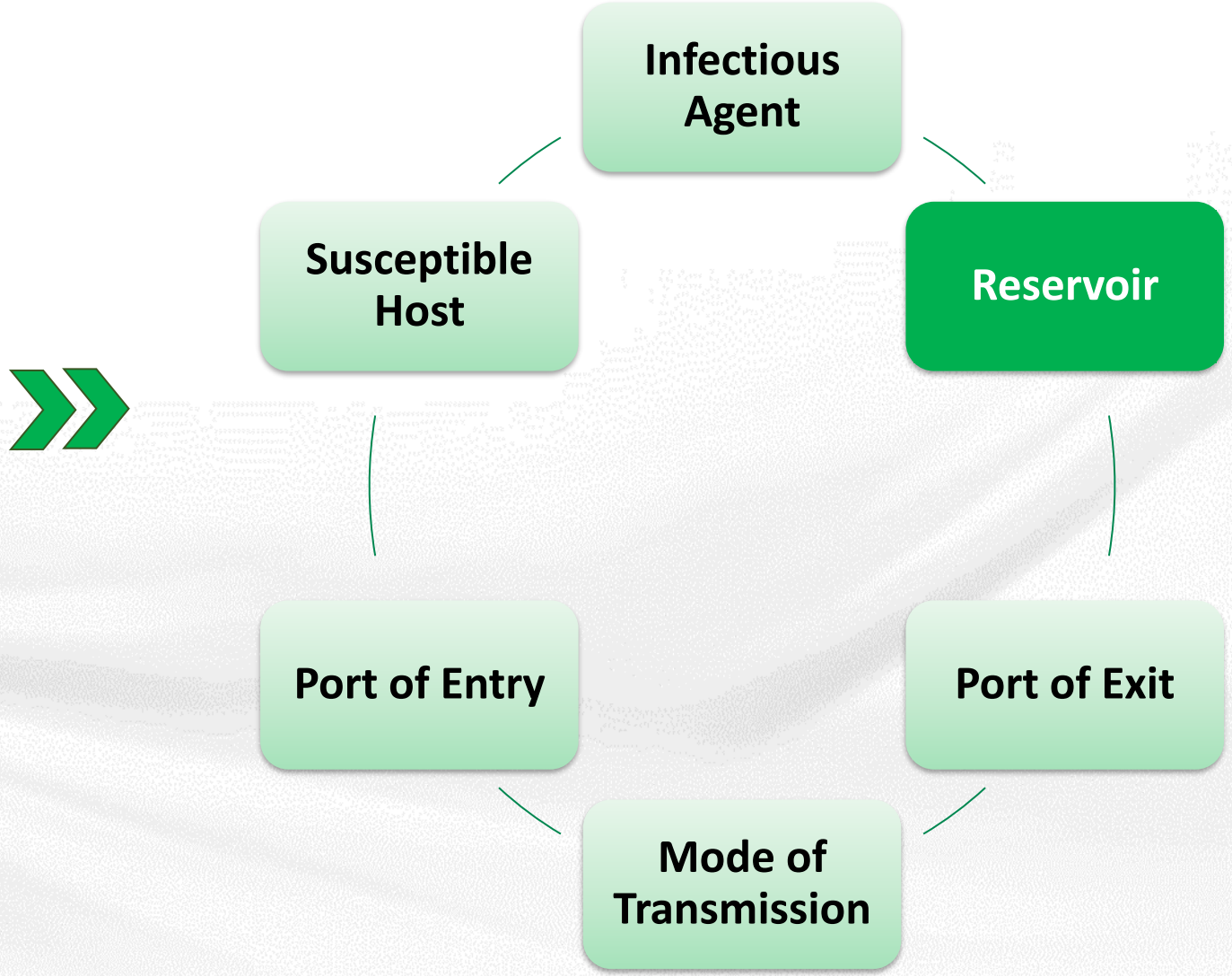
An infectious agent is a disease-causing microorganism (pathogen)

- Bacteria
- Parasites
- Fungi



Chain of Disease Transmission: Reservoir

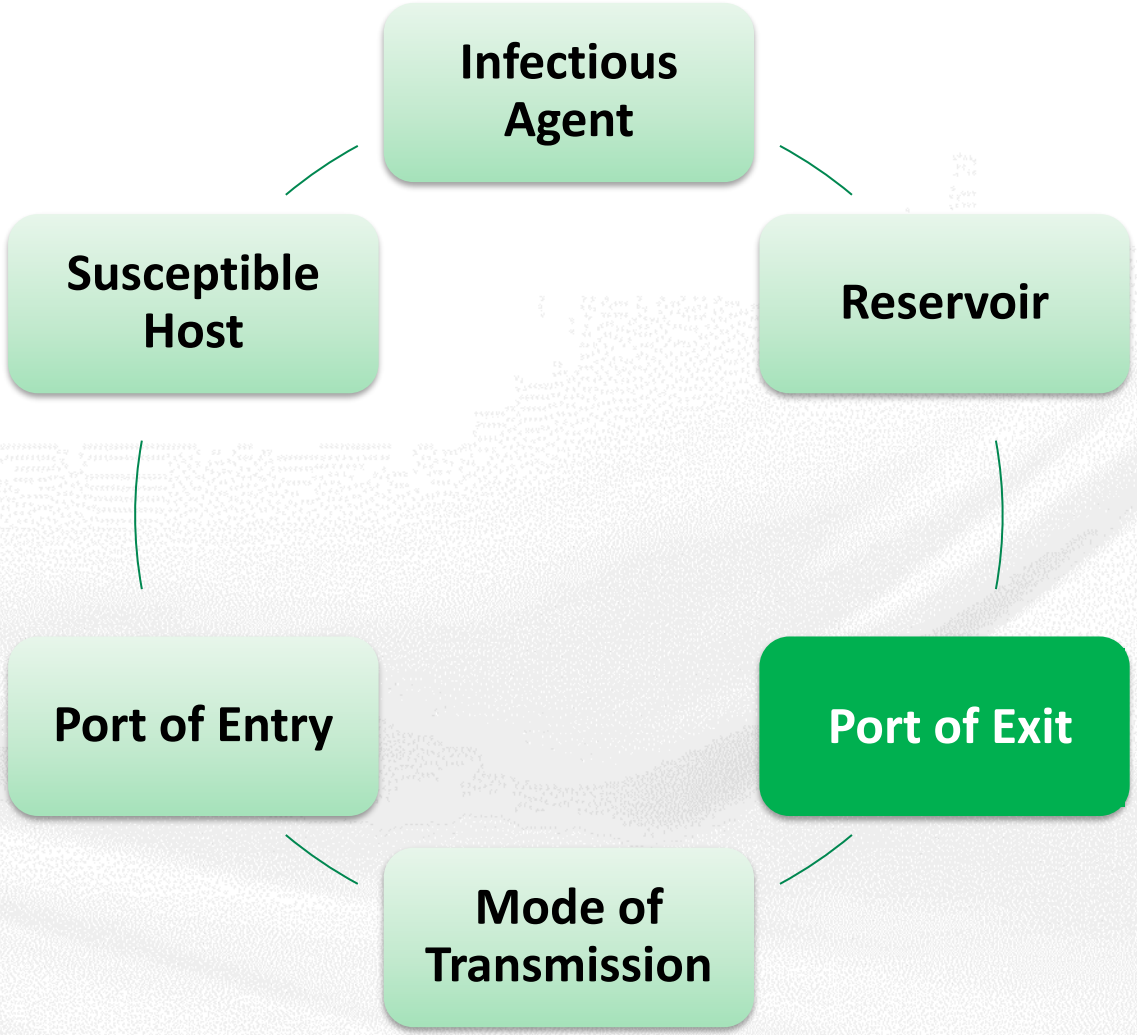
- **Persons**
- Animals
- **Surfaces, e.g.**
  - Tabletops
  - Beds
- **Medical equipment and supplies e.g.**
  - Needles and syringes
  - Tourniquets
  - Forceps
  - Bedpans/urinals
  - Dressing trolleys
  - Mattresses
  - Drip stands
  - Mops & buckets
  - Hand disinfection equipment



Chain of Disease Transmission: Port of Exit

To cause an infection, the infectious agent must leave the infected person

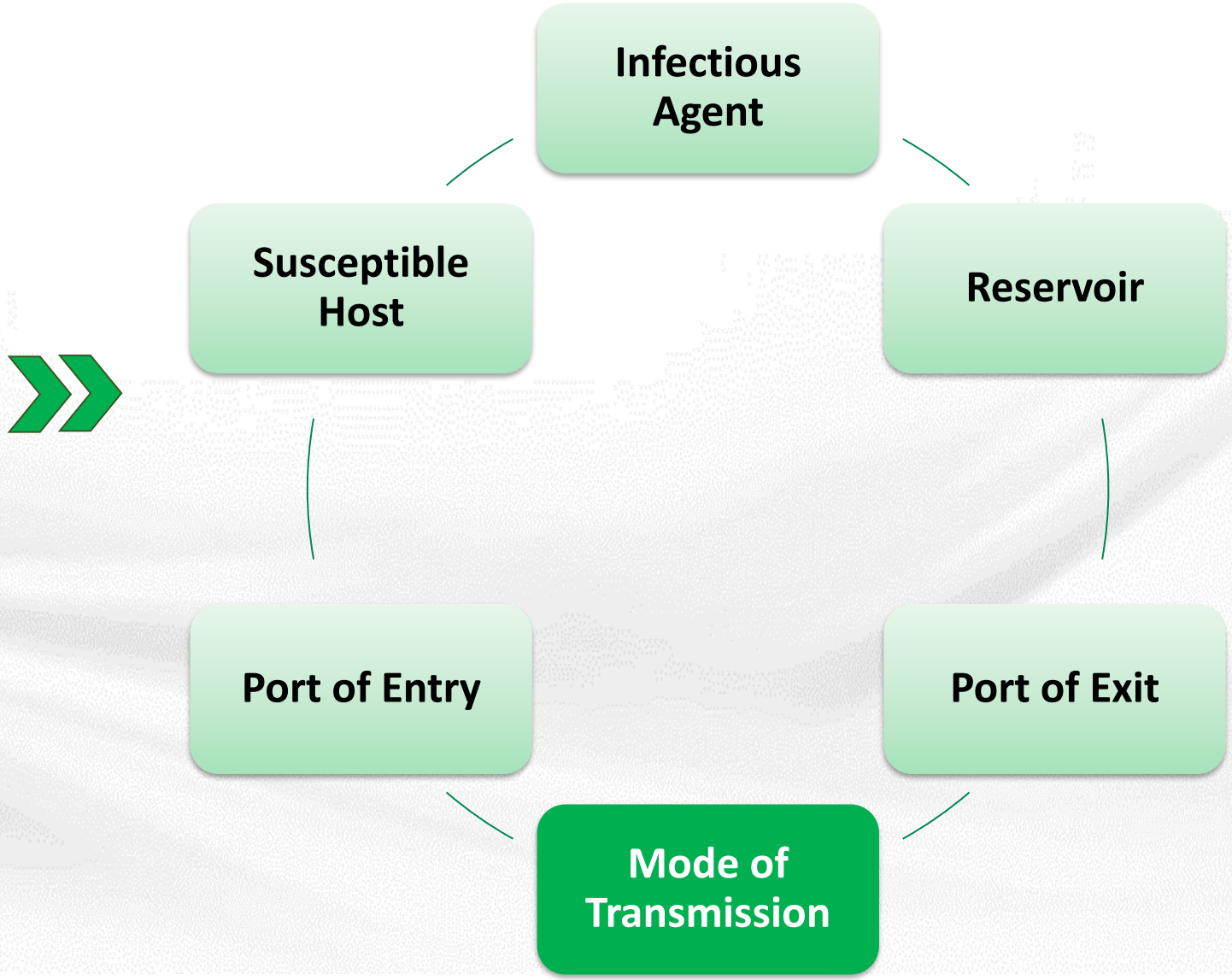
- Examples of ports of exit:
  - Respiratory tract, e.g. droplets
  - Gastrointestinal tract, e.g. stools
  - Breaks in skin, e.g. cuts



Chain of Disease Transmission: Modes of Transmission

Modes of transmission include:

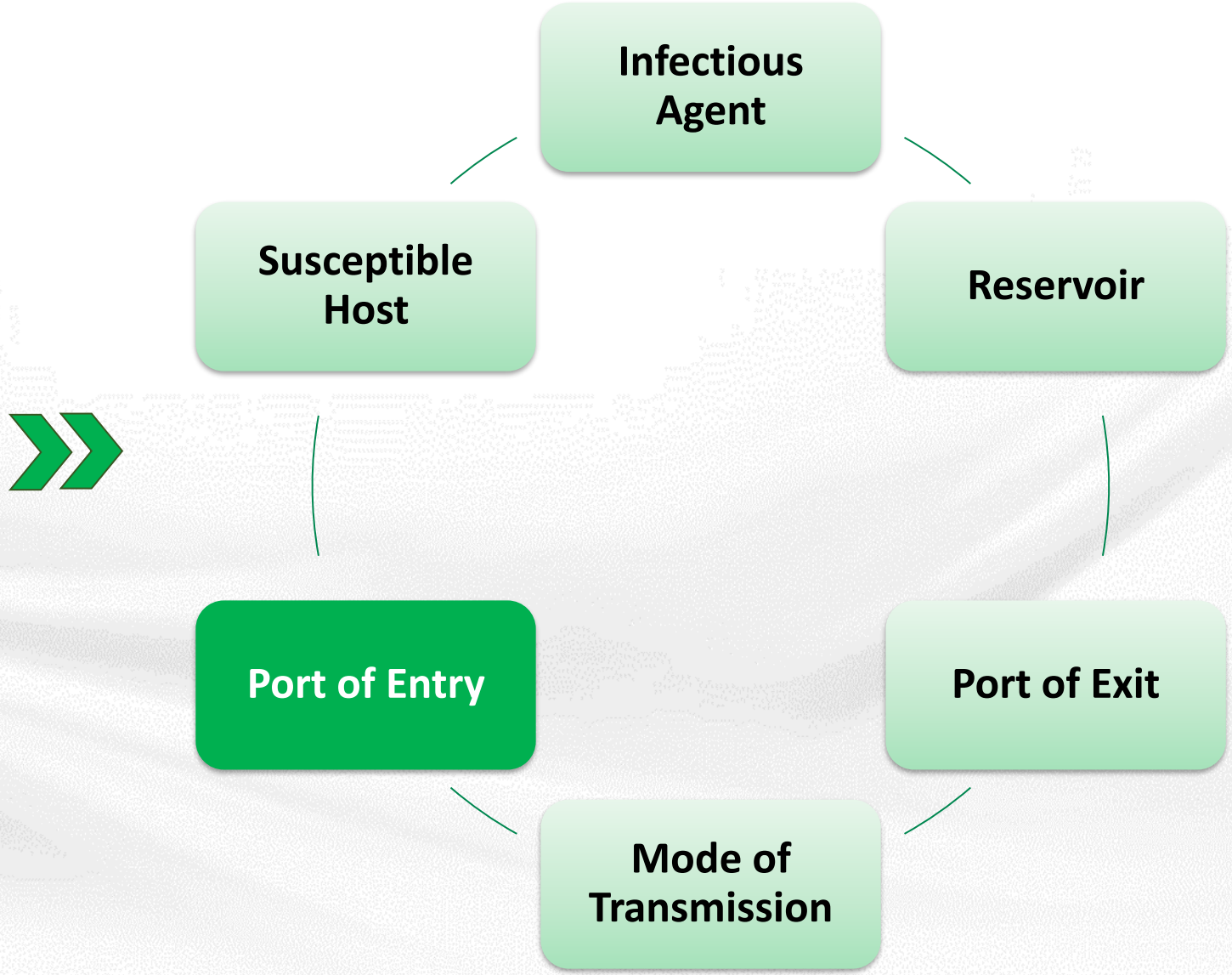
- Contact
- **Droplet: SARS-CoV-2**
- Airborne
- Foodborne and waterborne



Chain of Disease Transmission: Modes of Transmission

Port of entry is the route through which a pathogen enters a susceptible person

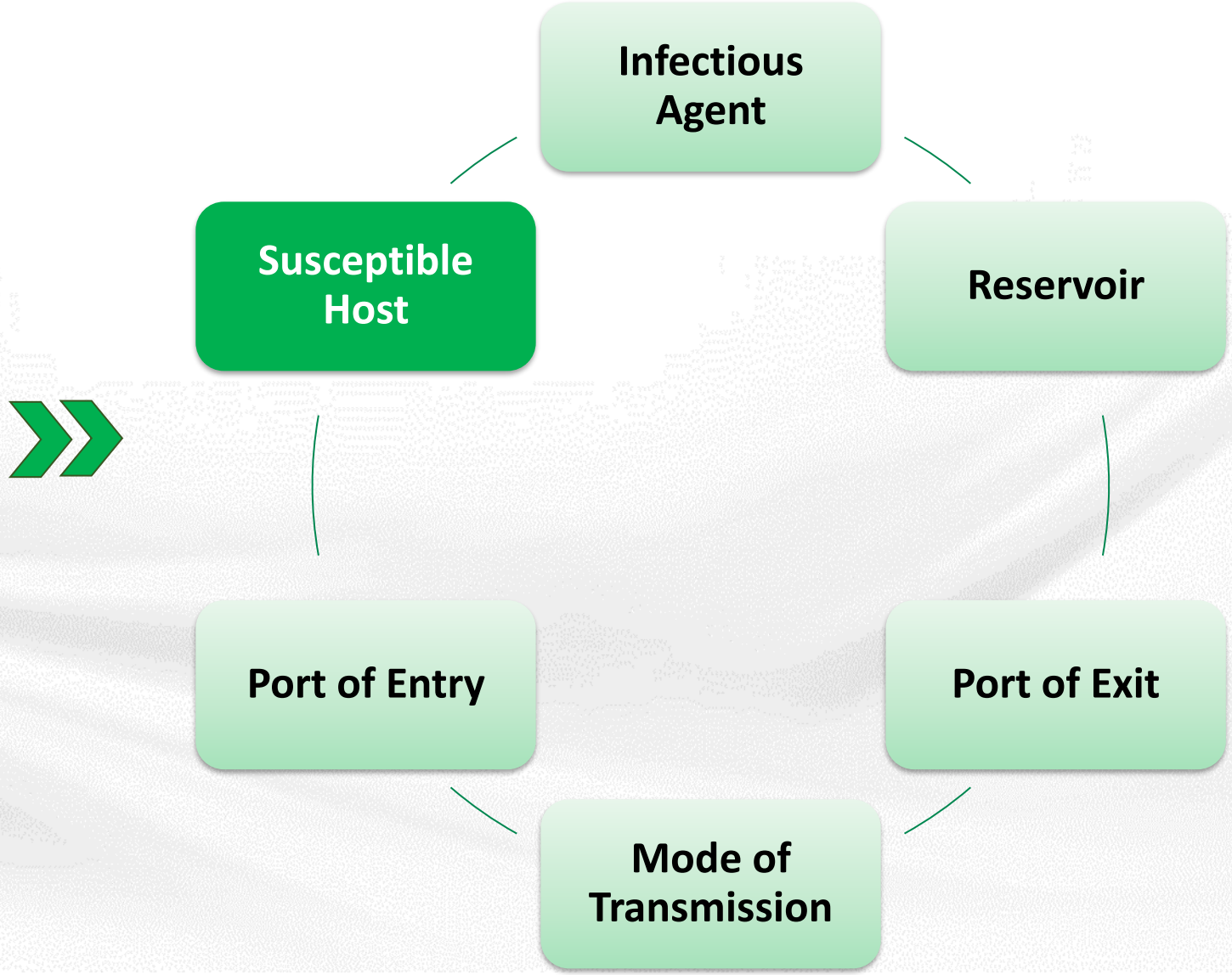
- Examples of ports of entry:
  - Intravenous
  - Respiratory tract
  - Gastrointestinal tract
  - Breaks in skin



Chain of Disease Transmission: Susceptible Host

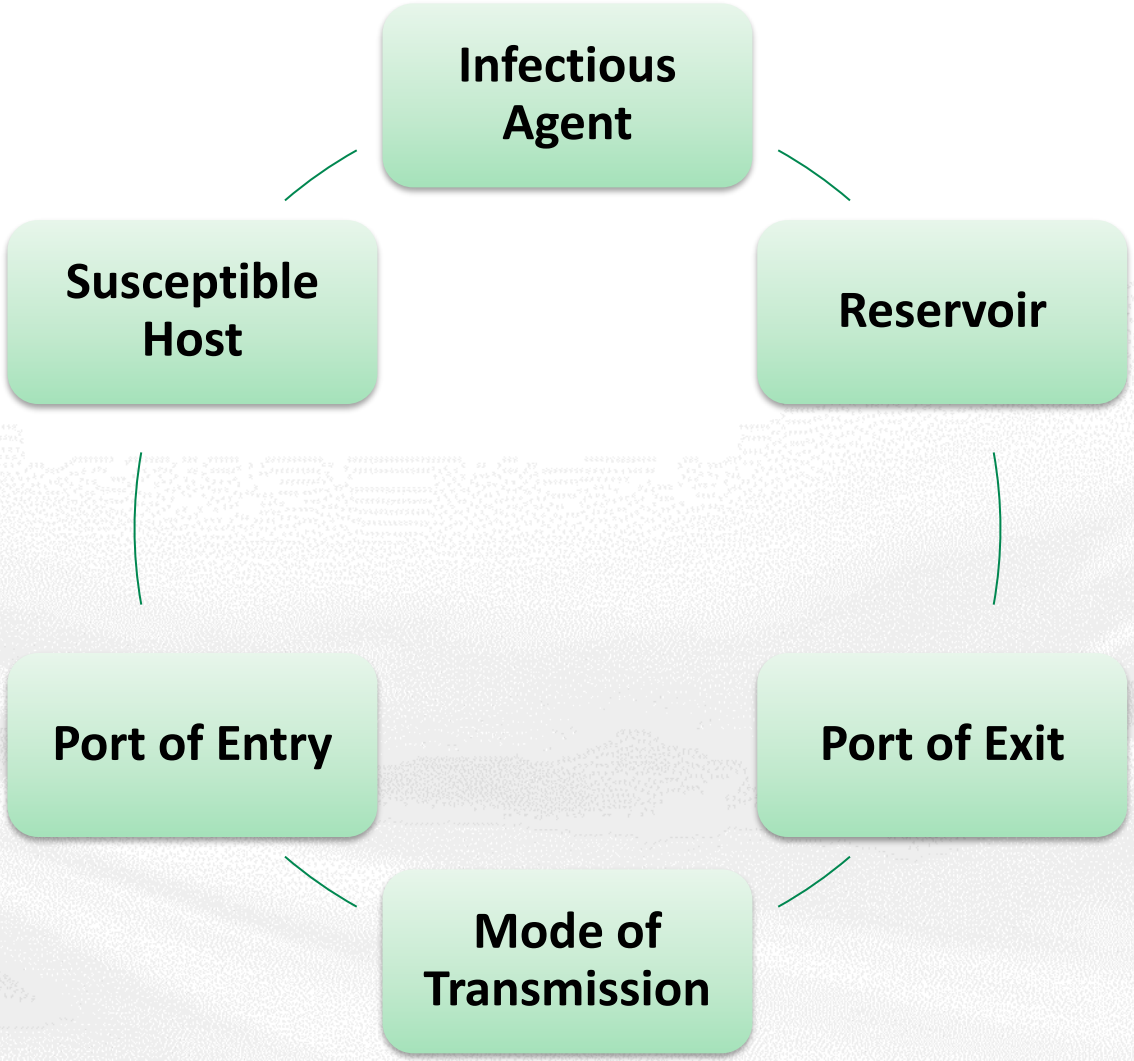
People with weakened resistance or insufficient natural immunity or insufficient immunity acquired from vaccination

- Examples of susceptible host:
  - Pregnant women
  - Children
  - HIV patients
  - Diabetic patients



HCWs' Role in Preventing Transmission

Breaking the links of the chain!



SESSION 15.5.7: PREVENTION OF NEEDLE-STICK AND SHARPS INJURIES

Session Objectives

- At the end of this Session, participants should
- Know how to use needles and syringes appropriately
- Avoid needle-stick injury
- How to safely dispose of sharps after usage

Measures to Prevent Needle-stick and Sharps Injuries

- Dispose of sharps at the point of care
- Sharps container can be carried to the point of care so that the sharp can be disposed of safely at the point of care
- Never carry sharps in your hand to a sharp container
- Place sharps in a kidney dish or similar container to carry used sharps
- Limit the use of needles and other sharp objects as much as possible
- Limit the use of phlebotomy and laboratory testing to the minimum necessary for essential diagnostic evaluation and patient care

Measures to Prevent Needle-stick and Sharps Injuries (Contd.)

- Never replace the cap on a used needle
- Never direct the point of a used needle toward any part of the body
- Do not remove used needles from disposable syringes by hand
- Do not bend, break, or manipulate used needles by hand
- Dispose of syringes, needles, scalpel blades, and other sharp objects in appropriate, puncture-resistant containers
- Limit the use of phlebotomy and laboratory testing to the minimum necessary for essential diagnostic evaluation and patient care

Measures to Prevent Needle-stick and Sharps Injuries (Contd.)

- Never empty a sharps container and never refill an emptied container
- Never overfill a sharps container
- A sharps container that is ¾ full should be disposed of in the incinerator
  - A new/empty sharps box should be used on the ward

Injection Safety

- Use dedicated injection and parenteral medication equipment for each patient
- Never reuse syringes, needles, or similar equipment



Key Messages

- Use dedicated injection and parenteral medication equipment for each patient
- Never reuse syringes, needles, or similar equipment
- Never direct the point of a used needle toward any part of the body
- Do not remove used needles from disposable syringes by hand
- Do not bend, break, or manipulate used needles by hand

Key Messages

1. Use dedicated injection and parenteral medication equipment for each patient
2. Never reuse syringes, needles, or similar equipment
3. Never direct the point of a used needle toward any part of the body
4. Do not remove used needles from disposable syringes by hand
5. Do not bend, break, or manipulate used needles by hand


Thank
you