सत्यमेव जयते

Ministry of Health & Family Welfare
Government of India

Infection Prevention and Control in Healthcare Facilities

Training Session – I

National Center for Disease Control, New Delhi

Outline

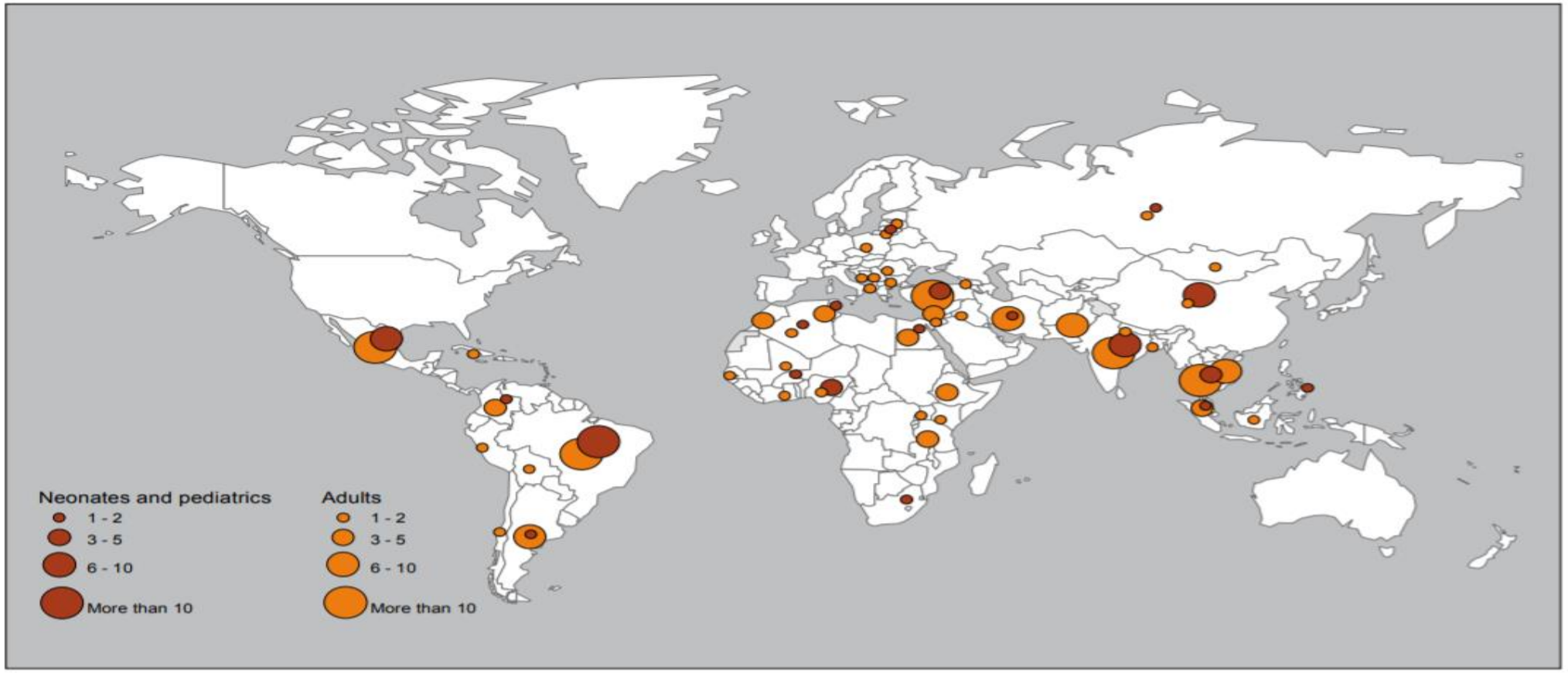
- Healthcare-associated infections (HAIs) and their importance
- Implementation of Infection Prevention and Control (IPC) measures in healthcare facilities (HCF)
- Trends in antimicrobial resistance (AMR)
- Global and National initiatives
- Core components of IPC guidelines
- IPC guidelines – scope and purpose

Healthcare-associated Infections (HAI) and their Importance

What is HAI?

- Healthcare-associated infections (HAI) occur in a patient during the process of care in a hospital or other HCF, which was not present or incubating at the time of admission
- Previously referred to as “nosocomial” or “hospital acquired” or “hospital” infection
- HAIs include occupational infections among healthcare providers

Burden of HAI; Studies reporting HAI in LMICs



HEALTHCARE-ASSOCIATED INFECTIONS ARE A CONCERN IN ALL COUNTRIES

7 to 10%

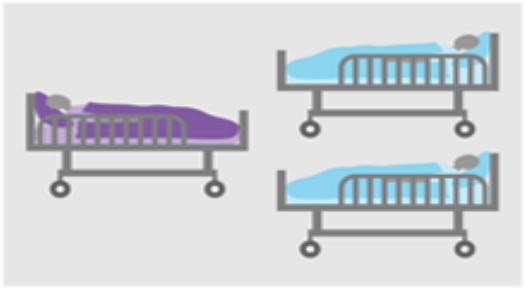
Of every 100 hospitalised patients, 7 in high-income and 10 in low and middle-income countries, will acquire at least one healthcare-associated infection.

1 in 4

A quarter of healthcare-associated infections in long-term acute care settings are caused by antibiotic-resistant bacteria.

1 in 3

A third of patients in intensive care units (ICUs) in high-income countries are affected by at least 1 healthcare-associated infection.



Sources: WHO Healthcare-Associated Infections, Fact Sheet, 2014, WHO, The Burden of Health Care-Associated Infection Worldwide: A Summary, 2010, and CDC, Vital Signs Report, March 2016.

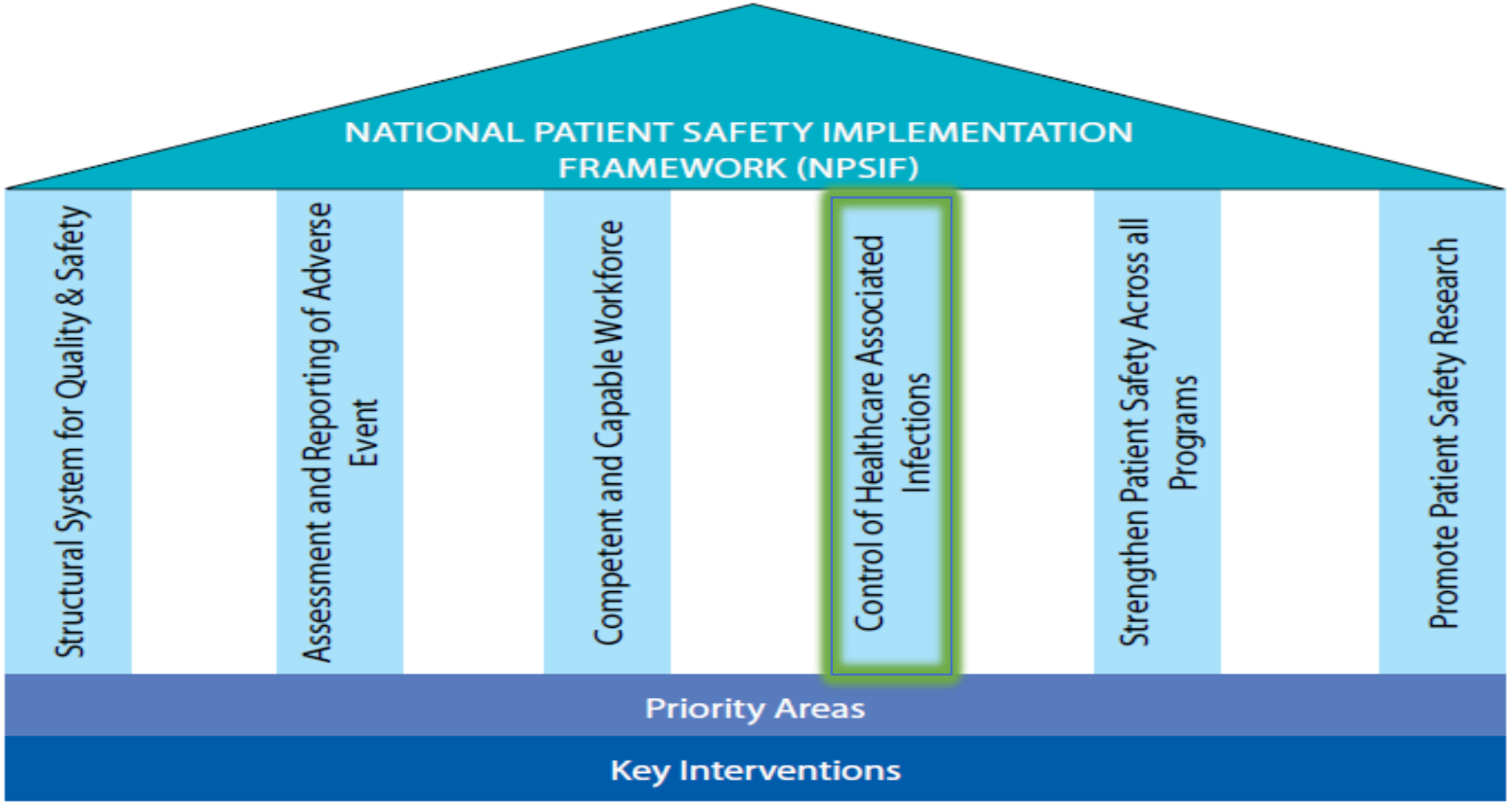
Review on Antimicrobial Resistance

Why are HAIs important?

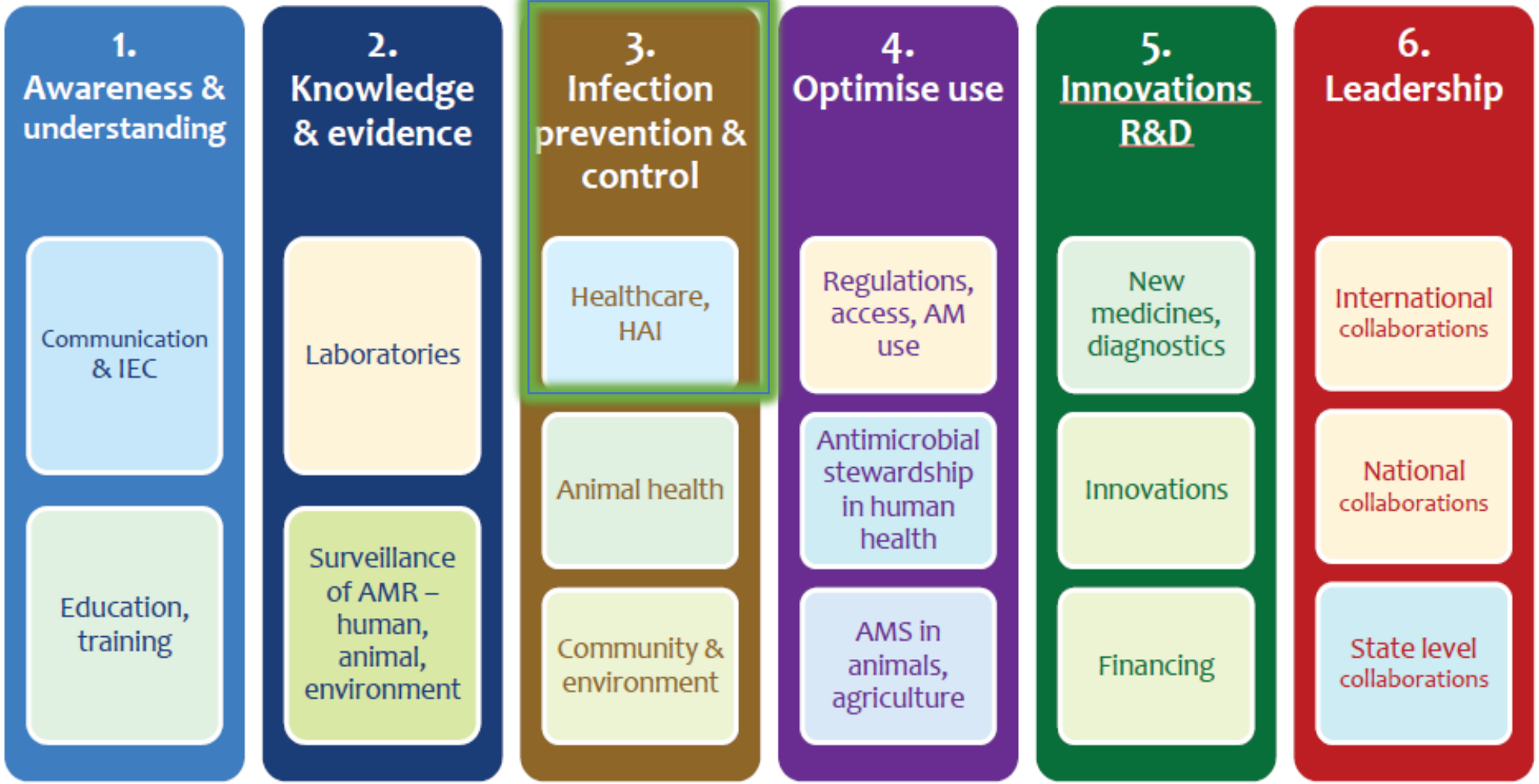
- HAIs are most common adverse events during healthcare delivery and a major public health issue affecting morbidity, mortality, quality of life and patient safety
- HAIs result in prolonged hospital stays, long-term disability, increased resistance of microorganisms to antimicrobials, additional cost on health systems, high cost for patients and their families

HAIs are largely preventable through effective IPC measures

Important priority under patient safety



Important priority under AMR containment



Infection Prevention and Control (IPC) Implementation in Healthcare facilities (HCF)

IPC in a healthcare facility (HCF)

- HCFs are high-risk environments for the development and spread of drug-resistant organisms
- HCFs usually have the highest burden of multidrug-resistant organisms (MDROs)
- IPC measures reduce the opportunities for resistant pathogens to spread in HCFs and contribute to the containment of AMR
- IPC is important in the context of global epidemic/pandemics of COVID-19, SARS, Influenza, Nipah, Ebola etc.

HCF can become an epicentre and amplifier of outbreaks

AMR – rising trends a major concern

- From 2008 to 2019, blood isolates of Escherichia coli resistance to
  - Third-generation cephalosporins increased from 70% to 82%
  - Resistance to carbapenems, increased from 10 to 33%
- In Gram positive Cocci
  - 60 % resistance for cefoxitin, surrogate marker for methicillin resistant Staphylococcus aureus (MRSA)
  - 1% resistance is seen in Staph. aureus and 5% in Enterococcus species to linezolid
- 16% resistance to vancomycin in Enterococcus species

Antibiotic use – a major driver of AMR in India

Global initiatives for IPC

- International Health Regulations, 2005
  - Containment of AMR (and IPC) is a strategic priority
- United Nations Sustainable Development Goals (SDGs)
  - Safe water, sanitation and hygiene (WASH)
- World Alliance for Patient Safety
- WHO Patient Safety Programme
  - “Clean care is Safer care”
- Regional Strategy for Patient Safety (2016–2025), WHO SEARO
- WHO Guidelines on Core Components of Infection Control Programmes
- WHO Technical Guidance on IPC for COVID–19, 2020

National initiatives for IPC

- Biomedical Waste Management Rules, 1998 (revised in 2016 and 2018, 2019,2020) by Ministry of Environment, Forests and Climate Change
- The “Kayakalp” programme, 2015
- National Guidelines on Clean Hospitals (Swacchhta Guidelines), 2015
- Hospital Infection Control Guidelines by ICMR
- National Quality Assurance Standards for Public Health Facilities, 2017, revised 2021
- National Action Plan on AMR, 2017-21
- National Patient Safety Implementation Framework, 2018–25
- National Guidelines for Infection Prevention and Control in HCF, 2020
- NCDC Guidelines for COVID-19, 2020

Core components of IPC

IPC guidelines – scope and purpose

- To improve patient safety, healthcare quality and containment of AMR in India
- To enable hospital administrators, clinicians/doctors, nurses and allied professionals to practice IPC and develop their own policies and SOPs
- To serve as a resource for IEC materials for all levels of healthcare staff, as well as for patients
- Aligned with National Patient Safety Implementation Framework and National Action Plan on AMR

Summary

- HAIs can be prevented
- IPC should be a priority in healthcare facilities to ensure patient safety
- IPC is important for AMR containment
- Global and national initiatives for IPC
- IPC core components provide the framework for IPC strengthening
- National Guidelines for IPC in HCFs need to be implemented

Questions?