

# Strengthening IPC for Effective Epidemic Preparedness

## IPC FOCAL PERSONS TRAINING

**Topic: Introduction to HAIs and Surveillance**

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# Outline

- Defining Healthcare-Associated Infection surveillance
- Purpose of HAI surveillance
- Hospital Epidemiology
- Who is responsible for surveillance
- Steps in planning a surveillance system



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# Defining HAI and Surveillance

- **Healthcare-associated infection (HAIs)**

HAIs are infections people get during the process of receiving care in a hospital or other health care facility. HAIs are not present or incubating at the time of a patient's admission to a health care setting.

HAIs are one of the most common adverse events in health care.

- **Surveillance:**

Surveillance is the ongoing, systematic collection, analysis, interpretation and evaluation of data closely integrated with the timely dissemination of these data to those who need it. Conducting high quality surveillance is crucial to identify how big a problem is and to assess the impact of any prevention or improvement intervention.



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- **Hospital surveillance:**

Is the ongoing, systematic collection, analysis, interpretation and dissemination of health data (e.g., HAI) to help guide clinical and public health decision-making and action (i.e., information for action).



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# Purpose of HAI surveillance

- The purpose of HAI surveillance is to provide data on HAI occurrence for decision-making, policy and research.
- It helps describe microbiological profiles of pathogens causing HAI, and, depending on most frequent infections.
- It provides critical information to plan and tailor IPC interventions.
- You can use surveillance to detect changes in HAI rates over time and evaluate the impact of HAI prevention and control measures.
- Finally, surveillance can help detect outbreaks. With appropriate methodologies, surveillance data can be used for benchmarking and as an indicator of quality of care and patient safety.



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# Hospital Epidemiology

- Hospital epidemiology focuses on identifying, understanding and minimizing or eliminating these risks to prevent and control HAI. In other words, hospital epidemiology is the application of epidemiological methodologies to the hospital setting.
- Hospitals are complex institutions where patients go for prevention, diagnosis or treatment. However, hospitals are also places where patients may encounter risks to their health.



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# Who is responsible for surveillance?

- Ideally, a motivated, multidisciplinary IPC team will be responsible for data collection, analysis, interpretation and dissemination of findings.
- Size and composition of the team will depend on availability and interest of local staff, but it is preferable that the team consist of an IPC/hospital epidemiology physician, a microbiologist and a nurse lead with clinical experience.
- This team will need protected time for surveillance responsibilities and training in hospital epidemiology/surveillance methods and regular supervision by the national IPC team to ensure that the data collected is of good quality.



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# Cont. who is responsible for surveillance?

- If no dedicated hospital IPC team is available, surveillance can be done by:
- Nursing personnel dedicated to IPC;
- IPC link nurses or practitioners of other disciplines as relevant (e.g., surgeons, pharmacists);
- those in other existing surveillance systems; and
- epidemiology/biostatistics support staff (e.g., initial training, ongoing supervision visits from national level).



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# Challenges of HAI surveillance in LMIC

- Limited expertise and/or skills for data interpretation and use
- Lack of reliable microbiological and other diagnostic tools
- Poor quality information from patient records.



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# Steps in planning surveillance system



# Steps Cont.

## 1. Surveillance Planning

- Assess the Population to Be Surveyed
- Select the Outcomes for Surveillance
- Use Established Case Definitions

## 2. Data Collection

- Collect the Surveillance Data

## 3. Data Analysis

- Calculate and Analyse Surveillance Rates
- Apply Risk Stratification Methodology



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# Steps cont.

## 4. Interpretation

- Interpret Infection Rates

## 5. Communication

- Communicate and Use Surveillance Information to Improve Practice

## 6. Evaluation

- Evaluate the Surveillance System



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# Thank You!

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