

# Pacific Infection Prevention and Control Network Meeting

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2023 PACIFIC INFECTION PREVENTION AND CONTROL NETWORK MEETING  
24 – 26 May 2023, Nadi, Fiji

## Agenda Item N°6.1

### ROLE OF MICROBIOLOGY IN INFECTION PREVENTION AND CONTROL

(Paper presented by Dr Eka Buadromo, SPC PHD Senior Laboratory Adviser<sup>o</sup>)

#### 1. BACKGROUND

1. A basic knowledge of the micro-organisms that commonly cause infections and the methods used by the clinical laboratories to identify and examine them is important in the day-to-day work of the IPC team. Team members who are knowledgeable about microorganisms can more effectively convince health care workers (HCWs) of the need for basic IPC strategies such as hand hygiene, Standard Precautions, Transmission-Based Precautions, cleaning, and disinfection. Also, knowing about the features and behavior of the microorganisms that are causing infections in a health care facility, in particular health care-associated infections (HAIs), can help the IPC team choose the most effective prevention strategy. Understanding the methods used in the clinical laboratory can also assist the IPC team in making sure that the best-quality samples are taken so that the microorganisms that are causing infection can be identified.

#### 2. PROGRESS AND ACHIEVEMENTS

##### Strengthening combat AMR activity in the Pacific

2. SPC in collaboration with WHO, FNU, PIHOA and Pacific Pathology Training Centre (PPTC) developed a training curriculum to strengthen AMR surveillance in the Pacific. This training has been delivered in various countries in the Pacific. The content of the training includes, Antimicrobial Stewardship, Infection Prevention and Control. Clinical microbiology and microbiology laboratory practical training. There are other partners working in this space in the region; the Pacific Region Infectious Disease Association (PRIDA), and University of Melbourne, Fiji National University and University of Papua New Guinea and other national training institutions delivering microbiology training.

3. Preliminary assessment of the quality of microbiology and other AMR activities in the region is ongoing and so far we have found a lot of improvement in the quality of AMR diagnostic testing. IPC personnel

involvement in combating AMR activities including close collaboration with microbiologists is picking up in most countries and there is Antimicrobial Stewardship activities that have started in some countries. SPC team has recently rolled out a simple excel based antibiogram to collect and analyse AMR data from laboratories, allowing informed decisions about antimicrobial resistance and alternate treatments.

### **3. CHALLENGES**

4. Sustainability remains the main challenge of the combating AMR activities in the region, the lack of resources, low priorities given to laboratory testing and the frequent shortage of manpower in the laboratories in the region affect the quality of laboratory testing including microbiology. Poor quality microbiology testing and test results will no doubt affect outcomes of IPC activities, increase in Hospital Acquired Infection, increase in the length of hospital stay and increase in antimicrobial resistance.

4. Lack of antibiogram that informs real time resistance pattern has been a common challenge over the years. Eventhough WHONET is available online for free, countries in the region have not found an easier way to use the software. SPC is just starting to roll out another antibiogram introduced this month to Kiribati, Vanuatu and Cook Islands with the hope that simple excel-based antibiogram will be more convenient and user friendly to small Pacific Island microbiology personnel.

### **4. FUTURE DIRECTIONS**

1. Continue to strengthen IPC and IPC officers' collaboration with Microbiology laboratories.
  2. Countries to sustain Microbiology AMR testing by ensuring adequate manpower and testing resources (consumables, reagents and technologies).
  - 3) Continue AMR strengthening activities (IPC, Clinical Microbiology, Antimicrobial stewardship etc.
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