

# Pacific Infection Prevention and Control Network Meeting

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## INAUGURAL PACIFIC INFECTION PREVENTION AND CONTROL NETWORK (PICNET) MEETING, 24 – 26 May 2023, Nadi, Fiji

### Agenda Item N° 6.2

#### ONE HEALTH AND AMR -HARMONIZING IPC, AMS AND AMR SURVEILLANCE (Presented by the Secretariat, Dr Salanieta Saketa, Senior Epidemiologist)]

The health and wellbeing of PICTs is threatened by complex issues at the nexus of the environmental, human, and animal health. Antimicrobial resistance (AMR) is a critical global and regional health problem that affects human, environmental and animal health. AMR is best addressed using the One Health approach which is defined as a joint effort of various disciplines that come together to provide solutions for human, environment, and animal health.

Compartmentalization of approaches to tackling AMR has contributed to the inefficient fight against this public health menace in the past two decades. The misuse and abuse of antimicrobial use within both hospital setting and the community, poor infection prevention and control practices coupled with weak AMR surveillance systems have accelerated the development of AMR worldwide and in the Pacific region.

The purpose of this paper is to inform participants of the progress, challenges, and opportunities in taking the One Health approach in tackling AMR in the Pacific with its benefit of harmonizing infection, prevention and control, antimicrobial stewardship and antimicrobial resistance surveillance across human, animal and the environment health systems.

## A. Background

1. AMR is a critical global and regional issue that affects human, environmental and animal health requiring a coordinated response amongst multiple stakeholders. Amongst global health problems it is one best addressed using the One Health approach<sup>1</sup>.
  
2. The One Health approach has been defined by the One Health High Level Expert Panel<sup>2</sup>, the advisory panel to the newly formed quadripartite between WHO, FAO, WOA, and UNEP as *“an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems.”* It recognizes that human health, animal health and environment health are inextricably linked. The approach encourages multiple sectors, disciplines, and communities at different levels of society to work together to foster well-being and tackle threats to health and ecosystems. The collaboration across sectors and disciplines will contribute to health protection, addressing health challenges such as emerging and re-emerging infectious diseases and antimicrobial resistance (AMR). The use of the One Health approach for disease surveillance and control has many demonstrated benefits, such as<sup>3</sup>:
  - Gains in efficiency by transitioning from a silo approach to more systemic measures
  - Gains in cost by removing duplication of activities and mutualizing resources and experience, and by earlier detection and implementation of control measures
  - Social benefits by the inclusion of all levels from central government to communities in surveillance and control activities
  
3. The Asia-Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III) which is the regional strategy for implementation of the International Health Regulations 2005 (IHR2005) recommends the reinforcement of “multi-sectoral and multi-stakeholder collaboration and coordination mechanisms, particularly with animal health and environmental health sectors” for countries to be better equipped to face antimicrobial resistance, in addition to policy development,, preparedness planning, improved information sharing and communication.

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<sup>1</sup> Maria EV et al, Antimicrobial resistance: One Health; Veterinary World, EISSN: 2231-0916, Open Access

<sup>2</sup> ‘Tripartite and UNEP support OHHLEP’s definition of One Health’: <https://www.who.int/news/item/01-12-2021-tripartite-and-unep-support-ohhlep-s-definition-of-one-health>

<sup>3</sup> Technical guidance on One Health integrated tool for surveillance, response and operational research, SPC, 2022

4. The development of antimicrobial resistance (AMR) is an inevitable phenomenon when one uses antimicrobial agents. The Pacific AMR burden has not been quantified adequately except for MDR-TB; however, available evidence indicate that AMR has been affecting Pacific Island countries and territories (PICTs) for many years. Major drivers behind the occurrence and spread of AMR are the high use of antimicrobial agents in hospitals and animal health sector leading to transmission of antimicrobial-resistant microorganisms between patients and healthcare workers; animals; and the environment. Poor infection prevention and control (IPC) practices and less developed antimicrobial stewardship (AMS) programs favour further spread of AMR<sup>4</sup>. Tackling AMR requires not only collaboration and partnership across human health, animal health and environment health sectors but also various disciplines including IPC experts, clinicians, nurses, and laboratory workers.

5. Harmonization of all efforts at combating AMR through IPC, AMS and strengthening AMR surveillance is best illustrated through a One Health approach requiring a multidisciplinary approach to prevention and control of AMR across human, animal, and environmental health care systems.<sup>5</sup>

## **B. Progress and achievements**

6. Since 2015 following the World Health Assembly resolution on strengthening prevention, preparedness and response to AMR, PICTs were committed to developing multi-stakeholder National AMR Plans using the One Health approach. With WHO and SPC assistance 7 PICTs have developed NAPs using the One Health approach and these include Fiji, RMI, FSM, Nauru, Tonga, and Tuvalu.

7. The 22<sup>nd</sup> Pacific Public Health Surveillance Network (PPHSN) Coordinating Body Meeting and the 7<sup>th</sup> Heads of Health meeting in 2018 endorsed the resolutions of the first One Health Consultative Workshop calling upon the strengthening of the partnerships between the human, animal, and environmental health sectors in addressing critical issues in the region.

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<sup>4</sup> <https://www.who.int/southeastasia/outbreaks-and-emergencies/health-emergency-information-risk-assessment/antimicrobial-resistance-one-health/meeting-the-amr-challenge>

<sup>5</sup> Mohammed M M et al. One health: harmonizing infection prevention and control, and antimicrobial stewardship in combating antimicrobial resistance to improve patient safety; PAMJ One Health, 11 March 2022

8. SPC working together with FNU, WHO, PIHOA and the Laboratory TWB developed a microbiology strengthening training program to strengthen AMR surveillance in PICTs. Infection prevention and control and antimicrobial stewardship were considered as important components of this training program. The first training was delivered in Kiribati in 2019 and this has been expanded to Samoa, Cook Islands, Tonga, Vanuatu, Solomon Islands and Nauru. Participants of this training include infection prevention control nurses, laboratory officers, clinicians, and animal health officers (Vanuatu).
9. The 2019 Regional PPHSN Meeting agreed that AMR should be considered a priority in all six service networks of PPHSN including PICNet and that with Fiji's experience AMR provided an entry point for establishing an integrated/multisectoral /One Health approach.
10. The 2022 Regional PPHSN Meeting further recognized the critical need for a One Health approach to addressing public health issues between animal, human and environmental health sectors, and its inclusion in the new PPHSN Strategic Framework.
11. SPC supported Fiji in 2022 to strengthen the One Health approach to AMR through the EU supported One Health Security project targeting 5 PICTs. (Fiji, Samoa, Tonga, Solomon Islands, Vanuatu). Ensuring that there is a national mechanism to coordinate the implementation of AMR interventions is also very critical. Fiji has established a dedicated committee to coordinate activities on AMR, made up of members from the Ministries of Health and Medical Services, Agriculture, Waterways and Environment, Fisheries, and Forestry, as well as other government agencies, professional societies, and academic institutions. The national AMR committee (NARC) members actively participate in the planning and implementation of activities. 6 multisectoral and multidisciplinary technical working groups including IPC, AMS and AMR Surveillance have been established under NARC.

### **C. Challenges and opportunities**

12. Challenges persist when it comes to addressing AMR in Pacific Island countries and areas. Current governance mechanisms at environmental, human, and animal health nexus is often inadequate, disconnected, fragmented or competitive. Other challenges include access to sustainable resourcing, including for workforce and capacity needs<sup>6</sup>.

13. Some Pacific nations do not have dedicated staffing for AMR and there are differences in technical competencies for the existing health workforce around infection prevention and control and AMS. There is also a gap in surveillance and reporting of AMR.

14. Opportunities to support cross-sectoral and cross-disciplinary capacity building is available through new funding opportunities such as the Pandemic Fund and the USAID support for the Global Health Security Agenda. With experience from Fiji support can be provided to set up national cross sectoral committees to strengthen governance, data sharing and reporting.

### **C. Conclusions**

15. Although there have been advances in addressing AMR using the One Health approach in the PICTs there is still a lot to be done. The PICNet as a service network of PPHSN is well placed to operationalizing the One Health approach as it helps in harmonization of strategies such as IPC, AMS, and AMR surveillance to accelerate prevention and control of AMR in the region.

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<sup>6</sup> <https://www.who.int/westernpacific/news-room/feature-stories/item/antimicrobial-resistance-in-the-pacific--how-pacific-nations-are-working-to-address-drug-resistant-pathogens>