
MEETING REPORT

2019 Regional Pacific Public Health Surveillance Network (PPHSN) Meeting

Tanoa Hotel, Nadi, Fiji, 3–7 June 2019

Linking up the initiatives and scaling up the actions

Hosted by:
Pacific Community (SPC)
World Health Organization (WHO)
Fiji National University (FNU)

Report prepared by the Pacific Community, 2019



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Day 1: 3 June 2019

Theme: Linking up the initiatives and scaling up the actions

(Moderator: Dr Berlin Kafoa, Pacific Community)

ITEM 1: Opening

Meeting participants and objectives

1. The 2019 Regional Pacific Public Health Surveillance Network (PPHSN) Meeting took place in Nadi, Fiji, at the Tanoa Hotel, 3–7 June, 2019. The meeting was opened by Hon. Ifereimi Waqainabete, Minister for Health and Medical Services, Fiji, and was attended by the following representatives:¹

Core members: American Samoa, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Nauru, New Caledonia, Niue, Northern Mariana Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.

Guest speakers: Australian National University (ANU), Beyond Essentials, CDC (Vietnam), New Zealand Ministry of Health, University of Queensland, University of Sydney, and WHO Collaborating Centre for Reference and Research on Influenza, at the Peter Doherty Institute for Infection and Immunity, Melbourne, Australia

Observers: Australian High Commission, Fiji Ministry of Health, Fiji National University (FNU), James Cook University, Pacific Pathology Training Centre (PPTC).

PPHSN allied members: U.S. Centers for Disease Control (CDC), Fiji National University (FNU), Pacific Community (SPC), Pacific Islands Health Officers' Association (PIHOA), Pacific Paramedical Training Centre (PPTC) and the World Health Organization (WHO).

Secretariat: SPC provides the PPHSN Secretariat and is the focal point for the PPHSN Coordinating Body (CB).

2. **Primary objectives of the meeting:**

- i. To provide an update on the implementation of, and discuss challenges for PPHSN's six service networks.
- ii. To encourage reflection and identify country-level priorities and opportunities that technical partners can leverage to achieve a coordinated and collaborative approach to One Health.

¹ Please note that all presentations mentioned in this report are available to meeting participants. See Annex 1 for the List of participants and Annex 2 for the Summary of decisions.

- iii. To discuss the capacity of Pacific Island countries and territories (PICTs) to make the Pacific region safe and secure from infectious diseases and other public health threats.

Opening remarks

- 3. The **Hon. Ifereimi Waqainabete, Fiji's Minister for Health and Medical Services**, welcomed participants to Fiji and acknowledged the support of the Government of France (through the French Development Fund – AFD), the Government of Australia (DFAT) and the Government of New Zealand (MFAT) through the project, 'Strengthening the capacities of the Pacific Public Health Surveillance Network'.
- 4. The Minister said the health of Pacific populations has improved in the past 20 years, but the gains made are threatened by the effects of climate change and outbreaks of emerging and re-emerging communicable diseases including arboviral diseases (e.g. dengue and zika). Antimicrobial resistance (AMR) is a serious threat. The Minister encouraged PPHSN to invite clinicians, physicians, surgeons and other health care professionals to the meeting to increase collaboration towards eradicating communicable diseases such as TB and leptospirosis.
- 5. The meeting acknowledged the remarks, noting that the Minister:
 - i. recognised the role of public health in achieving universal health care;
 - ii. encouraged PPHSN to invite other health workers, including clinicians, to the meeting so that all parts of the health sector can work together to eradicate communicable diseases;
 - iii. stressed the threats of climate change for health and the need for climate change advocacy by the health sector.
- 6. **Dr Angela Merianos (WHO)** reaffirmed WHO's commitment to working with partners to achieve Pacific health security and to support countries in meeting their obligations under the International Health Regulations (IHR). Health security requires ongoing vigilance given that 26 significant outbreaks were recorded in the region in 2018 and that new diseases are likely to emerge. These threats are compounded by the effects of climate change and the rise of AMR, which is one of WHO's priorities.
- 7. **Jojo Merilles (SPC)** welcomed everyone and outlined the programme for the meeting, noting the emphasis on scaling up the work that PPHSN has been doing.

Item 2: Keynote address

- 8. **Dr Mohammed Patel (Australian National University)** highlighted the effectiveness of local people applying local solutions and gave several examples of graduates of the DDM (Data for Decision Making) programme taking action after they had identified and characterised problems through their projects.
 - a) In FSM, in response to data showing that cervical cancer was the leading cause of cancer deaths, a health worker successfully advocated for higher uptake of PAP smears and HPV vaccination. Another study showed high rates of smoking, alcohol, and betel-nut use in schools. The local response included advocacy for education in schools, legislation on sales to students and a school exercise programme. This type of action can be replicated across the Pacific.

- b) Dr Patel reminded PPHSN that there are existing solutions to answer the minister's challenge to eradicate several communicable diseases, but the relevant areas of the health and non-health sectors must work together to achieve the goal.

ITEM 3: Report of PPHSN-Coordinating Body (CB)

9. The Chair of the PPHSN-CB, Dr Eric Rafai, reported the outcomes of its recent meeting (29–30 March 2019, Denarau, Fiji), noting that terms of reference for the external review of PPHSN were finalised and SPC as focal point was in the process of contracting a consultancy team to carry out the review. The team will visit selected countries and consult with others by Skype etc. to discuss the future direction of PPHSN.
10. During the CB meeting, a recommendation was made that the current annual PPHSN meeting should become a meeting of Pacific Directors of Public Health, similar to the existing annual meeting for Clinical Directors. The review will consider the implementation of this decision, which is aimed at strengthening leadership on public health initiatives, including those undertaken by PPHSN.
11. Dr Rafai noted that the new PPHSN website will be launched in the near future and asked countries to provide up-to-date material to the focal point.
12. The meeting acknowledged the PPHSN-CB report, noting in particular that:
 - i. the external review of the PPHSN will be undertaken in the next 6 months and will include consultations between the review team and countries;
 - ii. the review will include consideration of the recommendation by Pacific Heads of Health that the annual meeting of the PPHSN become a meeting of Pacific Directors of Public Health to provide a strong regional forum for strategic thinking on public health issues.

ITEM 4: Surveillance data analysis and reporting

13. Dr Mark Durand (Pacific Island Health Officers' Association – PIHOA) moderated the session, which included three presentations.
14. Dr Tom Kiedrzynski (Ministry of Health, New Zealand) discussed the importance of **data quality for effective public health surveillance**.
 - a) Surveillance system must be useful, i.e. results are used to take both immediate preventative action and longer-term measures. Action (tracing sources, immunisation campaigns, public messaging, etc.) must be timely, i.e. at the start of an outbreak, not towards the end of it. The recent outbreak of measles in New Zealand saw cases fall after an immunisation campaign began. Similar results were achieved with targeted immunisation in response to data showing a higher incidence of meningococcal disease in Maori and Pacific peoples (meningococcal disease is notified by age and ethnicity and also by sero-group).
 - b) The effectiveness of surveillance depends on good data, i.e. data that is complete, timely and valid. Routine efforts to maintain and improve a surveillance system should include training, dialogue with data providers and information users, and appropriate information dissemination. Less frequently, there should be a review of the system, with

stakeholder consultation, performance evaluation, and consideration of the legal framework for case management.

- a) Dr Angela Merianos (WHO) said the **Pacific Syndromic Surveillance System (PSSS)** has been in use since 2010, reporting on five syndromes: AFR, diarrhoea, ILI, DLI and prolonged fever, with 17 PICTs (Pacific Island countries and territories) reporting regularly. Weekly reports, which are posted on the WHO and SPC websites, provide early warning of common outbreak diseases.
 - a) Limitations of PSSS data include inconsistent use of case definitions, interpretation of 'prolonged fever', non-capture of some outbreaks (e.g. hepatitis A in RMI and Tuvalu), and no automatic collation or analysis of regional trends.
 - b) Participants were asked to consider if PSSS is still fit for purpose, including whether the five current syndromes should be kept, noting the Surveillance Technical Working Group (STWG) recommended dropping prolonged fever. The region no longer relies only on syndromic surveillance, given increasing PICT capacity to produce timely laboratory results, and there are new tools for data capture, analysis and visualisation.
17. Dr Michael Nunan (Beyond Essentials) described **Tupaia** (www.Tupaia.org) – a software system that enables decision-making through data aggregation and visualisation. Its development has been supported by DFAT.
- a) Tupaia is free and open source for low- and middle-income countries. A team of developers maintains the platform for the Pacific. Tupaia modules include health supply chains, health information system (HIS) aggregation, and disaster response. Upcoming modules include disease surveillance and AMR mapping.
 - b) In terms of data security, countries using Tupaia own 100% of their data. Password-protected permissions systems control data access.
 - c) Tupaia put forward a proposal to migrate PSSS to Tupaia. Countries could still use their own HIS, with Tupaia pulling data from national systems, aggregating and displaying the data in a way that is fit for purpose for the Pacific. Tupaia can assist each country to take part.
 - d) Depending on DFAT support, Tupaia plans to further develop a social media platform for sharing information, building response teams, etc.
 - e) Beyond Essentials is also developing **Tamanu** – a patient-level electronic medical record system that is suitable for PICT conditions (www.tamanu.io).

Discussion

18. Participants considered the PSSS is useful for countries in detecting events or increased incidence. They noted that:
- a) a comprehensive surveillance system includes all systems (event-based, hospital-based, etc.).
 - b) Each country must develop its own system for integrating various surveillance elements, defined alert thresholds, and mechanisms (typically using the EpiNet team) for interpreting surveillance system outputs.
 - c) Syndromes should not be changed without considering the need for training the people in the field who are responsible for recording events. It would be useful to capture zika in one of the definitions.
 - d) To enhance the usefulness of the alert map, countries are asked to provide information on case numbers, regardless of whether they are considering declaring an outbreak.

- e) There is a need for more coordination/interpretation of information across the region (such as a regional alert for high consequence pathogens, e.g. when a significant percentage of the population is not immune). The recent measles outbreaks in Australia and New Zealand could spread to PICTs and countries may need to consider lowering the age for MMR vaccination.
- f) Australia, Hawaii (USA) and NZ provide useful alerts when they identify imported cases of outbreak-prone diseases from PICTs. Surveillance information from PICTs is also useful to these countries. More collaboration could improve this reporting, with information from Australia, Hawaii (USA) and New Zealand feeding into the PSSS.
- g) It is important for countries to declare an end to outbreaks to trigger after-action reviews (identify lessons and improve preparedness) and enable neighbouring PICTs to adjust their risk perceptions. The timing for declaring the end of an outbreak will be three incubation periods from the time of the last case (or the time that the incidence of the disease in question returns to baseline).

19. The meeting:

- i. agreed to keep the current list of syndromes in the Pacific Syndromic Surveillance System (PSSS), and to strengthen surveillance and reporting for DLI and SARI;
- ii. agreed the PPHSN Surveillance Technical Working Group will provide guidelines for implementation of case definitions and submit them to PPHSN members for consideration;
- iii. agreed to recommend to PHOH and PHMM a resolution for PICT health agencies to report suspected outbreaks to WHO, SPC and CDC as early as possible, and to formally declare an end to all outbreaks using agreed-on criteria for timelines;
- iv. agreed to initiate inclusion of Australia, New Zealand and Hawaii (USA) in meetings/discussions related to sharing of information (e.g. cases of outbreak-prone diseases among migrants and Pacific Island communities);
- v. noted the usefulness of weekly PSSS reports produced by WHO and the weekly outbreak alert map produced by SPC, and requested SPC and WHO to explore enhanced data visualisation, risk interpretation in special cases, and consolidation of weekly regional PSSS and outbreak alert map reports;
- vi. noted the potential to use data visualisation techniques (e.g. via Tupaia software) to highlight features of national-level data.

Day 2: 4 June 2019

ITEM 5: Laboratory strengthening

20. Ann-Claire Gourinat (Institut Pasteur de Nouvelle-Calédonie) moderated the session, which included seven presentations.

21. Russell Cole (Pacific Pathology Training Centre – PPTC (formerly the Pacific Paramedical Training Centre)) presented the **report of the LabNet Technical Working Body (LTWB)**. LabNet is a collaboration of laboratory service organisations working in the Pacific region to advance and strengthen medical and veterinary health services. The network includes Level 1 (national), Level 2 (subregional) and Level 3 (reference) laboratories.
 - a) Current issues include biosafety and biosecurity; AMR; advancing relevant clinical sciences, such as biochemistry and haematology which are weak in the Pacific; developing lab services towards accreditation; governance, supervision and competency (training, continuing professional development – CPD).
 - b) LTWB has an advisory role in developing PICT lab services and is developing an advocacy document outlining technical service needs and priorities for presentation to PHMM. Priority 1 is to review the capacity and scope of medical laboratory services.
 - c) Enhancing regional health security requires strengthening the capacity of national and regional labs in accurate laboratory diagnosis, lab-based surveillance and networking, biosafety containment and quality management.
 - d) LabNet partners support the step-wise implementation of LQMS (Laboratory Quality Management System) in national labs. SPC is implementing a TA/mentorship programme between L1 and L2 labs and an AMR mentoring and capacity strengthening programme. FNU delivers the Bachelor of Medical Science and offers a pathway for lab workers with no formal qualifications.
 - e) PPTC supports PICT laboratories through four sections: Pacific Laboratory Accreditation Development, Laboratory Service Development, External Quality Assessment and the Diploma of Medical Laboratory Science.

22. Dr Mark Durand (PIHOA) updated the meeting on the implementation of **SLMTA (Strengthening Lab management Towards Accreditation) in the US-affiliated Pacific Islands**. SLMTA is a training tool designed to achieve immediate, measurable improvement in labs with low resources. The training (mentoring and classroom-based) addresses shortcomings identified in SLIPTA (Stepwise Laboratory Improvement Process Towards Accreditation) audits.
 - a) PIHOA has appointed a Regional Lab Program Specialist, to support SLMTA implementation. The position is based at the SPC Office in Pohnpei, FSM.
 - b) Implementation of SLMTA in the Yap lab has included three workshops (lab floor mapping; revision of SOPs; process mapping; productivity management; inventory management; and procurement management).
 - c) It is critical that the national health leadership endorses their lab's commitment to the SLMTA initiative.

23. Tebuka Toatu (PPHSN LabNet Coordinator, SPC) presented a **Roadmap to laboratory accreditation** based on a nine-step process – 1. Laboratory Quality Management System (LQMS) training; 2 LQMS assessment; 3. Internal self-assessment; 4. Mentorship programme at an L2 lab; 5. SLIPTA audit; 6. Internal self-assessment; 7. SLIPTA audit; 8. Assist countries to work with external accrediting bodies; 9. Assist countries in maintaining accreditation status.

- a) SPC provides assistance for LQMS implementation and helps labs to develop action plans to address low scores for Quality System Essentials (QSEs). Weak areas include process control, process improvement and assessment.
 - b) Major challenges for PICT L1 labs include achieving accurate, reliable and timely test results, due partly to the limited number of qualified staff who fully appreciate the importance of quality systems, and partly to the low national priority given to lab financing, planning and service delivery. Quality management does not guarantee error-free operation but allows detection and prevention of errors.
 - c) If the decision is made to seek accreditation, it is important that labs are able to maintain this status. Accreditation is costly and, once accredited, there are penalties for not complying with requirements. SPC will continue to provide support for labs that gain accreditation.
24. Kalkie Sero (Vanuatu), Maria Marfell (Yap, FSM) and Sitinaeli Hoko (Tonga) presented **country experiences** of implementing lab improvements.
25. **Vanuatu** – Following Tropical Cyclone Pam, Vanuatu received support for lab strengthening from WHO and SPC, and from PPTC, which worked with MOH to implement LQMS. The lab's initial SLIPTA score was 54%, which was surprisingly low, but staff persevered and were pleased to achieve a score of 89% by 2018. There is still work to do to complete SOPs, equipment records and the lab handbook, and undertake further staff training. The aim is to reach a SLIPTA assessment score of 100%.
26. **Yap experience with SLMTA/SIPTA** – A baseline audit in 2016 showed weaknesses in management, audit and review processes. SLMTA training in 2016 identified QSEs for improvement. Current training is focused on process improvement and staff are undertaking the PPTC Medical Lab Science Programme. Staff turnover has been a challenge, with trained staff moving on to wider opportunities. New positions include a haematologist, who was recruited in 2018; and a training officer and lab quality consultant proposed for FY 2019. LBJ Tropical Medical Center in American Samoa provided a training and microbiology attachment in 2017. This was a very effective form of training. Lessons learned include the need for total support from upper management; effective planning and budgeting; and creation of a culture of improvement in the lab.
27. **Tonga is seeking accreditation** (ISO 15189). Under an MOU, PPTC has provided finance, training, and support for SOPs, QA and policy development. Regular audits are carried out as part of the work towards accreditation. Major challenges for LQMS are improving the reliability, timeliness and accuracy of results. Behaviour change can be a challenge for long-term staff, which is partly managed by acknowledging staff achievement monthly. The last SIPTA audit (97%) included a visit by IANZ (an accreditation body), which provided advice to support accreditation. Challenges include HR, procurement, and lab infrastructure (a new extension is nearly ready).

Discussion

28. Participants noted:
- a) the need for greater progress on improving PICT lab standards with the goal of accreditation where feasible, benchmarking for L1 labs, and quantification of HR gaps, including the number of pathologists needed in the next five years. This information should be provided to PHMM;
 - b) the need to include the animal health sector and to increase zoonotic capability;
 - c) the lack of locally available biosafety training, which is a requirement of the IHR;

- d) the difficulty of retaining qualified staff in PICT labs. The situation could be addressed by defining a career path and improving salaries and conditions in recognition of qualifications;
- e) the training process for lab technicians would benefit from a new model, based on a comprehensive lab training package with set targets;
- f) requests for specialist tests are increasing due to development of clinical specialisation in PICTs. MOHs need to develop a plan or policy to ensure the scope of lab services can match the types of clinical and public health services provided;
- g) the pros and cons (including cost) of gaining and maintaining accreditation and the potential for a regional assessment body. PICTs must make own decision and budget for the accreditation process. MOH support is essential. For some small labs (around six staff), the WHO minimum standards are a suitable target;
- h) Cook Islands' request to be included in the next round of support for accreditation.

29. The meeting:

- i. agreed on the need to lift laboratory standards across the region and the importance of setting timelines for achieving benchmarks for all laboratories, including accreditation where it is feasible and sustainable, noting that Mataika House, Fiji, is targeting accreditation as a level 2 laboratory by 2025;
- ii. agreed that at next year's meeting of Directors of Clinical Services, a session will be dedicated to laboratory issues to support strengthening of the regional health architecture;
- iii. agreed that to inform Pacific Heads of Health, LabNet and technical partners should set regional benchmarks for:
 - a. the number of pathologists and qualification standards for laboratory technicians required to support improved laboratory services in PICTs,
 - b. number of accredited laboratories;
- iv. agreed to develop a roadmap for laboratory improvement with milestones that every PICT can commit to, depending on their size and the services they provide;
- v. agreed that LabNet should work with technical partners to define objectives for laboratory services and develop a comprehensive technical package for the region that takes into account the training currently provided by agencies;
- vi. agreed that the LabNet Technical Working Body should expand to include national laboratory representatives;
- vii. agreed that the LabNet Technical Working Body should consider development of a Pacific-specific standard that can serve as the minimum acceptable standard that all laboratories should aim to achieve; and further consider that a Pacific standard could be the basis for regional assessment of accreditation in place of an international assessment body;
- viii. recognised the need to define a career path for laboratory staff and a clear pathway to qualification, similar to the pathway for other medical cadres, with

- consideration of establishing a regulatory body and transitioning to requiring annual registration for qualified laboratory staff;
- ix. recognised the problems of retaining trained laboratory staff and the need to offer improved salaries and conditions;
 - x. agreed that animal health laboratories must be considered in regional laboratory improvement programmes, including through sharing information on DDM, IATA training and other initiatives.

Item 6: Strengthening Health Interventions in the Pacific/Data for Decision Making (SHIP/DDM)

30. Dr Sala Saketa (SPC) and Ramneek Goundar (FNU) moderated the session, which included three presentations.
31. Dr Donald Wilson (FNU) described the course modules and the pathway to entry to the **DDM/Postgraduate Certificate in Field Epidemiology (PGCFE)**. (He noted that to comply with FNU course naming requirements, the DDM course is now called the PGCFE). Criteria include a background as a health professional with a bachelor degree, or five years' experience in the health sector, and a supervisor's reference. Many of those who have completed the course have gained entry based on experience (mature entry).
- a) The degree of Master in Applied Epidemiology (MAE) has been revised with aim of achieving TEPHINET (Training Programs in Epidemiology and Public Health Interventions Network) accreditation, which enables graduates to take part in global initiatives.
 - b) There is a need for more one-on-one training and recruitment of a mentor has been suggested. Some regional students struggle with scientific English and academic writing, which is why a 65% average at diploma level is required for entry to the masters programme.
 - c) A number of students have completed all five DDM units but have not completed FNU enrolment requirements, due to lack of birth certificates. Until enrolment is completed, students cannot graduate. The Vice Chancellor of FNU has approved in principle that passports can be a proxy for birth certificates and countries are asked to ensure candidates can obtain these documents.
32. Dr Mark Durand (PIHOA) updated the meeting on **PIHOA's support for DDM/SHIP in USAPI**, noting that qualifications are important for workforce and systems development. PPHSN has allowed collaboration in the delivery of DDM.
- a) 232 students from North Pacific PICTs have enrolled in the course and 95 have now completed it, contributing to a critical mass of staff trained in data awareness and management.
 - b) Regional goods that have evolved from DDM include the development of SOPs for communicable disease reporting and after-action reports.

- c. Weekly outbreak disease surveillance reports are now received from 90% of sites, compared to 10% in 2015.
 - d. A training matrix has been developed for provision of courses through to 2021. Timing of delivery will depend on the readiness of health agencies.
33. Jojo Merilles (SPC) updated the meeting on **SPC's implementation of SHIP-DDM**, noting that the data used in the programme is actual data (following the principle 'from work, at work, for work'). This has enabled students to undertake system improvement projects e.g. in Vanuatu, improving the timeliness and completeness of surveillance data reporting. Operational research courses were also delivered (13 officers from 8 PICTs); 14 studies were conducted and 6 papers have been published in peer-reviewed journals.
- a) The next steps are to scale-up implementation through delivery of subregional courses, providing training for trainers and developing training manuals for trainers and trainees.
 - b) The course is being translated into French and will be delivered in the French territories (French Polynesia, New Caledonia, Wallis and Futuna) in 2020–2021.
 - c) The DDM course is not available online, except for some background material. Face-to-face training is an important aspect of the course, especially for hands-on projects.
 - d) SHIP is a tool that countries can use to strengthen systems to address infection prevention and control, AMR, etc. It is a problem-solving tool that can also link silos.

Discussion

34. Participants commented on
- a) the benefits of the course in empowering students to use data to make systems improvements;
 - b) the application process – some participants were unaware of the process and requested further information. Samoa and Cook Islands asked to be included in further training rounds.
 - c) the need to keep course delivery within a shorter timeframe to avoid students dropping out before completion (Kiribati and Tuvalu).
 - d) the selection of appropriate candidates, depending on country needs, and the importance of encouraging lab technicians and scientists to take the DDM course.
 - e) the need for support and mentoring for students. Some e.g. nurses, have a heavy daily schedule and may lack the time to complete their projects.
 - f) Inclusion of the animal health sector, noting a One Health module has been discussed for the DDM.
35. The meeting:
- i. noted that according to their presentations, countries find the DDM/PGCFE (Postgraduate Certificate in Field Epidemiology) to be an effective and useful capacity building programme that also provides a pathway to higher qualifications;
 - ii. requested countries to ensure DDM candidates can obtain birth certificates (or passports as a proxy for birth certificates) to satisfy FNU enrolment regulations and enable students who have completed the course to graduate;

- iii. agreed that when selecting DDM candidates, countries should identify people who can fill gaps for health data technicians (in the human, animal or environment health sectors), noting FNU will screen the applications against the minimum qualification requirements for the DDM programme. Individuals from all backgrounds may qualify as long as they provide the necessary documents for enrolment and recommendations from their respective country authorities. Final selection and nomination for the course is a Ministry decision;
- iv. recognised that candidates undertaking the course require mentoring support and time allowed during work hours, if necessary, to complete course requirements including their projects, noting that workplace supervisors can act as mentors;
- v. agreed that candidates' projects should be aligned with the country's priority problems and should be discussed with the management team;
- vi. recognised the benefits of 'training of trainers' for facilitators and mentors;
- vii. agreed to communicate clearly with countries on the schedule for the DDM course and enrolment procedures, including through the course brief, and also the PPHSN website and PacNet;
- viii. noted that a training manual is being developed for trainers and trainees. The manual will be translated into French and training will be delivered for francophone countries (French Polynesia, New Caledonia and Wallis and Futuna) in 2020–2021.

Day 3: 5 June 2019

ITEM 7: One Health

36. Associate Professor Simon Reid (School of Public Health, University of Queensland) presented the principles of **One Health** and described how systems thinking can be used to gain insights into how a system works, where the problems are and how to make improvements.
- a) One Health means taking a multidisciplinary approach to understand, prevent and manage zoonotic diseases, which involve interaction between human, animal and natural environments, e.g. to prevent leptospirosis transmission in Fiji; or better manage live animal markets in Asia, which mix different species from different regions and have little oversight of hygiene and waste disposal.
 - b) With complex problems, such as zoonotic diseases, there may be several solutions. It is also likely that an intervention will lead to unintended consequences. Understanding the behaviour of a system helps to identify the points where an intervention is more likely to achieve a desired outcome.
 - c) WHO has produced a guidebook, *Systems Thinking for Health Systems Strengthening*. Applying a systems approach to the problem of leptospirosis in Fiji involved identifying stakeholders, issues, and management options, and using a consultative

process to decide what was feasible – not to eradicate the disease but to reduce case fatality. The focus was on the structures surrounding transmission to humans, including human behaviour.

- d) Each zoonotic problem (e.g. bovine TB, leptospirosis, ciguatera) involves a different set of stakeholders, including different government agencies, professional groups and communities. One Health networks need to be set up, recognising that it may take two to three years for those involved to understand each other's roles. Some countries have Zoonotic Committees that work well.

37. Iwona Piechowiak (SPC) presented an **Integrated planning** approach to One Health, which calls for generational change and recognition of the role of sustainable ecosystems management in human health.

- a) There have been several regional One Health consultative meetings in 2018 and 2019.
- b) SPC is now working on developing a Pacific One Health Integrated Programme to address the endorsed resolutions of these consultative meetings: (1) strengthen partnerships between the human, animal and ecosystems health sectors in research, (2) empower local education institutions to provide One Health research and training leadership appropriate to the Pacific context, and (3) address vector control from ecosystems perspectives, including through better water and natural resources management, noting the contribution of ecosystems degradation and in particular deforestation, land degradation and water pollution.

'The One Health approach recalls that human health cannot be considered alone and that it is intrinsically linked to animal and ecosystem health' (ID4D, 2019)

38. Dr Eric Rafai (Fiji MOH) presented a **Multisectoral framework for collaboration and management** using the example of the establishment and operation of Fiji's National AMR Committee.

- a) AMR provided an entry point for a One Health approach in Fiji. The committee's purpose is to champion the implementation of the Fiji National AMR Action Plan 2015 and to demonstrate the effectiveness of collaboration between diverse partners in implementing AMR countermeasures.
- b) It was difficult to convince other sectors that they are equal partners in a One Health approach.
- c) The committee is now working with Australia's CSIRO to review and develop a new plan with the vision of achieving a 'One Health Informed Society' by 2030.

39. Dr Ann-Claire Gourinat (CHT, Medipole, New Caledonia) presented **Leptospirosis surveillance and response** in New Caledonia.

- a) Worldwide, around 7 to 10 million people are infected annually, with severe cases resulting in 59 000 deaths. Many cases are unrecognised because the mild form resembles influenza.
- b) In New Caledonia, both ELISA and quantitative PCR are used to diagnose leptospirosis. Cases are treated using antibiotics, with aggressive supportive care for severe cases.
- c) In 2018, there were 27 cases per 100 000 inhabitants, with most occurring in the rainy season.

- d) Prevention includes a communication campaign, vaccination of those most at-risk (e.g. vets, livestock farmers) and improved hygiene measures, including wearing closed shoes and controlling rodents.
40. Dr Tereapii Uka, Tereapii Nimerota and Douglas Tou (Cook Islands MOH) presented Cook Islands' approach to **Vector-borne disease surveillance and response**, focusing on the 2019 dengue outbreak (56 cases to end of May 2019).
- a) The public health response includes the ongoing *tutaka* programme – a house to house inspection for mosquito-breeding places and general cleanliness; peri-focal spraying of risk areas; increased public awareness; mosquito larvae trapping and monitoring; free mosquito nets for patients' home use; and daily surveillance update reports to key stakeholders and MOH staff.
 - b) Challenges include the case definition not being followed by some clinicians and delays in spraying.
 - c) There are plans to improve capacity for monitoring, analysis and data management; strengthen community participation in health activities; and strengthen partnership with stakeholders (internal/external).
41. Dr Clémence Gatti (Institut Louis Malardé, French Polynesia), presented **Ciguatera fish poisoning surveillance and response**, noting that the Pacific region has the world's highest rate of ciguatera, though there has been no regular collection of information since 2000 (SPC previously monitored the regional incidence for 10 years). There is national data but this is not communicated to the regional or international level.
- a) Ciguatera is not a benign condition – it has impacts on the digestive, cardiovascular and nervous systems.
 - b) Ciguatera will worsen with climate change. It limits food sources and local economies (people are more likely to eat imported products).
 - c) Research is now looking at new vectors with recent studies showing that invertebrates may also be a risk.
 - d) Ciguatera can only be detected in fish using lab-testing methods that require highly qualified technicians. There are more than 40 different ciguatera toxins. There is no rapid test. Kits were developed but were unreliable.
 - e) The Institut is putting together a research project to develop a diagnostic test for patients using urine and blood. Currently, diagnosis is based on symptoms, and analysis of what the patient ingested, if there is any left over.
 - f) There is no treatment for ciguatera in Western medicine. Researchers are interested in traditional medicine and treatments.
 - g) In French Polynesia, several agencies are involved in the integrated response to ciguatera, which includes epidemiological survey, technology watch, risk assessment, biomedical approaches, and education and community outreach. There is an online form to declare cases. When there is a major situation, researchers may make a field visit to take samples.
 - h) The Institut can test fish samples for ciguatera if PICT labs send a dried or vacuum-packed fish sample. But the process takes time and the results will not be available quickly.

42. Pierre Horwitz (Wildlife Conservation Society) presented **Building the Pacific One Health Network – A common platform (meta-network) for health and environment in Oceania**, noting the current lack of engagement between regional ecologists/the environment sector and health professionals.
- a) Various meetings in 2018 called for integrated action. The Oceania Planetary Health Forum communiqué included a recommendation to ‘encourage existing networks to establish common platforms to facilitate productive dialogue and collaboration between the health and environment sectors and other relevant sectors’.
 - b) Where should this consolidated platform for health and environment be established – in an existing intergovernmental organisation or as an independent publicly funded office?
 - c) The suggestion is that it should be located in an organisation (e.g. SPREP, SPC) until it can become an independent publicly funded office.

Discussion

43. Participants commented:
- a) that all presentations highlighted the need for collaboration and understanding between sectors to advance a One Health approach;
 - b) on the need to apply a One Health perspective to zoonotic diseases that threaten PICTs, including influenza;
 - c) that zoonotic problems need to be contextualised to the Pacific, e.g. what are the risks of keeping pigs close to human dwellings? In this and other cases, there is insufficient information for risk assessment;
 - d) on Fiji’s approach to AMR and development of an action plan. Current information on AMR in PICTs is fragmented. PPTC encourages L1 and L2 labs to refer multi-drug resistant organisms to L3 labs. An AMR surveillance network was proposed to share information in the region;
 - e) SPC has begun developing a manual on control of Aedes mosquitoes with the best strategies for PICT conditions. The manual will be completed by the end of 2019 and training will follow;
 - f) traditional medicine is important in PICTs and may offer alternatives to antibiotic use. SPC’s Land Resources Division is collaborating with the University of the South Pacific on research in this area.
 - g) given that SPC is already active in the planetary health space, the proposed consolidated platform should be located in SPC. (SPC acknowledged the proposal, noting that progress on the issue would depend on support from members and partners.)

Day 4: 6 June 2019

Item 7 b : Human-animal surveillance interface

44. Dr Tom Kiedrzynski (NZ) moderated this session on the human and animal surveillance interface. There were five presentations.

45. Nguyen Thi Minh Thoa (Influenza Division, US CDC, Vietnam) **presented Animal-human interface surveillance in Vietnam: An overview of influenza surveillance through the One Health approach.**

- a) In Vietnam, rapid urbanisation in the last 10 years and cross-border trade have heightened emerging infectious disease risks. A One Health approach was adopted early to control avian influenza, with the establishment of preparedness programmes followed by the One Health Strategic Plan, 2016–2020. The plan brings together Vietnamese and international agencies under the leadership of the government ‘to address zoonotic infectious disease threats at the human animal-ecosystem interface’.
- b) CDC supports surveillance and research for human and animal influenza viruses and works with partners to develop seasonal flu vaccines, which are mandatory for health workers. The surveillance system includes both passive (e.g. outbreak investigation) and active surveillance (e.g. live bird markets). Positive samples are shared with WHO collaborating centres.
- c) The national One Health platform has evolved to include wildlife and environment stakeholders, e.g. Ministry of Natural Resources and Environment. Challenges include lack of information sharing and active involvement by sectors such as environment.
- d) The key message is that different sectors must connect and work together, which requires leadership support.

46. Prof. Patrick Readings (WHO Collaborating Centre for Reference and Research on Influenza – VIDRL) **presented Evolutionary dynamics of seasonal influenza viruses (in the Pacific and globally)**, beginning with a brief review of influenza subtypes, the seasonality of epidemics and recent global circulation.

- a) Influenza pandemics (e.g. Spanish flu, Asian flu) differ from seasonal flu because when the virus comes from animals, all humans are susceptible.
- b) The current concern is the highly pathogenic avian influenza A virus (H5N1), which emerged in Hong Kong in 1997, re-emerged in 2003 and has spread from birds to humans in 16 countries. The virus has not shown effective person-to-person transmission but could mutate to allow this, which is why so much effort goes into flu surveillance.
- c) In the Pacific, outbreaks are probably related to infection arriving with tourists.
- d) The WHO Global Influenza Surveillance and Response System (GISRS) is one of the biggest networks globally and is a platform for development of diagnostics. WHO Collaborating Centres are Level 3 laboratories. Relevant centres for the Pacific are the WHO CC, Melbourne, and CDC, Atlanta.
- e) National Influenza Centres include L2/L3 laboratories in Fiji, PNG, New Caledonia, New Zealand and Australia) and other labs with PCR capacity (French Polynesia, Guam, Hawaii USA). Regional L1 laboratories collect clinical specimens and often forward them directly to a national centre or WHO CC but may perform identification using immunofluorescence or rapid tests. From 2014 to 2019, Fiji, New Caledonia, PNG, Solomon Islands and Vanuatu submitted samples to the WHO CC.
- f) Prof. Reading outlined the Doherty Institute’s Pacific engagement, which includes WHO reference lab support, specialised training programmes (Fiji, Kiribati), joint research projects (Samoa and Fiji) and PhD student supervision.

47. Dr Salanieta Saketa (SPC) presented a report of the **2018 Training Workshop to Strengthen Influenza-like Illness (ILI) and Severe Acute Respiratory Tract Infections (SARI) Surveillance in PICTs**. Influenza is a priority outbreak disease for PPHSN and ILI is the PSSS's most commonly reported disease. Currently A and B influenza viruses are circulating in the region.
- a) The training workshop (August 2018) was held to update lab-based flu surveillance, and strengthen ILI and SARI surveillance. Thirty-four participants from PICTs attended (none were from the animal health or environment sectors due to lack of funding).
 - b) Case definitions for ILI and SARI were strengthened and participants received training in taking swabs and transporting samples. (SPC has funding from CDC to assist countries in shipment and testing samples for ILI; and separate funding for shipment/testing from AFD for other diseases.)
 - c) The roles of the three national influenza centres in PICTs (Fiji, PNG and New Caledonia) were explained.
 - d) A key recommendation from the workshop was to 'Ensure strategies to strengthen influenza laboratory surveillance including standardising in-country testing, sample collection, storage and referral mechanism, including shipping specimens to L2 and L3 labs'.
48. Alfred Dofai, Cynthia Joshua (Ministry of Health and Medical Services, SI) and Barnabas Keqa (Ministry of Agriculture and Livestock, SI) presented **Influenza surveillance and response in Solomon Islands**. The SI surveillance system was formally set up in 2016 as part of meeting the IHR and to provide early warning. It includes a Public Health Emergency and Surveillance Unit, which has links to the provincial level. The system has 13 sentinel sites which report weekly on ILI. There are 9 sentinel sites for SARI. Since 2018 a total of 108 SARI cases have been reported but no investigations have been conducted.
- a) Cases are reported from the provincial sites without lab confirmation, which is only available at the national hospital.
 - b) 'EWARS in a box' is used to report data directly from sentinel sites and relevant information is posted to PacNet.
 - c) Challenges include data quality, inconsistent application of case definitions, the multi-roles of nurses at provincial sentinel sites, and staff turnover. There is no routine sample collection despite swab training.
 - d) When an outbreak is confirmed, a response is activated, which includes arrangements for a staff call-out roster. Samples are shipped to Melbourne according to IATA regulations. The results of tests conducted by the local lab and the Melbourne WHO CC for the Jul./Aug. 2018 period showed good comparability.
 - e) A new lab is being developed with support from Taiwan. Lab policies and guidelines need to be revised or developed. Scaling-up effort requires more training and backup staff and improving links with the animal health sector. SI is interested in risk assessment training.
 - f) *Animal health* – SI has requested training from WHO for syndromic surveillance for zoonotic diseases and is interested in building capacity through field epidemiology training and SHIP/DDM. Current surveillance is passive. A 2019 ASF (African swine fever) meeting of FAO and government sectors (health, animal health, biosecurity,

national security) was organised by WHO. Outcomes included a plan for syndromic surveillance for zoonotic diseases and sensitisation of port and customs staff and importers.

49. Dr Ann-Claire Gourinat (New Caledonia) presented **Influenza surveillance and response in New Caledonia**, outlining the sample collection protocol at sentinel sites (26), ILI case definition and laboratory procedures for testing samples.

- a) The surveillance system includes the main hospital. Information is shared weekly with WHO FluNet and there are monthly reports to GPs with data on cases, vaccination, etc.
- b) The influenza response includes vaccination campaigns targeting at-risk groups (pregnant, elderly, chronically ill) and wide communication of the message 'Everybody needs flu vaccine'.
- c) New Caledonia began a new influenza vaccine strategy in 2017, using a Southern Hemisphere vaccine, which is a tetravalent vaccine as opposed to the previously used trivalent type. There has been an atypical pattern of influenza activity so far in 2019. A dengue outbreak has complicated diagnosis.
- d) Future plans include strengthening SARI surveillance, assessing whether the switch of vaccine formula was the right decision, and expanding vaccination coverage of healthcare workers, which is low at present.
- e) The Laboratory of Microbiology Medipole wants to develop influenza cell culture isolation by the end of 2019, and to extend lab services to neighbouring PICTs.

Discussion

50. There was extensive discussion of the difficulties of obtaining specimens for influenza virus testing, especially given the reluctance of clinical staff to take nasopharyngeal swabs despite training. Once a sample is obtained, there are difficulties in ensuring it is transported to the lab within the recommended time.

51. Dr Readings said that the key point for PICTs is to have a test in-country that informs them whether they have an outbreak (sending samples to the WHO CC is not diagnostic). PICT labs need to be confident about their results. Rapid testing or GeneXpert is suitable for smaller PICTs, though GeneXpert is expensive (AUD 40.00 per test). Transport of samples to labs within 2 hours is not necessary (as the test kit says) if they can be stored at -4°C.

52. To clarify which swab techniques can be used and suitable test procedures, Dr Reading suggested (1) to trial changing the protocol from nasopharyngeal swabs to nose and throat swabs for one year to see if labs receive more samples; (2) using a standardised test with a reader, noting GeneXpert is ideal but expensive; (3) making a video of the test procedure, including information on timing and storage of samples. Clinicians can be referred to existing guidelines on the CDC and WHO websites.

53. SPC has funding to cover the cost of PICT labs shipping samples to reference labs (through a DHL account). PICTs should inform SPC of shipment details prior to shipping. Lab managers have been informed of the funding. Currently, three to five samples are being shipped each

week under this arrangement. PIHOA supports shipping for US API countries through a similar process.

54. Countries can contact the WHO CC in Melbourne for information and technical advice, e.g. the most suitable influenza to use.

Item 7 c: Developing a One Health framework in PICTs

55. The meeting split into three workshop groups to discuss possible One Health approaches in PICTs to (1) leptospirosis, (2) zoonotic influenza, and (3) AMR surveillance.

Discussion

56. Dr Simon Reid, who moderated the session, summarised as follows:

- a) The workshop discussions indicated that lack of laboratory capacity in most PICTs is a key weakness. Participants noted the need for labs to use accredited tests in order to give confidence in the results so they can be acted on. Livestock owners must trust the results if they are to accept changes that may be imposed on them. It may be beneficial to focus attention on PPHSN members working with their animal health counterparts to develop capacity for culture and sensitivity testing of animal samples, either through local solutions (e.g. developing a laboratory that could test food/animal samples or testing animal samples in public health labs) or through referral to overseas labs.
- b) The second area was working out where the entry point is for cost-effective sampling of animals. One idea was to use epidemiological data from a human case to identify possible animal exposure or a food source and then to investigate the source via animal sampling on farm or in the environment of a house, etc. This would probably need more thought to see if it is feasible, given it is difficult to achieve with food-borne illness.
- c) A common theme of the three group discussions was the need to pay attention to legislative and policy issues. In most PICTs, there is no legislation compelling a farmer to give access for samples to be taken. (People cannot be compelled to provide samples for investigatory purposes either.)
- d) The development of MOUs between sectors involved in One Health can be used to formalise mechanisms for collaboration between stakeholders. Political support, sharing of information and regular meetings are important in this process.

57. The meeting:

- i. acknowledged the usefulness of applying systems thinking to complex problems (such as reducing leptospirosis incidence) that require an integrated approach by the human, animal and environmental health sectors and other stakeholders;

- ii. noted the suggestion to establish a consolidated platform for health and environment for the Pacific Islands region in an existing regional organisation or network such as PPHSN;
- iii. agreed that AMR should be considered a priority area for all six PPHSN services (EpiNet, LabNet, PacNet, PicNet, SHIP/DDM and SurvNet);
- iv. noted Fiji's experience that AMR provided an entry point for establishing an integrated multisectoral/One Health approach;
- v. agreed that countries may wish to consider other priorities (e.g. influenza) that will provide a suitable entry point for establishing a One Health approach that brings all relevant sectors, including human, animal and environmental health, together;
- vi. asked countries to report back to the next PPHSN meeting on initiatives taken in this regard;
- vii. acknowledged the presentations on control and prevention of leptospirosis and ciguatera, which demonstrated desirable outcomes from an integrated approach;
- viii. agreed that the Pacific Syndromic Surveillance System will become **SurvNet**, which will include syndromic surveillance, event-based surveillance, hospital-based surveillance, AMR surveillance, lab-based surveillance, disease surveillance, vector surveillance and the alert map.

Influenza surveillance

- i. recognised that countries must have their own capacity and fit-for-purpose equipment, ideally using a standardised test with a reader (a rapid test for the Pacific region) to diagnose influenza and be confident about the result, while maintaining a robust system to send specimens to referral laboratories;
- ii. agreed the influenza testing algorithm and regional guide should be reviewed by the LabNet TWB to include collection, shipment and testing, with consideration of making a video of the test procedure, including storage of samples and timing of delivery to lab facilities;
- iii. further agreed that clinical staff could be referred to the guidelines for specimen collection on the WHO and CDC websites;
- iv. acknowledged that the reluctance of clinical staff to take nasopharyngeal swabs despite training is a bottleneck for surveillance;

- v. agreed that the TWB will review the literature and come up with a document to support a pilot of using alternative collection techniques such as throat and nose swabs;
- vi. agreed on the need for a protocol for communication between the health worker and patients to explain the reasons for collecting a specimen and to advise them of the result;
- vii. noted that countries can seek advice on appropriate influenza vaccines from the WHO Collaborating Centre in Melbourne;
- viii. agreed to promote influenza vaccination for health workers, noting that present coverage is very low;
- ix. acknowledged the need to report case fatality rates due to confirmed cases of influenza and dengue, noting that these case numbers are likely to be an underestimate of the actual burden.

Day 5: 7 June 2019

ITEM 8: Poster presentation

58. Christelle Lepers (SPC) moderated the poster session during which PICT representatives explained their activities, studies, research findings and challenges.

ITEM 9: Pacific health security

59. Dr Angela Merianos (WHO) presented the status of **Health security** in PICTs, noting that the International Health Regulations (IHR) are the legal framework for coordinated action for global health security.
- a) Implementing the IHR requires Member States to have capacities in eight areas (e.g. legislation and policy, surveillance, risk communication) and to be equipped to deal with five IHR-related hazards (biological, chemical and radionuclear).
 - b) Under the Pacific Health Security Coordination Plan (PaHSeC), PICTs and development partners have agreed to work together to strengthen IHR implementation.
 - c) The IHR Monitoring and Evaluation Framework has four components: the State Party annual report (SPAR), after-action review, simulation exercises and joint external evaluations (JEE), which are a five-yearly assessment. The 2018 SPAR reports showed that PICTS scored well for surveillance and lab capacity but lower for IHR coordination and national focal point functions, and ability to manage zoonotic events, and chemical events and radiation.
 - d) PICTs need to map their radiation risks and assess their capacity to detect, contain and mitigate radiation risks. They also need to pay more attention to chemical risks.

- e) The human health/animal health interface is weak in PICTs and needs strengthening in preparation for zoonoses.
 - f) All countries were encouraged to complete their SPAR IHR MEF early ahead of the 2020 World Health Assembly.
60. Christelle Lepers (SPC) presented **Epidemic and emerging disease alerts in the Pacific**, showing the latest alert map, which provides a picture of diseases circulating in the region (currently including flu, dengue, and measles in New Zealand) and contributes to preparedness for regional public health threats. It is updated weekly (on Mondays) and posted to PacNet as a PDF in English and French. There is also an interactive web-based version: <http://www.spc.int/phd/epidemics/>
- SPC and WHO thanked countries for sharing information, noting that the usefulness and accuracy of the map depend on the quality and timeliness of reporting from PICTs, and welcomed feedback/suggestions for improvement.
61. Kelera Oli (WHO) presented **Climate change – a security threat**, stressing that inaction is not an option for the health sector.
- a) Changing weather patterns will affect health security and damage infrastructure. There is considerable funding available for climate change issues, but little is coming to health and the sector need to advocate more strongly.
 - b) The Pacific Islands Action Plan on Climate Change and Health was launched in May 2018. The implementation framework for the action plan includes Action R2.6: *Integrate climate change and health data in existing information systems such as the PPHSN and Pacific Climate Change Portal.*
 - c) A Working Group on Climate Change and Health has been formed under EpiNet/PSSS to develop action on R2.6, and a regional symposium on Climate Change and Health is proposed.
62. Dr Merianos (WHO) presented a brief summary of data on recent **Pacific disasters**. The most frequent disasters are storms and floods followed by earthquakes, volcanic activity and drought.
- a) Extreme weather events in the Pacific can affect multiple countries and bring about cascading health, social and economic impacts, especially for marginalised people.
 - b) The Global Emergency Medical Team Initiative assists organisations and member states to build capacity and strengthen health systems by coordinating the deployment of quality-assured medical teams in emergencies.
 - c) Emergency medical teams range in complexity from level 1 to level 3. Fiji is the first PICT to set up a Type 1 Fixed Emergency Medical Assistance Team. The Fiji FEMAT has been assessed as ready for international deployment.
63. Maria Marfel (Dept of Health Services, Yap, Federated States of Micronesia) presented **FSM's JEE experience and results**, focusing on the laboratory aspects of the evaluation. The Joint External Evaluation (JEE), which is one of the core components of the IHR monitoring and evaluation framework, uses a standard tool to review national capacities across 19 technical areas related to health security.
- a) FSM is the first Pacific Island Member State to request the voluntary JEE process.
 - b) The JEE evaluated the lab's capacity to test for priority diseases, ship samples to reference labs, support effective point of care and laboratory-based diagnostics, and implement laboratory quality systems. Challenges included retaining a qualified workforce and ensuring efficient procurement.
 - c) Overall recommendations of the FSM JEE included embedding coordination of IHR activities into existing structures at national and state level; implementing a national workforce plan to recruit, retain and develop staff who can comply with IHR provisions; and providing relevant and regular training to staff at all levels.

64. Roxy-Anna Kepae and Shanyko Benjamin (Ministry of Health and Medical Services, Nauru) presented **Nauru's experience of the State Party Annual Report (SPAR) process**, which was supported by WHO and SPC.
- a) The process assisted Nauru to understand its lack of capacity in specific areas, especially in responding to emergencies and outbreaks. Most indicators were at level 1–3 (red and yellow). Only Laboratory and Food Safety achieved level 4–5 (green).
 - b) Following the SPAR, WHO led workshops and desk simulation exercises on Risk Communication and All Hazards Health Emergency Response.
 - c) After completing a SPAR for the first time, Nauru needs technical support from partners, including WHO and SPC, on the next steps towards IHR compliance.
65. Christelle Lepers (SPC) presented the results of a **Pacific risk communication needs survey**, which was a PaHSeC initiative. Risk communication is a core public health capacity under the IHR.
- a) Survey responses were received from 13 PICTs.
 - b) 12 out of 13 countries have assigned risk communication personnel, all of whom have other responsibilities.
 - c) Challenges for effective risk communication include the inexperience of practitioners, difficulties coordinating with other sectors and first responders, and lack of communication technology in remote areas.
 - d) All responders wanted training that includes other sectors. They would also like to have resources, such as examples of key messages that can be adapted to fit different situations, and checklists, guides and templates for risk communication.
 - e) A pilot of regional training in risk communication was scheduled for June 2019 in Guam.
 - f) Partners have formed a Risk Communication Working Group (CDC, PIHOA, SPC and WHO).
66. Dr Paula Vivili presented **Leadership and (collective) accountability for non-communicable diseases (NCDs) – The Pacific NCD Roadmap and Pacific Monitoring Alliance for NCD Action (MANA)**. The Pacific NCD Roadmap was endorsed in 2014 to support action in PICTs to reduce NCD incidence.
- a) MANA was established to monitor implementation of the roadmap.
 - b) The MANA dashboard uses a 'traffic light' display to show country progress in areas such as taxation measures (on tobacco, alcohol, sugar-sweetened beverages), legislation and healthy food policies. It also shows areas where progress is slow, such as level of tobacco industry interference.
 - c) Initially, publicly available data was used to pre-fill the dashboard. Now, MANA partners (C-POND, PIHOA, SPC and WHO) work with national focal points to update the dashboard, with the results signed off by the MOH or a similar authority. Having an accountability framework encourages action.
 - d) The next steps for NCD action include support for ECHO (Ending Childhood Obesity) and further development of the Pacific Regional Legislative Framework as a basis for NCD-related laws and regulations in PICTs.

Discussion

67. Participants commented:
- a) that the presentations showed the links between PPHSN activity and Pacific and global health security;
 - b) on the need for multi-sectoral approaches to NCDs and climate change to achieve sustainable change and reduce the vulnerability of Pacific communities;

- c) that the JEE process has many benefits. In FSM, the process identified weaknesses and gaps that can now be addressed. WHO noted that PICTs need timely and sustainable access to capacity through partners and networks such as PPHSN, given that some capacities are too expensive or specialised for small countries to maintain locally. In New Zealand, the JEE findings will be used to improve existing systems, particularly in the areas of zoonotic diseases and risk communication. New Zealand presented multisectoral case studies to show how systems were working and were connected. PICTs undertaking a JEE could also consider using case studies to illustrate systems and processes.
- d) on the need for labs to maintain an up-to-date inventory of chemicals with relevant data sheets and health and safety rules. These are weak points for LQMS.

68. The meeting:

- i. acknowledged that PPHSN plays a key role in supporting PICTs in meeting their IHR core capacities and APSED III focus areas;
- ii. acknowledged that while PICTs may not be able to maintain all IHR core capacities themselves, they have access to the required capacities through regional services such as PPHSN and other partners;
- iii. agreed that the Joint External Evaluation (JEE) of IHR capacities is useful in pushing countries to make improvements and mobilise resources;
- iv. agreed on the need to pay attention to chemical safety in PICTs, including ensuring up-to-date inventories of lab chemicals and protocols for meeting health and safety requirements for use of chemicals;
- v. acknowledged that to meet SPAR (State Parties Self-Assessment Annual Reporting) and JEE requirements, countries need a mechanism for multisectoral engagement;
- vi. noted the establishment of the Working Group on Climate Change and Health, and its links to EpiNet/PSSS, to develop action on [R2.6](#) of the PIC climate change action plan;
- vii. acknowledged that disasters also pose opportunities for building capacity for PICTs, as demonstrated by advances achieved in Vanuatu following the support provided by partners after Tropical Cyclone Pam;
- viii. noted (a) the need to strengthen risk communication and training in PICTs based on the findings of the recent survey, (b) the suggestion that countries appoint a risk communication officer, and (c) the support available from CDC, PIHOA, SPC and WHO;

Closing plenary

69. Dr Eric Rafai, Fiji, suggested that PPHSN establish a monitoring framework to monitor country progress on initiatives. Participants supported the suggestion, noting the importance of taking ownership and being accountable for taking action.

70. Cook Islands suggested changing the name of the Pacific Public Health **Surveillance** Network to the Pacific Public Health **Security** Network to better reflect the scope of PPHSN's work. Participants agreed that the change could be discussed in future meetings.
71. Dr Paula Vivili (SPC) thanked members, partners and observers for their contribution to the meeting and to the work of PPHSN.
72. The meeting:
 - i. agreed to implement a monitoring framework for PPHSN to monitor country progress and activities, similar to the MANA dashboard for NCDs.
 - ii. agreed to discuss, at future meetings, changing the name of the Pacific Public Health **Surveillance** Network to the Pacific Public Health **Security** Network.

Annex 1: List of participants

2019 PPHSN REGIONAL MEETING

“Linking up the initiatives and scaling up the actions”

3-7 June 2019, Nadi, Fiji

RÉUNION RÉGIONALE DU ROSSP 2019

« Établir un lien entre les initiatives et renforcer le programme d'action »

3-7 juin 2019, Nadi (Fidji)

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Annex 2: Summary of decisions

2019 Regional Pacific Public Health Surveillance Network (PPHSN) Meeting

Meeting objectives

1. The meeting acknowledged the primary objectives of the regional PPHSN meeting were:
 - i. to provide an update on the implementation of, and discuss challenges for the six service networks of PPHSN.
 - ii. to encourage reflection and identify country-level priorities and opportunities that technical partners can leverage for a coordinated and collaborative approach by the human, animal and environmental health sectors.
 - iii. to discuss the capacity of Pacific Island countries and territories (PICTs) in making the Pacific region safe and secure from infectious diseases and other public health threats.

Welcome address

2. The meeting acknowledged the opening remarks by Hon. Ifereimi Waqainabete, Minister for Health and Medical Services, Fiji, noting that the Minister
 - i. recognised the role of public health in achieving universal health care;
 - ii. encouraged PPHSN to invite other health workers, including clinicians, to the meeting so that all parts of the health sector can work together to eradicate communicable diseases;
 - iii. stressed the threats of climate change for health and the need for climate change advocacy by the health sector.

Keynote address

3. The meeting acknowledged the address by Dr Mahomed Patel, who emphasised the effectiveness of local people applying local solutions, using examples of DDM graduates who followed up their projects with practical action (e.g. promoting HPV vaccination and Pap smears to reduce cervical cancer incidence in Federated States of Micronesia).

Report from PPHSN Coordinating Body

4. The meeting acknowledged the report from the Chair of the PPHSN-CB, Dr Eric Rafai, noting in particular that:
 - i. the external review of the PPHSN will be undertaken in the next 6 months. The review will include consultations between the review team and countries, via visits to selected countries and online consultation with others;

- ii. the review will include consideration of the recommendation by Pacific Heads of Health that the annual meeting of the PPHSN become a meeting of Pacific Directors of Public Health to provide a strong regional forum for strategic thinking on public health issues.

Surveillance data analysis and reporting

5. The meeting:

- i. agreed to keep the current list of syndromes in the Pacific Syndromic Surveillance System (PSSS), and to strengthen surveillance and reporting for DLI and SARI;
- ii. agreed the PPHSN Surveillance Technical Working Group will provide guidelines for implementation of case definitions and submit them to PPHSN members for consideration;
- iii. agreed to recommend to PHOH and PHMM a resolution for PICT health agencies to report suspected outbreaks to WHO, SPC and CDC as early as possible, and to formally declare an end to all outbreaks using agreed-on criteria for timelines;
- iv. agreed to initiate inclusion of Australia, New Zealand and Hawaii (USA) in meetings/discussions related to sharing of information (e.g. cases of outbreak-prone diseases among migrants and Pacific Island communities);
- v. noted the usefulness of weekly PSSS reports produced by WHO and the weekly outbreak alert map produced by SPC, and requested SPC and WHO to explore enhanced data visualization, risk interpretation in special cases, and consolidation of weekly regional PSSS and outbreak alert map reports;
- vi. noted the potential to use data visualisation techniques (e.g. via Tupaia software) to highlight features of national-level data.

Laboratory strengthening

6. The meeting:

- i. agreed on the need to lift laboratory standards across the region and the importance of setting timelines for achieving benchmarks for all laboratories, including accreditation where it is feasible and sustainable, noting that Mataika House, Fiji, is targeting accreditation as a level 2 laboratory by 2025;
- ii. agreed that at next year's meeting of Directors of Clinical Services, a session will be dedicated to laboratory issues to support strengthening of the regional architecture;
- iii. agreed that to inform Pacific Heads of Health, LabNet and technical partners should set regional benchmarks for:
 - a. the number of pathologists and qualification standards for laboratory technicians required to support improved laboratory services in PICTs,
 - b. number of accredited laboratories;

- iv. agreed to develop a roadmap for laboratory improvement with milestones that every PICT can commit to, depending on their size and the services they provide;
- v. agreed that LabNet should work with technical partners to define objectives for laboratory services and develop a comprehensive technical package for the region that takes into account the training currently provided by agencies;
- vi. agreed that the LabNet Technical Working Body should expand to include national laboratory representatives;
- vii. agreed that the LabNet Technical Working Body should consider development of a Pacific-specific standard that can serve as the minimum acceptable standard that all laboratories should aim to achieve; and further consider that a Pacific standard could be the basis for regional assessment of accreditation in place of an international assessment body;
- viii. recognised the need to define a career path for laboratory staff and a clear pathway to qualification, similar to the pathway for other medical cadres, with consideration of establishing a regulatory body and transitioning to requiring annual registration for qualified laboratory staff;
- ix. recognised the problems of retaining trained laboratory staff and the need to offer improved salaries and conditions;
- x. agreed that animal health laboratories must be considered in regional laboratory improvement programmes, including through sharing information on DDM, IATA training and other initiatives.

Strengthening Health Interventions in the Pacific/Data for Decision Making (SHIP/DDM)

7. The meeting:
 - i. noted that according to their presentations, countries find the DDM/PGCFE (Postgraduate Certificate in Field Epidemiology) to be an effective and useful capacity building programme that also provides a pathway to higher qualifications;
 - ii. requested countries to ensure DDM candidates can obtain birth certificates (or passports as a proxy for birth certificates) to satisfy FNU enrolment regulations and enable students who have completed the course to graduate;
 - iii. agreed that when selecting DDM candidates, countries should identify people who can fill gaps for health data technicians (in the human, animal or environment health sectors), noting FNU will screen the applications against the minimum qualification requirements for the DDM programme. Individuals from all backgrounds may qualify as long as they provide the necessary documents for enrolment and recommendations

from their respective country authorities. Final selection and nomination for the course is a Ministry decision;

- iv. recognised that candidates undertaking the course require mentoring support and time allowed during work hours, if necessary, to complete course requirements including their projects, noting that workplace supervisors can act as mentors;
- v. agreed that candidates' projects should be aligned with the country's priority problems and should be discussed with the management team;
- vi. recognised the benefits of 'training of trainers' for facilitators and mentors;
- vii. agreed to communicate clearly with countries on the schedule for the DDM course and enrolment procedures, including through the course brief, and also the PPHSN website and PacNet;
- viii. noted that a training manual is being developed for trainers and trainees. The manual will be translated into French and training will be delivered for francophone countries (French Polynesia, New Caledonia and Wallis and Futuna) in 2020–2021.

One Health

8. The meeting:

- i. acknowledged the usefulness of applying systems thinking to complex problems (such as reducing leptospirosis incidence) that require an integrated approach by the human, animal and environmental health sectors and other stakeholders;
- ii. noted the suggestion to establish a consolidated platform for health and environment for the Pacific Islands region in an existing regional organisation or network such as PPHSN;
- iii. agreed that AMR should be considered a priority area for all six PPHSN services (EpiNet, LabNet, PacNet, PicNet, SHIP/DDM and SurvNet);
- iv. noted Fiji's experience that AMR provided an entry point for establishing an integrated multisectoral/One Health approach;
- v. agreed that countries may wish to consider other priorities (e.g. influenza) that will provide a suitable entry point for establishing a One Health approach that brings all relevant sectors, including human, animal and environmental health, together;
- vi. asked countries to report back to the next PPHSN meeting on initiatives taken in this regard;

- vii. acknowledged the presentations on control and prevention of leptospirosis and ciguatera, which demonstrated desirable outcomes from an integrated approach;
- viii. agreed that the Pacific Syndromic Surveillance System will become **SurvNet**, which will include syndromic surveillance, event-based surveillance, hospital-based surveillance, AMR surveillance, lab-based surveillance, disease surveillance, vector surveillance and the alert map.

Influenza surveillance

- x. recognised that countries must have their own capacity and fit-for-purpose equipment, ideally using a standardised test with a reader (a rapid test for the Pacific region) to diagnose influenza and be confident about the result, while maintaining a robust system to send specimens to referral laboratories;
- xi. agreed the influenza testing algorithm and regional guide should be reviewed by the LabNet TWB to include collection, shipment and testing, with consideration of making a video of the test procedure, including storage of samples and timing of delivery to lab facilities;
- xii. further agreed that clinical staff could be referred to the guidelines for specimen collection on the WHO and CDC websites;
- xiii. acknowledged that the reluctance of clinical staff to take nasopharyngeal swabs despite training is a bottleneck for surveillance;
- xiv. agreed that the TWB will review the literature and come up with a document to support a pilot of using alternative collection techniques such as throat and nose swabs;
- xv. agreed on the need for a protocol for communication between the health worker and patients to explain the reasons for collecting a specimen and to advise them of the result;
- xvi. noted that countries can seek advice on appropriate influenza vaccines from the WHO Collaborating Centre in Melbourne;
- xvii. agreed to promote influenza vaccination for health workers, noting that present coverage is very low;
- xviii. acknowledged the need to report case fatality rates due to confirmed cases of influenza and dengue, noting that these case numbers are likely to be an underestimate of the actual burden.

Threats to health security in the Pacific region

9. The meeting:

- i. acknowledged that PPHSN plays a key role in supporting PICTs in meeting their IHR core capacities and APSED III focus areas;
- ii. acknowledged that while PICTs may not be able to maintain all IHR core capacities themselves, they have access to the required capacities through regional services such as PPHSN and other partners;
- iii. agreed that the Joint External Evaluation (JEE) of IHR capacities is useful in pushing countries to make improvements and mobilise resources;
- iv. agreed on the need to pay attention to chemical safety in PICTs, including ensuring up-to-date inventories of lab chemicals and protocols for meeting health and safety requirements for use of chemicals;
- v. acknowledged that to meet SPAR (State Parties Self-Assessment Annual Reporting) and JEE requirements, countries need a mechanism for multisectoral engagement;
- vi. noted the establishment of the Working Group on Climate Change and Health, and its links to EpiNet/PSSS, to develop action on [R2.6](#) of the PIC climate change action plan;
- vii. acknowledged that disasters also pose opportunities for building capacity for PICTs, as demonstrated by advances achieved in Vanuatu following the support provided by partners after Tropical Cyclone Pam;
- viii. noted (a) the need to strengthen risk communication and training in PICTs based on the findings of the recent survey, (b) the suggestion that countries appoint a risk communication officer, and (c) the support available from CDC, PIHOA, SPC and WHO;

Closing plenary

10. The meeting:

- i. agreed to implement a monitoring framework for PPHSN to monitor country progress and activities, similar to the MANA dashboard for NCDs.
- ii. agreed to discuss, at future meetings, changing the name of the Pacific Public Health **Surveillance** Network to the Pacific Public Health **Security** Network.