

MEETING REPORT



Pacific Public Health Surveillance Network (PPHSN) EpiNet/LabNet Regional Meetings

25-28 July 2023, Honolulu Hawaii

Co-sponsored by the Pacific Islands Health Officers Association (PIHOA)
and the Pacific Community (SPC)



Pacific
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Communauté
du Pacifique

Report prepared by the Pacific Community

Contents

Abbreviations.....	1
Acknowledgements	4
Introduction.....	5
Welcome address	5
Meeting objectives and regional health architecture	5
EpiNet/LabNet background and EpiNet terms of reference (TORs)	6
Outbreak response – group discussion	7
EpiNet/Response teams: Establishment and institutionalisation	8
EpiNet/Response teams: Networking and communication	10
Global Outbreak and Alert Response Network (GOARN).....	10
SHIP-DDM Programme – Building capacity for EpiNet and LabNet	11
Border health security.....	14
One Health – Surveillance and monitoring	15
Antimicrobial resistance (AMR) action plans and AMR stewardship.....	16
Event-based surveillance (EBS).....	17
Situation reports (Sitreps)	19
PacNet reports and PPHSN website	20
Pacific syndromic surveillance system (PSSS).....	21
Pacific Outbreak Manual (POM): Review and recommendations for update.....	22
Modified Incident Command System (ICS).....	23
CDC’s role in public health response	25
IHR (2005) Monitoring and Evaluation Framework (IHR MEF)	26
Joint External Evaluation (JEE).....	26
After-Action Review (AAR)	27
Risk communication	28
EpiNet Terms of reference (TOR) - review	30
PPHSN expert support for PICT outbreak preparedness and response	31
Outbreak response – Follow-up exercise	32
Draft recommendations	34
Close of meeting.....	34
ANNEX 1: LABNET MEETING REPORT	35
ANNEX 2: EPINET RECOMMENDATIONS	45
ANNEX 3: LIST OF PARTICIPANTS.....	48
ANNEX 4A and 4B: OUTBREAK SCENARIOS– Day 1	69

ANNEX 4C: OUTBREAK SCENARIOS – Day 4.....	82
ANNEX 5: PACIFIC OUTBREAK MANUAL GROUP WORK SCENARIOS	90
ANNEX 6: MEETING EVALUATION REPORT	91

Abbreviations

AAR	After Action Review
AFD	Agence Française de Développement (French Development Agency)
AMR	Antimicrobial Resistance
APSED	Asia Pacific Strategy for Emerging Diseases
CB	Coordinating Body
CDC	(United States) Centers for Disease Control and Prevention
CNMI	Commonwealth of the Northern Mariana Islands
COVID-19	Coronavirus disease
DDM	Data for Decision-Making
DFAT	(Australian Government) Department of Foreign Affairs and Trade
DOS	(United States) Department of State
EBS	Event-based Surveillance
EOC	Emergency Operations Centre
EpiNet	Epidemiology Network
ESF	Emergency Support Functions
EU	European Union
EWARS	Early Warning, Alert and Response System
FCDC	Fiji Centre for Disease Control
FETP	Field Epidemiology Training Program
FNU	Fiji National University
FSM	Federated States of Micronesia
HAI	Healthcare-Associated Infection
HIS	Health Information System
IATA	International Airline Transportation Association
IBS	Indicator-Based Surveillance
ICS	Incident Command System
IHR	International Health Regulation
IPC	Infection Prevention and Control
IPNC	Institut Pasteur de Nouvelle Calédonie
JCU	James Cook University
JEE	Joint External Evaluation
JIMT	Joint Incident Management Teams
LabNet	Laboratory Network
LQMS	Laboratory Quality Management System

Abbreviations (cont'd)

MAE	Master of Applied Epidemiology
MEF	Monitoring and Evaluation Framework
MFAT	(New Zealand) Ministry of Foreign Affairs and Trade
MOH	Ministry of Health
MRO	Multi-resistant organisms
NAPHS	National Action Plan for Health Security
PacNet	Pacific Network
PacMOSSI	Pacific Mosquito Surveillance Strengthening for Impact
PCR	Polymerase Chain Reaction
PHD	Public Health Division
PICNet	Pacific Infection Prevention and Control Network
PICTs	Pacific Island Countries and Territories
PIHOA	Pacific Island Health Officers Association
PGCFE	Postgraduate Certificate in Field Epidemiology
PGDAE	Postgraduate Diploma in Applied Epidemiology
PNG	Papua New Guinea
PN-VCR	Pacific Network for Vector Control Response
POM	Pacific Outbreak Manual
PPHSN	Pacific Public Health Surveillance Network
PPTC	Pacific Paramedical Training Centre
PSC	Project Steering Committee
PSSS	Pacific Syndromic Surveillance System (PSSS)
RCCE	Risk communication and community engagement
RMI	Republic of the Marshall Islands
RTPCR	Reverse transcription polymerase chain reaction
SHIP-DDM	Strengthening Health Interventions in the Pacific - Data for Decision-Making
Sitrep	Situation Report
SLIPTA	Stepwise Laboratory Quality Improvement Process towards Accreditation
SLMTA	Strengthening Laboratory Management Toward Accreditation
SOP	Standard Operating Procedure
SPAR	State Party Self-Assessment Annual Reporting
SPC	Pacific Community
SPRP	Surveillance, Preparedness and Response Programme
SSI	Surgical Site Infection
SurvNet	Surveillance Network

Abbreviations (cont'd)

TB	Tuberculosis
TORs	Terms of Reference
TWB	Technical Working Body
USAID	United States Agency for International Development
US	United States
USAPI	United States Affiliated Pacific Islands
WHO	World Health Organization

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PACIFIC PUBLIC HEALTH SURVEILLANCE NETWORK (PPHSN)
EPINET/LABNET REGIONAL MEETING
25–28 July 2023, Honolulu, Hawaii
MEETING REPORT

Introduction

1. Co-Chairs, Dr Sylvie Laumond, New Caledonia, and Ms Tmong Udui, Palau, welcomed participants. Federated States of Micronesia (FSM) said the prayer.

Welcome address

2. **Dr Berlin Kafoa, Director of SPC's Public Health Division (PHD)**, welcomed all participants and recognised the role of PIHOA in co-hosting the meeting with SPC, with support from the World Health Organization (WHO), and financial support from Agence Française de Développement (AFD), and the U.S. Department of State (DOS) and U.S. Centers for Disease Control and Prevention (CDC). Dr Kafoa acknowledged the presence of Dr Tom Kiedrzynski, who was one of the founders of PPHSN in 1996. Dr Kiedrzynski formerly worked for SPC and is now with New Zealand's Ministry of Health (MOH).
3. **Emi Chutaro, Executive Director, PIHOA**, welcomed everyone and said the meeting was an opportunity to reconnect the PPHSN family – north and south. The first PPHSN meeting was in the North Pacific and PIHOA has been a PPHSN partner since day one. The COVID-19 pandemic demonstrated the value of PPHSN and the need to scale the network's services. She thanked all who contributed to PPHSN, including countries and partner agencies.

Meeting objectives and regional health architecture

Amy Simpson, Team Leader, Surveillance, Preparedness and Response Programme, SPC

4. The meeting's objectives included:
 - strengthening national EpiNet and LabNet capabilities¹
 - improving information sharing
 - updating resources
 - enhancing connections between members.
5. PPHSN was created in 1996 as a voluntary network to address the health challenges of Pacific Island countries and territories (PICTs). It now includes six service networks created to support that goal: EpiNet, LabNet, PacNet, PICNet, Pacific Syndromic Surveillance System (PSSS), and Strengthening Health Interventions in the Pacific – Data for Decision-Making (SHIP-DDM). A new initiative, Pacific Vector Control (PVN) had its inaugural meeting in June 2023. More information on PPHSN services is available on the new website (www.pphsn.net).
6. Dr Kafoa (SPC) described the regional health architecture, which includes the Pacific Health Ministers Meeting, Pacific Heads of Health, Directors of Clinical Services, Directors of Public Health, Pacific Heads of Nursing and Midwifery and PPHSN. Strengthening Health Interventions in the Pacific – Data for Decision-Making (SHIP-DDM) is an example of a regional approach, as is LabNet.

¹ EpiNet and LabNet members shared in the plenary sessions, but held separate sessions to discuss the specific issues for each network.

EpiNet/LabNet background and EpiNet terms of reference (TORs)

Dr Tom Kiedrzyński, Principal Advisor, Communicable Diseases, Public Health, New Zealand Ministry of Health (MOH)

LabNet

7. LabNet was established in 2000 to strengthen PICTs laboratory resources. A three-tier lab system was set up – Level 1, Level 2 and Level 3, with ‘level’ referring to the lab’s role in the network rather than to its capacity.
 - L1 labs (most PICTs) collected samples from patients in suspect cases and used first line or screening tests.
 - L2 labs (larger PICTs) performed confirmation testing for some L1 labs, and also provided services for PICTs without their own labs.
 - L3 labs, mostly located in Australia, New Caledonia, New Zealand and USA, acted as reference labs, performing more sophisticated tests and providing epidemiological information for regional and global disease surveillance (e.g. dengue virus genotyping, influenza subtyping).
8. LabNet’s role included support for Laboratory Quality Management (LQMS) / Laboratory Standards Implementation and assessment, training (e.g. testing, shipment of specimens), and an email communication list (PacNet) to share information on target diseases. In 2011, a technical working body (TWB) was set up and PIHOA and SPC established regional positions to support lab development.
9. The 2022 LabNet meeting recognised⁶ the advances, including funding and equipment, made during the COVID-19 pandemic (e.g. the ability of PICT labs to carry out RTPCR² testing), and the need to sustain this increased capacity. The meeting also recommended a focus on One Health, with greater partnership between human/animal/environmental health labs.

EpiNet

10. EpiNet is the response arm of the PPHSN network. Every PICT formed an EpiNet team, or equivalent group, in 2001. These teams differ in structure and capacity, and may have different titles. A regional EpiNet team, involving regional partners, can provide support if requested.
11. Key functions of EpiNet teams include maintaining surveillance and response protocols for PPHSN target diseases, and all technical and resource-related aspects of all operations.
12. EpiNet TOR were originally drafted in 2003. The TOR include roles; size of teams and capacity; and appointment of a country focal point. The EpiNet concept and TOR are to be reviewed in light of the pandemic and other responses, recognising that the pandemic was ‘not business as usual’ but that outbreaks are.
13. Dr Kiedrzyński asked participants to contact him directly, or other secretariat members, if they wished to comment on the TOR.

² Reverse transcription polymerase chain reaction.

Outbreak response – group discussion

Dr Thane Hancock, Medical Epidemiologist, CDC, and Jojo Merilles, Epidemiologist, SPC

14. Dr Hancock presented three potential outbreak scenarios (See annexes 4a and 4b). Participants formed twelve groups of approximately six people, with a mix of technical areas and were assigned a facilitator to work through the scenarios. Each group chose a rapporteur and reported back on their discussions about their response to the evolving situation as well as strengths and weaknesses of their EpiNet teams.³

15. Group reports

- **Group 1 (Waikiki):** Discussion about response was initially chaotic, with different professions/expertise and nationalities in the group. Mix of technical skills is a strength. Important to have cooperation between clinicians and public health. A committee would be a good approach.
- **Group 2 (Blue Lagoon):** In discussing the first scenario, decided that working in a team with various backgrounds was helpful (similar to a good EpiNet team). Reflected the Minister of Health should have a background in health. Always verify data and share information. Cohesive teamwork is essential. Data verification is important.
- **Group 3 (Coconut Wireless):** Challenges included ensuring the team has active core members – LabNet and EpiNet teams are strong. Teams need strategic plans in place and team members must understand their roles.
- **Group 4 (Blue Paradise):** The scenarios helped the group work in an orderly way, despite the diversity of members.
- Inclusion of health leadership was a strength. Noted the misinformation in the scenarios and the importance of disseminating accurate information.
- **Group 5 (Hi Five):** discussed the roles of EpiNet and the Incident Command System (ICS), and when to declare the end of an outbreak.
- **Group 6 (Ono):** was a diverse group, with a multi-expertise taskforce. However, members from different countries took mostly similar approaches to the scenarios. Testing capacity, knowledge of thresholds, interpretation of results, and clear communication to decision-makers were essential.
- **Group 7 (Lucky 7s)** stressed the importance of routine surveillance systems to detect irregular patterns of findings. Evaluating lab capacity in countries is essential. Need to know how to send specimens to reference labs. Need outbreak manuals, response plans and regular exercises to help define team roles and actions.
- **Group 8 (SPAM):** Institutional knowledge is a challenge with staff turnover, including of communication staff. Team members need to be able to depend on each other and know the appropriate people focal points to reach out to. Again a diverse group. The use of ICS facilitated discussion. Important to have good lab capacity. Everyone learnt from addressing COVID-19.

³ Not all groups reported because LabNet members left for their separate meeting.

- **Group 9 (Dikiki):** focused on the importance of lab support.
Better communication could have identified the outbreak sooner, especially between leaders and spokespersons from the EpiNet team.
(This was a small group. Dr Hancock agreed that EpiNet teams don't need to be big, smaller teams can be more nimble.)
- **Group 11 (Nakoa):** Found having an ICS structure helpful to guide their response.
- **Group 12 (French group):** French overseas countries and territories depend on France. However, politicians often do not have a good understanding of the threat and importance of certain health issues.
The initial investigation has to involve epidemiology. Important to have laboratory capacity to produce rapid, accurate results.
We need to go back to the idea of thresholds for declaring an outbreak.
The after-action review is important, but feedback is often not reflected in response plans.

Discussion

16. Dr Mahmoud (WHO): Issues highlighted by the groups included how to confirm an outbreak and limits on surveillance and diagnostic capacity (screening diseases in or out). An outbreak should not be declared until there is confirmation.

EpiNet/Response teams: Establishment and institutionalisation

Dr Thane Hancock, Medical Epidemiologist, CDC

17. There are 25 EpiNet teams across the Pacific. Each PICT has a team (FSM has five – a national team and one for each state). The ideal structure of a team includes expertise in data management, clinical medicine, laboratory systems, field investigation, public health management, disaster management and risk communication. Benefits of EpiNet teams include:
 - event monitoring and early outbreak detection
 - outbreak investigation and reporting
 - response planning and operation
 - intersectoral collaboration
 - refinement of response strategies and implementation
18. Dr Hancock briefly described the work of Tolbert and Zucker (1996)⁴ on the three phases of institutionalising/maintaining EpiNet teams (capitalisation, objectification, and sedimentation). Achieving institutionalisation requires:
 - engaging widely across the MOH and other sectors
 - right sizing the core team
 - developing a routine of meetings and reporting
 - finding a champion; and assigning responsibilities
 - rewarding participation
 - exercising when not responding
 - fostering external advocates
 - getting buy-in from health leadership

⁴ Tolbert, P. S. & Zucker, L. G. (1996). *The institutionalization of institutional theory [electronic version]*. In S. Clegg, C. Hardy and W. Nord (ed. *Handbook of organization studies* (pp. 175-190). London: SAGE.

19. Addressing COVID-19 seemed an overwhelming task for EpiNet teams. Dr Hancock asked which PICTs had maintained their teams post pandemic.
20. Guam: The team existed but was called the ICS. It is not formalised but acts when a response is required.
21. Commonwealth of the Northern Mariana Islands (CNMI): CNMI has an EpiNet team, which is in a continuation phase at the moment. However ongoing funding support is needed.
22. Yap: The EpiNet team has existed for a long time. It shifted from managing a dengue outbreak to managing COVID-19, which Yap state declared was an emergency. The team therefore had to use ICS, which worked very well. The team is going strong – it has a communication network; collects data on a weekly basis from all islands; and has updated its standard operating procedures (SOPs). It is also happy to learn more, including through SHIP-DDM. Current health directors have been supportive – a large change is that the health leadership listens to the Dept of Health and provides ongoing support.
23. Dr Hancock (CDC) noted that US (United States) territories have funding for EpiNet teams and asked whether other PICT teams existed without direct funding.
24. New Caledonia: EpiNet teams are well established and institutionalised in French Territories and add civil defence, environmental health and others as needed. Though during COVID-19 they needed to involve more private practitioners. The team is still involved in daily surveillance, has held training, and appointed focal points in all localities.
25. Vanuatu: There are rapid response teams that operate in Vanuatu's six provinces, overseen by the National Surveillance Unit. The teams are always on standby and receive regular training.
26. Cook Islands: The EpiNet team met every day during the pandemic but is no longer meeting post pandemic. Several members held high-level positions and Cook Islands found that was not essential. The team may move to meeting monthly or once a quarter.
27. American Samoa: Most PICTs are constantly responding to a crisis. It is important to have plans in place and to maintain EpiNet's role in the command structure. Detailed plans should map out everyone's roles and responsibilities. This also supports the sustainability of EpiNet in multiple responses. The plan doesn't need team names, but instead can describe the capacity needed, which provides flexibility. The EpiNet team should be built into response plans.
28. French Polynesia: 'Civilians' look after investigation and response. After the pandemic, the response unit was transferred from one department to another. In addition to surveillance, One Health/environmental health are considered separately. The system needs restructuring – at present it follows the structure in France.

EpiNet/Response teams: Networking and communication

Dr Thane Hancock, Medical Epidemiologist, CDC

29. Bringing EpiNet teams together to network/brainstorm provides a 'regional brain' rather than isolated island teams. The benefits of networking include improved information and data sharing, capacity building, strengthened early warning systems, and more timely outbreak response. Networking opportunities for EpiNet teams include regional conferences; collaborative projects and workshops (e.g. sharing relevant SHIP projects); and communication channels such as PacNet and EPI Rounds.
30. Monthly EPI Round calls (Zoom) started in Guam before expanding to United States Affiliated Pacific Islands (USAPI) and now to all PICTs. The EPI Rounds is a monthly meeting designed to link those working in Pacific public health security. It's an opportunity to discuss emerging threats, current signals, and have an in-depth discussion on a pertinent public health topic. Invitations are sent via the EpiNet teams email list, others who would like to join are asked to contact SPC via Focal Point PPHSN- Coordinating Body (CB): focalpointpphsn-cb@spc.int.
31. Christelle Lepers (SPC): PacNet also facilitates communication. The EpiNet list has been reactivated and participants can use this list to communicate with each other (invitations to join are being sent out to EpiNet teams).

Global Outbreak and Alert Response Network (GOARN)

Dr Sharon Salmon, Technical Officer GOARN, WHO, WPRO

32. GOARN was established in 2000. It is a global technical partnership, consisting of about 290 technical institutions and networks coordinated by WHO to provide coordination and rapid technical support in the event of an outbreak. The WPRO region has 71 partners. Each GOARN partner has a focal point/s.

Joining GOARN is a straightforward process for non-profit organisations that have the capacity to contribute to the network. For more information on GOARN and participation:

<https://extranet.who.int/goarn/>

GOARN strategy 2022–2026: <https://apps.who.int/iris/handle/10665/366066>

33. The GOARN structure includes an operational support team, 21-member steering committee, and partners. From 2000 to date, GOARN undertook 181 operations globally with the most requested service being epidemiology and surveillance followed by laboratory support. Ebola generated the most requests for support followed by COVID-19.
34. A GOARN response involves *event* → *alert* → *request for assistance* → *offer* → *deployment*. Support can be deployed in 72 hours. WHO provides flights, insurance, etc. but no salary. An individual's institution or a GOARN partner provides that.
35. GOARN works with MOHs. When a request is made for support, the type of response is determined by the country, not GOARN. TOR are drawn up for each mission.
36. **Group exercise:** Dr Salmon presented a case study of Rohingya refugees – 860,000 live in Cox's Bazaar, Bangladesh, in poor living conditions. Participants formed groups to discuss three priority actions if deployed as an epidemiologist to Cox's Bazaar.

37. Group reports

Group 1

Meet with the requesting authority
Do an assessment, including of resources available
Form an action plan

Group 2

Meet with the requesting authority
Do an assessment, including identifying resources available
Get the latest data, if possible, and form an action plan

Group 3

Same as above but also link with local authorities
Take a culturally sensitive approach – ask what do local people want?
Recognise that technology may not be available

Group 4

Meet the camp coordination team/health team. Listen to them to understand the context
Assess resources
Follow local protocol/be safe – understand the security situation
Work at the required level, which may be lower than the deployed person's level of expertise

38. Example of Ebola outbreak response in Liberia – Dr Salmon described her own experience of investigating reasons for hospital deaths during an Ebola outbreak. Causes included non-isolation of suspect cases and staff/carers needing training on Infection Prevention and Control (IPC) basics.

Discussion

39. Cook Islands has just joined GOARN and can see the benefits.

SHIP-DDM Programme – Building capacity for EpiNet and LabNet

Hélène Le Mouëllic, SHIP Program Manager, PIHOA; Amy Simpson Team Leader, Surveillance, Preparedness and Response Programme SPC; PICT representatives

40. SHIP-DDM is a capacity building programme with three tiers:
- Tier 1 – Postgraduate Certificate in Field Epidemiology (PGCFE)
 - Tier 2 – Postgraduate Diploma in Applied Epidemiology (PGDAE)
 - Tier 3 – Master of Applied Epidemiology (MAE).
- It is provided through a partnership between Fiji National University (FNU), SPC, PIHOA, and PICT MOHs. The training is delivered in-country by faculty members. SHIP-DDM has nearly 200 graduates from PGCFE so far, with around 80 more participants expected to graduate PGCFE by the end of 2023.

Country experience

How has the SHIP-DDM program supported surveillance preparedness and response capacity?

41. Vanuatu: SHIP-DDM provides excellent on-the-job training. Graduates can support others taking part in the programme. Vanuatu has limited ability to send students abroad for training – SHIP-DDM allows staff to stay in place while studying. The programme has evolved and there are now more participants.
42. New Caledonia: (SHIP-DDM began delivery in French in May 2022, with 17 participants from across New Caledonia). We had huge support from management. Eleven students with all different technical skills from my public health department are participating in the course. We had to do public health investigations and were able to put in place measures against COVID-19. Previously no theoretical training was available in this area. A range of fields of expertise undertook the course. We now share the same knowledge and language and can communicate data and manage risks, using a standardised approach to managing alerts. All the projects carried out related to public health risks.
43. American Samoa: The programme caters to a range of skills and backgrounds. It's important that clinicians' notes provide good data. The quality of data improved as clinicians realised this use. During COVID, clinicians, nurses and technicians were exposed to outbreak management. Using real data improves the student's work and capacity around them, and also protocols. SHIP-DDM produces tangible outputs and high-quality work.

SHIP-DDM outcomes

44. Tokelau: We had surveillance, but the SHIP-DDM programme greatly improved the level of operation. It has boosted skills for decision making and provided career opportunities. After completing SHIP-DDM I am now Director of Health (Note: The Director also has nursing qualifications and a degree in social policy). We can make use of the skills we learnt. Tokelau now has a COVID-19 outbreak (they are the last PICT to identify cases) and we are applying these skills.
45. FSM: We had surveillance, but the data was scattered. SHIP-DDM showed us how to bring data together, better data management, create situation reports (sitreps) and assess the overall picture. When we had COVID-19 and dengue, we were able to respond appropriately due to analysis of the information, and to inform management of needs for response mobilisation. We are able to use syndromic surveillance. FSM requested continuance of the program.

What changes in policies, programmes, etc. have occurred as a result of SHIP-DDM?

46. Fiji: Before completing the first module, I did an outbreak investigation. After the module, I realised I needed to start again. We are able to apply learnings from the training to fieldwork and be able to respond better to outbreaks. A divisional outbreak response program was developed and this prepared us for the dengue, leptospirosis and typhoid season. Fiji encouraged other countries to take the opportunity to do SHIP-DDM.
47. Yap, FSM: SHIP-DDM really helped. We started in 2016 with a range of students and learnt how to collect and interpret data and improve policies, e.g. for reporting and communication of public health programs, especially for EpiNet. The notifiable disease response process has improved, with templates, better data collection and reporting. The lab sends an email to notify appropriate contacts if a disease of interest is identified. This means surveillance can begin immediately. Information is collected from all 17 pharmacies on Yap. One of the biggest changes is the level of communication between the health department and leaders.

Unintended outcomes of the SHIP-DDM programme?

48. Kiribati: The training is quite new in Kiribati and it was interesting to hear the experience of other PICTs. There are 9 current participants, and this supports capacity building with more qualified staff. Aiming to expand the number of sentinel sites in outer islands for the surveillance. Although it has been difficult to build a cohort of graduates, Kiribati appreciates the opportunity to take the programme.
49. Vanuatu: The programme is an eye opener in showing the impact of data analysis. In terms of finding a project to improve the health system, – most graduates chose areas related to their own work. Unintended outcomes – students have published guidelines and manuals, such as the TB control program and the Teachers manual for Public Health surveillance at the Vanuatu College of Nursing Education. This also made us aware of gaps, e.g. a guideline for leptospirosis outbreak investigation.
50. American Samoa: Graduates are ready for increased roles and responsibilities. We have people with extra skills but they are still in the same roles. We now have to look at where they fit in. We have created new 'Epi tech' (epidemiology technician) positions to support epidemiologists. Public health leaders have to accommodate these new skills and make use of the additional capacity.
51. Tonga agreed with American Samoa and Fiji on improvements in surveillance and the need to absorb graduates into the workforce. The program should have a clear pathway for graduates to fit in. The MOH loses SHIP-DDM graduates, including to other ministries. We want graduates to stay in health and continue to contribute.
52. Guam has had similar experiences losing trained individuals or people moving to other departments within the MOH. SHIP-DDM graduates should understand that in an outbreak they will be pulled in to assist. Perhaps regular tabletop exercises are needed to keep skills refreshed.

Assisting with surveillance preparation

53. Tokelau: The programme gave us the capacity to provide advice on border control during COVID-19. We also realised the value of analysing data, not just collecting it. We can now write SOPs too.

How can SHIP-DDM improve to meet the future needs of EpiNet/LabNet?

54. Fiji suggested a shorter time frame for delivery of the course.
55. Guam noted that the change in the order of the modules was useful during the pandemic. Some students' study was interrupted by COVID-19 and they need to be able to complete the course. Can SHIP-DDM administrators pull together success stories from other PICTs? This would help in discussing changes with managers and the needs for epidemiology.

To what extent does SHIP-DDM address the current needs of your surveillance preparedness and response to epidemics and emergencies?

56. New Caledonia: One Health is a current theme. We'd like to update data collection appropriately. It has been suggested that vets could take part in the programme under a tripartite One Health approach. We have a new health approach focused on prevention and could contribute to that.
57. New Caledonia: The training content and implementation of projects correspond to public health needs. Risk communication during COVID-19 was identified as a gap. Overall, the module was very beneficial.
58. Cook Islands: The cost of SHIP-DDM is an issue. We've looked at alternatives. Can we reintroduce the course and get dropouts to re-enrol and complete (it is four years since the course was first delivered in Cook Islands).

59. Amy Simpson (SPC) emphasised that SHIP-DDM requires partnership between programme facilitators and the country. Completion could be discussed further.
60. Dr Kafoa (SPC): Fees are the cheap part. For SPC and PIHOA, the highest cost is providing faculty. Expenses are shared between PICTs and agencies. Students who haven't completed could join a new cohort.
61. Dr Laumond (Chair): PICTs have the ability to access standardised training, which is a great benefit. Hopefully, health systems can upgrade positions for graduates and limit attrition.

Border health security

Captain Michael Kinzer, US Public Health Service CDC, Honolulu Quarantine Station

62. US Border health security is designed to:
 - protect public health at US ports of entry
 - keep travellers healthy during travel and while living abroad
 - ensure the health of individuals coming to live and work in the US
 - partner to protect the health of US communities along the US-Mexico border.
63. CDC legal authorities (e.g. the Public Health Service Act; federal regulations; and Presidential/Executive orders) allow quarantine station staff to respond to suspected illness. Diseases of public health concern include (among others) cholera, tuberculosis, severe acute respiratory syndromes, influenza and measles.
64. Quarantine station locations: Millions of people enter the US every year. CDC has 20 quarantine stations but cannot monitor each entry point and relies on partners to supervise arrivals. Staff at stations are responsible for numerous public health functions. They work with state-level authorities and may also have to deal with mass entries (e.g. following the Afghanistan exodus).
65. CDC partner agencies include the US Department of Agriculture, WHO and many others. CDC also works with cruise lines and airlines. They must report all onboard deaths and some illnesses.
66. When and how to contact the CDC quarantine station – Follow the steps on the RING card to alert CDC:
 - **Recognise signs and symptoms of ill travellers**
 - **Isolate them from other people**
 - **Notify the supervisor and local CDC Quarantine Station**
 - **Give support or assist as needed.**
67. Collaboration with the CDC Honolulu Quarantine Station could include training, developing travel restrictions, drafting a Communicable Disease Response Plan, and drafting health alerts/guidelines for diseases of concern.

Discussion

68. Dr Hancock (CDC): Is it feasible to have a Quarantine Station in small PICTs?
69. Captain Kinzer (CDC): A Quarantine Station could be one person with the skills to assess information/symptoms.
70. Dr Laumond (Chair): How do you organise quarantine?
71. Captain Kinzer: We have an isolation room for holding people for brief periods before they move to medical care. If we have an isolated person from the PICTs, we use the International Health Regulation (IHR) system to inform PICT authorities.

One Health – Surveillance and monitoring

Dr Gillian Dunn, Regional Health Information Systems and Performance Management Coordinator, PIHOA

72. One Health recognises that the health of humans, domestic and wild animals, plants and the wider environment (including ecosystems) are closely linked and interdependent. Humans make up one-third of the big picture. The approach mobilises multiple sectors, disciplines and communities to tackle threats to health and ecosystems. One Health is often thought of as infectious diseases and the natural environment. However, it should be considered more broadly as a basis for thinking about:
- infectious diseases
 - non-communicable diseases (including injury and mental health)
 - land and marine environments
 - built environments
 - connections to animals
73. **Important One Health issues**
- Leadership, coordination and monitoring
 - (Emerging) infectious diseases; zoonoses
 - Vector-borne diseases
 - Antimicrobial resistance (AMR)
 - Domestic animal health; wildlife health
 - Food systems: production, importation, marketing
 - Food security: availability, pricing, nutrition, safety
 - Water security and safety
 - Sanitation
 - Disaster preparedness
 - Climate change adaptation
 - Built environment and health: occupational health and safety, health facilities, schools, land/marine use and stewardship, exercise and recreation areas, roads, etc.
74. In applying the One Health approach, consider connections between human health issues and wild areas and ecosystems; built environments (buildings, infrastructure – sewage, communications, etc.); and domestic animals.

75. Human health practitioners are likely to need assistance with animal health surveillance and environmental monitoring. Resources available include local expertise, government agencies, and non-governmental organisations; regional partners; the Green Climate Fund; and the World Organisation for Animal Health (formerly OIE).
76. Health systems already take a One Health approach to some extent. The challenge is to make a network that is truly interdisciplinary and to develop a Pacific-relevant One Health framework.

Discussion

77. New Caledonia: For last two years, we've used a One Health approach to look at AMR identified in hospital patients. We identified resistant genes never before identified in humans and will extend the research to animal health. People dealing with wastewater and veterinary services are also involved in One Health.
78. Vanuatu: We had expertise from New Caledonia to look at leptospirosis. Many *Leptospira* bacteria were found in soil. In terms of coordination – where in public health should One Health sit? The Vanuatu lab has no capacity for animal health testing and has to send samples abroad. Sometimes the human health lab is used for animal testing.
79. French Polynesia: Could we have a One Health network to communicate issues and inform politicians? We also need access to funds – environmental management is costly. A recent *Salmonella* problem associated with animals in French Polynesia was costly to deal with (e.g. incineration of animals). Economics have to be considered, and consensus between the different areas involved.
80. Dr Dunn (PIHOA): Prevention is better than cure and less expensive, which is an argument for financing preventive measures. There are global One Health frameworks but we need an interdisciplinary Pacific one. We also need to demonstrate the effectiveness of One Health approaches.

Antimicrobial resistance (AMR) action plans and AMR stewardship

Dr John Stelling, WHO Collaborating Centre for Surveillance of Antimicrobial Resistance, Brigham and Women's Hospital, Harvard Medical School, Boston, USA

81. Dr Stelling described the Kirby-Bauer method (1996) of testing for antibiotic susceptibility using a single disk⁵, and said that although hospital and microbiology laboratories and clinical pharmacies generate a 'richly-detailed window into evolving microbial populations and antimicrobial use practices' these resources are underutilized. Surveillance platforms should support national, regional, and global collaboration and analyses through:
 - recognising and containing emerging threats
 - cost-effective patient care based on antimicrobial stewardship and locally relevant treatment guidelines
 - public health awareness, policy and interventions
 - science and operational research
 - improved data management.

⁵ Bauer, A. W., W. M. M. Kirby, J. C. Sherris and M. Turck. 1966. Antibiotic susceptibility testing by a standardized single disk method. *Am. J. Clin. Pathol.* 36:493-496.

82. A regional approach to AMR should include:
- advocacy
 - epidemiology: benchmarking antimicrobial use and resistance trends
 - resistance containment: regional coordination of response strategies and initiatives
 - capacity building: technical support, best practice, lessons learned, mentoring
 - two regional frameworks – one for data collection and analysis; and one for translating data into action.
83. The World Health Assembly passed several resolutions on AMR in the 1990s, mainly due to overuse of antimicrobials (e.g. in food production) and the threat of hospital infection. Labs may collect data, but many organisations are involved in treating the outcomes of AMR. Increasingly, virulence and resistance are linked. Zoonotic diseases are also a concern.
84. Surveillance strategy recommendations
- All institutions with a microbiology laboratory and all countries should have a system for confirming and communicating isolate results of high public health importance
 - All countries should routinely monitor results generated in the course of routine work
 - These data provide a base for sustainable surveillance
85. The WHO Global Strategy for Containment of AMR (2001) includes 14 priority interventions and 67 recommendations in the areas of advocacy, education, management and regulation of drug use (<https://www.who.int/publications/i/item/who-global-strategy-for-containment-of-antimicrobial-resistance>).
86. WHONET (www.whonet.org) is a free desktop Windows app for management and analysis of microbiology laboratory data with a particular focus on AMR surveillance. It is used by 130 countries. In addition to supporting surveillance, WHONET also supports recognition and containment of emerging threats, improved laboratory capacity and data quality.

Event-based surveillance (EBS)

Christelle Lepers, Surveillance Information and Communication Officer, SPC; Dr Ann Pobutsky, Territorial Epidemiologist, Guam

87. Event-based surveillance (EBS) is the organized collection, monitoring, assessment and interpretation of mainly ad hoc information about health events or risks, which may represent a risk to human health (WHO definition).
88. Key aspects of EBS:
- Real-time reporting
 - Information received through EBS should be rapidly verified and assessed for the risk to public health and responded to appropriately
 - Uses unstructured descriptions and reports rather than routinely collected data and response thresholds
 - Signals may come from both official and unofficial sources (media).
89. EBS is a key component of an Early Warning Alert and Response System (EWARS) and of enhanced surveillance for mass gatherings. Information sources include the community, healthcare workers, media/social media, and animal health resources. Networking provides access to much of this information.

90. SPC's Regional Epidemic Intelligence System includes reports and networks. During COVID-19, Facebook was also used, though it is not an official source of information.
91. *Comparison between EBS and indicator-based surveillance (IBS)* – EBS includes informal sources of information and requires connecting the dots. IBS information tends to come from existing systems, especially health systems. EBS is flexible and scalable, but depends on the reliability of information sources.
92. EBS and risk communication and community engagement (RCCE) share similar sources of information.
93. Summary
 - EBS can be a powerful early warning tool and should be used in conjunction with IBS in a country's public health surveillance system
 - Information/signals must be verified
 - Events must be risk-assessed, investigated and have triggers for action
 - Epidemiological and laboratory investigations are needed to support EBS
 - Opportunities to combine EBS and RCCE, rumour monitoring and management work.

Dr Pobutsky, Guam

94. EBS was conducted in conjunction with IBS after Super Typhoon Mawar struck Guam in May 2023.
 - Approximately 800 people were housed in three shelters after the storm
 - There was no formal ICS
 - The American Red Cross began working at shelters without public health consultation.
95. EBS consisted of asking hospital infection control officers and the Medical Examiner to report any unusual events immediately via phone.
 - EpiNet organized a meeting cell and the surveillance unit visited shelters to ask shelter officers to report on any health issues
 - There were challenges in coordinating with the Red Cross, no EBS reports were received, and a local physician began testing at shelters and reporting unverified results to the media but **not** to public health authorities.
 - COVID-19 and flu outbreaks occurred at the shelters, and there were four confirmed cases of shigellosis in children.
96. EBS was combined with IBS to:
 - monitor data from hospitals, clinics and physicians for possible outbreaks.
 - look for unusual events or trends such as injuries, food-borne/water-borne illness, carbon monoxide poisoning, and skin ailments, among others.
 - assess daily reports from a private hospital Emergency room only (there was an increase immediately after the storm in injuries and dialysis).
97. Dr Pobutsky acknowledged all the organisations that supported Guam after the typhoon.

Discussion

98. Vanuatu will soon hold the Festival of Pacific Arts and Culture. We've appointed focal points, etc., but community awareness of surveillance is low.
99. Christelle Lepers: Individuals should be encouraged to report symptoms. Guam has tried hard to implement EBS, but it's difficult in a crisis. Building on networks may help.
100. New Caledonia: We have SOPs that need to be activated when an event happens. In Guam, where were the SOPs?
101. Guam: It was 23 years since the last typhoon so many government officials were unsure of the steps to take. We started screening in shelters before being officially asked to. Collaborating with the Red Cross presented challenges with turnover of personnel. Some agencies needed reminders about cultural sensitivity. We also had issues with media reporting 'clickbait'. There was no incident command system so we did what we had to do.

Situation reports (Sitreps)

Stephanie Kern-Allely, Regional Communicable Disease Epidemiologist, PIHOA

102. A sitrep is a tool for describing outbreak data. It can be a simple note or a country-level report to PacNet. Every sitrep should include:
- outbreak description (time, person, and place)
 - response measures taken
 - additional resources⁶ or support needed
103. Sitreps should be shared, e.g.
- host on the official health agency website
 - circulate by e-mail – locally or regionally (PacNet)
 - post on official health agency social media accounts
 - distribute as a report at outbreak response meetings
104. Tools for making sitreps include MS Word, Excel, Tableau, and Power BI (WHO uses Power BI).
105. *Group activity* – Participants worked together to make a sitrep on 'Papahesina's' dengue outbreak using Excel.
106. Resources for sitrep makers include the following:
- Interactive dashboard skills
 - Excel : [The Office Lab](#)
 - Tableau : Tableau Beginner Course (YouTube) | Tableau Basics
 - Power BI: Power BI Tutorial For Beginners
 - Data management skills
 - Excel : PowerQuery | PivotTables | Excel Formulas
 - R: R for applied epidemiology and public health

⁶ *The Pacific Outbreak Manual, Appendix 4, has a full list: <https://www.pphsn.net/resources/outbreak-manual/>*

Discussion

107. Dr Mahmoud (WHO) suggested developing a sitrep template to save time.

PacNet reports and PPHSN website

Thibaut Demaneuf, Surveillance and Research Officer, SPC; Joanne Mariasua, Manager, Surveillance Unit, Vanuatu MOH; Dr Henri-Pierre Mallet, Bureau de la Veille Sanitaire et de l'Observation, Agence de Régulation de l'Action Sanitaire et Sociale, French Polynesia

108. PacNet is one of PPHSN's services. Users include 1099 health professionals, with the majority from the Pacific region. Departments of health, institutions and others are members. Surprisingly, COVID-19 did not produce a spike in messages on PacNet. This reflected that PICTs tend to use PacNet to receive information rather than share it. However, COVID-19 surveillance information and reports were widely shared on government Facebook pages.

109. Current PacNet posts include country sitreps (for e.g. those from Vanuatu, Tuvalu); health advisories (for e.g. monkeypox, arbovirus); sharing of information (COVID-19 modelling in Wallis and Futuna; a chikungunya virus seroprevalence study); the weekly Pacific Syndromic Surveillance System Report; and the weekly epidemic and emerging disease alerts in the Pacific – in English and French.

110. All PacNet messages are archived and accessible/searchable.

French Polynesia's perspective on PacNet

111. Dr Mallet described the dissemination of outbreak information in French Polynesia, which includes:

- weekly syndromic surveillance reports
- integration of PacNet information in epidemiologic bulletins
- transmission of specific reports in the case of epidemics (e.g. influenza, dengue fever, Zika, chikungunya, COVID-19)
- regular follow-up of PacNet for regional information (and also national – France – and international websites (WHO, CDC, ECDC, ProMED, CIDRAP, etc.).

112. French Polynesia has tried to maintain publication of newsletters, including during specific outbreaks. The alert system covers a wide range of sectors including human, animal and environmental health, and food production.

Vanuatu's perspective on PacNet

113. Joanne Mariasua said the rationale for using PacNet is based on collaboration with other PICTs and agencies. Vanuatu has expanded its sentinel sites from 11 to 23. The sites report weekly to the National Surveillance Unit. Information is sent to PacNet if a disease may have significant public health impact; if it is a novel or emerging pathogen; or if there are cross-border concerns. Reports are also sent as required by the IHR and when an outbreak threshold is reached. Recent reports to PacNet have been on leptospirosis, influenza and ciguatera poisoning.

114. PacNet's benefits include alerts triggering preparedness; understanding disease patterns; and learning from past experience. Vanuatu needs support to deal with outbreaks, stay informed and have access to capacity building.

Discussion

115. Thibaut Demaneuf (SPC): When SPC gets reports from PICTs, they are analysed and shared in various ways, depending on the information and whether it's necessary to raise a regional alert. A French translation is also sent. He encouraged PICTs to use the new PPHSN website (pphsn.net) and acknowledged Christelle Leper's extensive work in developing it.
116. Dr Mahmoud (WHO) noted that PICT reports to PacNet are not always timely. Regarding COVID-19 data, most PICTs did not provide data directly. Quite often, it came from Facebook and sitreps and was verified before being added to the regional report.

Pacific syndromic surveillance system (PSSS)

Sara Demas, Epidemiologist, Division of Pacific Technical Support, WHO

117. The PSSS was launched in 2010 and is implemented in 21 PICTs. It is a simple, sustainable system that allows local health authorities to detect unusual cases/clusters of disease early and to respond rapidly to reduce the impact of outbreaks.
- PSSS meets WHO member states' obligations to comply with the IHR. It does not take the place of routine surveillance of specific diagnoses, which can be useful for public health monitoring and planning/action.
 - Syndromic surveillance should not be conducted in isolation.
118. PSSS monitors six core syndromes:
- acute fever and rash
 - diarrhoea
 - influenza-like illness
 - severe acute respiratory infection
 - prolonged fever
 - dengue-like illness
- plus COVID-19 like illness. 'Unusual events' are also assessed.
119. In areas where there are sentinel sites, early information is shared to detect outbreaks. Outbreak responses are generally based on the Pacific Outbreak Manual (POM) (<https://www.pphsn.net/resources/outbreak-manual/>) or a customized local outbreak manual.

Way forward

120. WHO is revising the PSSS guidelines and assessing their application by selected Member States. The surveillance system is being revised to strengthen early detection of core syndromes and response in alignment with the POM.

A series of consultation workshops will be held to review the Pacific Syndromic Surveillance Guidelines revisions.

The revised guidelines will be rolled out through the PPHSN network.

Discussion

121. Fiji has added more syndromes, e.g. suspected meningitis, acute respiratory syndrome. It has 80 sentinel sites, all with officers, and provides sites with training.
122. Tonga has also increased its sentinel sites to 13 to include the more remote islands. Tonga is moving to eHealth which will help with surveillance, including by aligning health information and syndromic surveillance systems.

[Pacific Outbreak Manual \(POM\): Review and recommendations for update](#)

Sara Demas, Epidemiologist, Division of Pacific Technical Support, WHO; Amy Simpson Team Leader, Surveillance, Preparedness and Response Programme, SPC

123. The POM was developed by PPHSN to promote appropriate responses to PICT health challenges. It is intended to be a practical guide for health-care workers in the Pacific for the management of infectious diseases of public health importance. Individual PICTs are encouraged to adapt the manual to their local conditions.
124. *Plans for updating the outbreak manual based on feedback from an initial review:*
 - Expand public health priority diseases
 - Update with new evidence and international recommendations
 - Clinical description and progression of illness
 - Suspected and confirmed case definition changes
 - Threshold/alerts in alignment with PSSS
 - Guidance on lab with limited resources
 - Recommendations in an outbreak situation
 - Enhanced surveillance
 - PPHSN
 - Recommendations to inform the end of an outbreak
 - Reporting recommendations
125. *Group exercise* – Each group was assigned 2 syndromes/diseases and asked to consult the POM in reaching decisions on action, and to identify gaps in the POM and their country protocols (See Annex 5). The group reports (written flow charts) were collected and will assist in the POM update.
126. As part of the revision, the secretariat will establish a steering group to provide feedback from clinical and public health perspectives and will also survey PICTs on their use of the manual. The survey will include expressions of interest on joining the steering group.

Way forward

127. Changes to the manual will include:
 - notification system
 - epidemiological studies
 - laboratory methods
 - incident response, including communication.
- Review of manual update within PPHSN-CB
- Roll out of updated manual.

Discussion

128. Kiribati is updating the national outbreak manual to contextualise it to local conditions. A review is in progress with WHO support.
129. Jojo Merilles (SPC) asked if there was a plan to include animal health, etc. to reflect the One Health approach.
130. Sara Demas (WHO): The review consultant will be asked to consider this.

Modified Incident Command System (ICS)

Dr Thane Hancock, Medical Epidemiologist, CDC

131. ICS is a simple and effective way to organize into a team and provides a tool to enhance response coordination. It is a common structure for many organisations. ICS:
 - provides a common organizational structure
 - standardizes key management principles
 - manages span of control
 - integrates communication
132. **Key principles of ICS**
 - Incident action plan: defines objectives, activities, and resources
 - Unity of command: each individual reports to only one supervisor
 - Span of control: one supervisor to five subordinates (1:5) is optimal
 - Personal responsibility: each individual is accountable for carrying out their assigned role
 - Scalable: can expand and contract to meet response needs
 - ICS organizational structure: provides consistent framework for organizing roles and responsibilities
133. **Incident Action Plan**
 - Sets incident priorities, objectives, activities, and assignments for a specific time period
 - Needs to be concise and coherent
 - Usually written, but can be oral in small incidents
134. **Unity of command**
 - All individuals have one designated supervisor – receive work assignments from and report to only one supervisor
135. **Span of control**
 - Number of individuals or resources that one supervisor can manage effectively during an incident. Optimal – one supervisor to five subordinates
136. **Personal responsibility**
 - Each individual takes personal accountability for their own actions
 - Individuals focus on completing their assigned objectives and are encouraged not to interfere with other assignments.

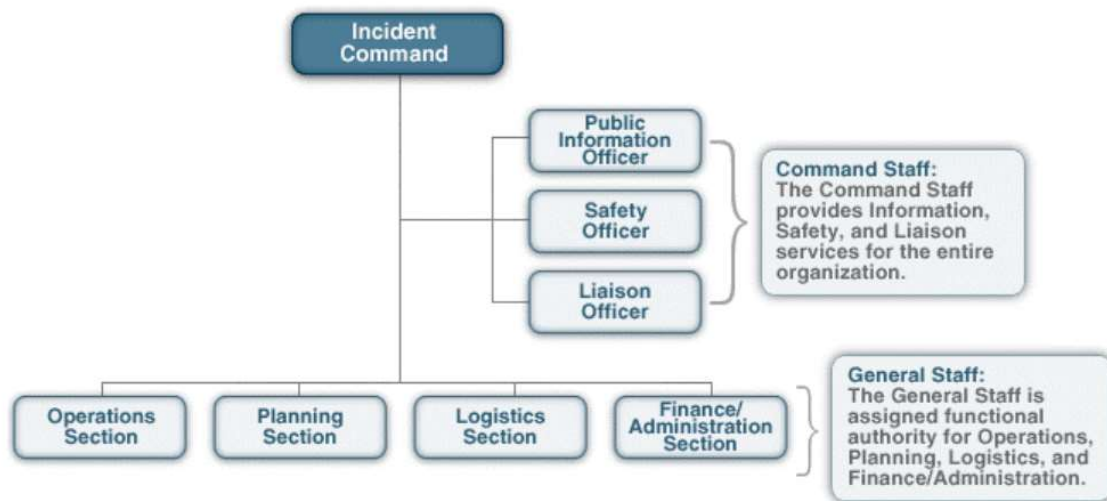
137. **Scalable**

- ICS can be used for small and large incidents – expands or contracts to meet requirements.

138. **Five major management functions**

1. **Command:** Sets objectives and priorities and has overall responsibility
2. **Operations:** Conducts tactical operations to carry out the plan. Develops assignments and organization and directs all operational resources.
3. **Planning:** Prepares the Incident Action Plan objectives, evaluates information, maintains resource status and documentation.
4. **Logistics:** Provides support and services to meet response needs.
5. **Finance/Administration:** Monitors costs. Provides accounting, procurement, time recording, and cost analyses.

ICS Organizational Structure



139. **Right person in the right role**

- Consider the expertise needed for the objectives/activity
- ICS structure should be tailored for the incident, not just a reflection of routine organizational structure
- Place people in roles where they can best contribute

Pacific implementation examples

140. Guam: Following Typhoon Mawar in May 2023, ICS helped to pull groups together and elaborate planning without overlapping.
141. Dr Mahmoud (WHO): PICTs have many disasters. MOHs need their own ICS. There are also national/subnational groups that may require their own ICS. Pohnpei used ICS to roll out its vaccination plan. Guam used it to plan surveillance for the Festival of Pacific Arts.
142. Guam: We had eight sites to monitor plus private clinics. Having the right people to lead sections was important. Communication ‘up’ was essential.

143. Yap adapted the ICS structure to address COVID-19.
144. Dr Laumond (Chair): In French countries, civil defence fills the role of ICS.
145. Dr Hancock (CDC): PICTs can have more than one ICS structure – there may be several, e.g. health, government, etc. Once you start using ICS, you'll use it again and again.

CDC's role in public health response

Megan Gosch, Division of Emergency Operations, CDC (via Zoom)

146. Depending on the type of response required, various response frameworks may be used. The 15 Emergency Support Functions (ESFs) are a component of the National Response Framework. CDC primarily supports ESF-8, Public Health and Medical Services⁷, which is led by the Department of Health and Human Services.
147. CDC provides public health expertise to domestic and international partners through:
 - Disease prevention and control
 - Environmental health
 - Health promotion
 - Laboratory analysis
 - Epidemiology
 - Surveillance
 - Clinical guidance
 - Health communication
148. CDC took the standard response functions of ICS, and based on its mission, modified and adapted the ICS approach to add a Science section that incorporates public health functions.
149. Response activities include:
 - situational assessment
 - technical guidance
 - scientific research
 - resource allocation
 - cross-agency collaboration
150. The three guiding principles of the National Incident Management System (NIMS) are:
 - **flexibility** – NIMS is scalable and therefore applicable to routine incidents, such as a foodborne disease outbreak, to a large-scale incident that may include multiple agencies.
 - **standardization** – supports interoperability among multiple organizations and teams, with organizations using similar structures, processes, and language.
 - **unity of effort** – coordinating activities among various responding organizations to achieve common objectives.

⁷ U.S. Department of Health and Human Services, Emergency Support Functions:
<https://www.phe.gov/Preparedness/support/esf8/Pages/default.aspx>

151. **Summary**

- CDC provides public health capabilities to support domestic and international responses.
- NIMS is a common framework for emergency management and incident response.
- ICS is a component of NIMS and can be applied to small incidents and large and complex ones.
- CDC establishes NIMS structure to achieve collaboration, communication, direction, and support during a response.
- No matter what public health threat CDC responds to, its responsibilities stay the same. Flexibility and structure are important.

152. **CDC management structures – Emergency Operations Centre (EOC)**

Dr Kevin Clarke, CDC, said that when people follow the Incident Management System, things go well. In PICTs, having systems and plans in place, e.g. an EOC, mean action can begin quickly in response to emergencies, outbreaks etc.

153. Dr Hancock (CDC): advised PICTs to start using ICS in small situations to get used to implementing the system.

154. Dr Mahmoud (WHO): It's normal to set up at an EOC and important to have a location (in the MOH), SOPs, and plan of action, including for communication. Every year, WHO asks PICTs to take part in simulation exercises.

155. Dr Kiedrzyński (NZ MOH): New Zealand uses Coordinated Incident Management System⁸ in disaster situations. It has similar functions to ICS but includes well-being. Key liaison people are appointed during incidents.

IHR (2005) Monitoring and Evaluation Framework (IHR MEF)

Dr Nuha Mahmoud, Team Coordinator, Pacific Health Security & Communicable Diseases, WHO

Joint External Evaluation (JEE)

156. The International Health Regulations (IHR) are 'A legally-binding instrument agreed upon by 196 states parties to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade'.

157. All states parties are required to have or to develop minimum core public health capacities to implement the IHR 2005 effectively (IHR, Article 13).

158. The IHR Monitoring and Evaluation Framework (IHR MEF) includes the state party' self-assessment annual report (SPAR), joint external evaluation (JEE), after-action review (AAR), and the National Action Plan for Health Security (NAPHS), which is the most important component.

159. A JEE is currently planned in several PICTs. It enables countries to

- identify urgent needs within their health security system
- prioritize opportunities for preparedness, operational readiness, response and action
- promote partnership and transparency
- support fund mobilization.

⁸ Coordinated Incident Management System - <https://www.civildefence.govt.nz/resources/coordinated-incident-management-system-cims-third-edition/>

160. The JEE tool⁹ includes self-evaluation and external evaluation components; contextual and technical questions to support self-evaluation; and a scoring process. It evaluates 19 technical areas, e.g. AMR, zoonotic disease, food safety, biosafety and biosecurity, immunization, national laboratory system, surveillance, health emergency management and IPC.
161. The expected outputs of a JEE are:
- an accurate report showing national status and progress
 - recommendations
 - priority areas for health security system strengthening
 - incorporation of recommendations into the national public health work plan and NAPHS.

Discussion

162. Samoa: Samoa is currently planning its first JEE. It is an intensive, time-consuming process requiring preparation. Samoa has identified focal points and is making arrangements for meetings, etc. Self-evaluation will take three weeks. The questions are highly technical. A report will then be produced for WHO. The ICS process discussed earlier may help in the process.
163. Dr Laumond, the Chair, asked if PICTs carry out more regular/annual self-evaluation which could make it easier to do the JEE. (Some PICTs, including Cook Islands, do.)
164. Fiji: Core capacities were assessed for SPAR, using a multi-sectoral approach. Self-assessment shows you how to improve and achieve higher levels.
165. Samoa: For SPAR, you just provide recommendations, but the JEE is much more detailed and also requires supporting documents.

After-Action Review (AAR)

166. The AAR is a qualitative review of actions taken to respond to an emergency and assesses what worked, what did not work, why, and how to improve. The overall objective of the AAR is to:
- review the preparedness and outbreak response;
 - identify best practices and challenges;
 - draw lessons learnt for improved response;
- Honest analysis is essential. However, an AAR is not an external evaluation of an individual's or team's performance.
167. Building a timeline enables participants to map out key milestones of the emergency in the order they occurred. A timeline provides a common picture and supports identification of good practices, gaps and lessons.
168. Way forward
- Identify what can be addressed immediately and what can be done in the mid and long-term
 - Establish an AAR follow-up team
 - Document progress in implementing the recommendations
 - Ensure engagement of senior leadership

⁹ World Health Organization Joint External Evaluation tool, third edition - <https://www.who.int/publications/i/item/9789240051980>

Discussion

169. Tonga carried out an AAR after three disasters (volcano, COVID-19 and tsunami). It was challenging to record what was done, especially given the importance of accurate and truthful information. Tonga will have a JEE next year.
170. FSM is still working on carrying out an AAR.
171. Dr Kevin Clark (CDC): In relation to the methodology for an AAR – look at who is participating in the review. This often includes management, not working-level staff. It is important to listen to them and also to ask: ‘How is the response seen internally’? CDC has looked at ‘responder resilience’. How can the work environment better support response?
172. Dr Hancock (CDC) advised that an AAR is best carried out soon after an event, rather than delaying.
173. Dr Laumond, the Chair, thanked Dr Mahmoud for the presentation and noted there will be a IHR meeting in Fiji in August.

Risk communication

Christelle Lepers, SPC

174. Risk communication is communication with the public. It involves real-time exchange of information, advice and opinions between experts, officials or community leaders and people who are at risk.
175. Clear communication during outbreaks
 - helps slow, stop or prevent outbreaks.
 - helps people make informed decisions about protecting themselves.
 - builds trust in health authorities.
 - helps overcome fear and anxiety.
 - reduces the economic, social and political impacts of an outbreak.
176. Trust is built through
 - proactively communicating real or potential risk
 - maintaining **transparency** throughout the outbreak
 - **listening** to the public to understand their risk perceptions and information needs.
 - developing an outbreak communication plan (roles)
177. Communication needs to occur at different levels – health-care workers, managers, media, public and community members, partners, and stakeholders. Coordination is essential. Use a combination of methods – SMS, radio, social media, print, outreach etc. Too much information can occur during an epidemic, not all of it accurate. It is necessary to monitor, assess and respond to rumours and misinformation. Address rumours by providing correct and consistent information, and if possible, engaging with the sources of rumours.

178. *Group activity* – Groups were asked to discuss the case of two athletes with suspected dengue at the PPHSN Games (two-three days before laboratory results will be available). How should this issue be communicated?

179. **Group feedback**

Group 1

- Face-to-face meetings with the EpiNet team
- Ensure internal communication
- Inform the delegation of the cases.
- Get confirmation (positive/negative) and communicate to stakeholders

Group 2

- Start communication with partners – external and internal
- Surveillance sitreps; PacNet
- Media campaign on dengue

Group 3

- Focus communication on the relevant group/team
- Messaging on potential for dengue and how to avoid it
- Place posters in venues

Group 4

- Two people being tested could be a source of rumour. (Christelle agreed – especially in a mass gathering.) Therefore important to communicate with delegations.

180. Conclusion – Best practices

- Communicate results early
- Manage communication to ensure consistent messages
- Listen to the intended audience
- Adapt the communication style to the audience
- Involve partners and the target audience, and refine the communication plan as required

Resources for risk communication

- US Centers for Disease Control and Prevention:
https://www.cdc.gov/healthcommunication/risk_communication.html
- [Crisis & Emergency Risk Communication \(CERC\)|CDC](#)
- [World Health Organization - WHO: guideline for emergency risk communication \(ERC\) policy and practice](#)
- [WHO: Risk communication and community engagement \(RCCE\) considerations: Ebola response in the Democratic Republic of the Congo](#)
- [WHO Communicating for Health](#)
- [Pacific Outbreak Manual](#) developed by and for PPHSN
- [Creating an effective communication project in the Pacific Region](#), developed by SPC and UNFPA

EpiNet Terms of reference (TOR) - review

Dr Tom Kiedrzyński, Principal Advisor, Communicable Diseases, Public Health, New Zealand MOH

181. Dr Kiedrzyński presented the EpiNet TOR and the proposed revisions for discussion, and outlined the benefits of EpiNet teams, core functions, and expertise of team members.
- Proposed core functions
 - Public health surveillance and early outbreak detection
 - Outbreak investigation and reporting (timely communication in country and internationally)
 - Public health response planning and operations (incl. risk communication)
 - Continuous improvement of detection, investigation and response (lessons learnt, AAR)
 - Intersectoral collaboration (incl. private/public, military/civilian)
 - Networking (in country and internationally)
 - Advocacy (Outbreak response, EpiNet/response function)
 - Seek advice and/or support through PPHSN(/internationally) if required
 - Adaptation and implementation of PPHSN guidance and recommendations (Incl. establish and maintain relevant PPHSN target-diseases surveillance, investigation and response protocols)
 - Areas of expertise of the EpiNet team:
 - Expanded areas of expertise, include risk communication and disaster/emergency response within core team. Additional areas such as environmental health/vector control, IPC management, immunisation etc included as required.
 - Ensure that team members and their areas of expertise reflect the core functions
 - Clarify the roles of EpiNet team members in these functions (operational response vs management/supervision of function)
 - Size of EpiNet teams:
 - Health professionals with core areas of expertise involved in outbreak responses, could be up to 7 members
 - Could be part of a larger response group
 - EpiNet primary focal points – unchanged
 - Institutionalization of response functions/teams (if needed)
 - Suggested activities include: wide engagement with stakeholders, right-sizing core team, develop routine for meetings and reporting, assign champion and clear responsibilities, reward participation, exercises, get buy-in from health leadership
 - Training
 - Adapt to roles and responsibilities in the response
 - Prioritise those operationally involved in outbreak response (incl. response management)
 - Consider PPHSN expert deployment as a potential training ground (with similar pre-deployment SOPs)
 - EpiNet team 'brand' (or local name) = operational outbreak response team
 - Clarify that team members are (ideally) health professionals involved in the core functions of outbreak response, and/or managers/supervisors of these functions.

Discussion

182. American Samoa: Operational roles – Would it be better to select people who wear several hats, or have more members who specialise in their roles?
183. Kiribati: Experience sharing – could we have a more formal process for sharing information between PICTs?
184. Dr Kafoa (SPC): SPC has sent emergency response teams, e.g. to Kiribati. The SPC team goes in to do what local staff normally do, freeing them to address the emergency. The response team is based on need, e.g. for a biomedical engineer.
185. Jojo Merilles (SPC): Right sizing of teams is important. There are three issues:
1. EpiNet team effectiveness (e.g. readiness to respond to the pandemic). If you lack capacity let us know.
 2. Scalability – you may need to add capacity to respond to a need.
 3. Responsiveness – readiness to assist other countries.
186. Dr Hancock (CDC): Peer-to-peer sharing between PICTs is valuable. We have Epi Rounds once a month on Zoom – the focus could shift to the practicality of running EpiNet teams. It is important to right-size teams – a small and agile team with key people is easier to manage than a large team. Team effectiveness and scale are both important. A regional EpiNet team also requires more consideration. Regional exercises could be run if PICTs see a need.
187. WHO requested PICTs to conduct internal exercises, and encouraged alignment of the POM and LabNet catalogue.
188. Dr Kiedrzyński agreed on the usefulness of Zoom for sharing information, and also with the comments on team size, noting that the pandemic was exceptional and required a larger team. The revised draft of the EpiNet TOR will be circulated to countries for comment.

PPHSN expert support for PICT outbreak preparedness and response

189. From time to time, PICTs may need expert support from health professionals to prepare for or respond to outbreaks. The experts could be from PICTs or PPHSN allied bodies.
190. What needs to be done to make timely support possible:
- Experts in potential response areas to be identified in PICTs and PPHSN allied bodies.
 - They should be prepared to work in (other) PICT members of the PPHSN, assisting or carrying out response activities (remotely or in-country) in addition to their normal duties.
191. Pre-arrangement with PICTs to use their experts
- Subject to agreement from the requesting PICT.
 - Funding arrangements for PICTs experts need to be clearly defined, including travel, per diem, insurance, etc.

Discussion

192. Dr Hancock (CDC): In terms of a regional EpiNet team – there is an informal existing group. Do PICTs want to request a formal regional team? That could attract resources. PICTs also have options for requesting support from agencies, etc.
193. Guam agreed that a Regional EpiNet team should be formalized.
194. American Samoa: We often don't realise the capacity of other PICTs. We need to discuss these capacities, also recognising that Pacific Island experts already have cultural awareness.
195. Vanuatu supported exchanges between PICTs.
196. Jojo Merilles (SPC) noted that a potential issue for PICT/PICT collaboration is licensing of professional clinicians in different jurisdictions. This needs to be negotiated.
197. Dr Kiedrzyński thanked participants for their ideas and asked that further comments be sent to PPHSN-CB focal point.

Regular updating of the EpiNet list

198. Elise Benyon, Data Processing Officer, SPC: Every year PPHSN-CB focal point sends a request to PICTs to update their EpiNet list. Please reply to ensure we have an accurate list. We can also invite you to join in Epi Rounds. Thanks to the PICTs that do reply.

Outbreak response – Follow-up exercise

Dr Thane Hancock, Medical Epidemiologist, CDC; Stephanie Kern-Allely, Regional Communicable Disease Epidemiologist, PIHOA; Jojo Merilles, Epidemiologist, SPC

199. Dr Hancock handed out hard copies (see Annex 4c) of scenarios and questions to each group and their facilitators and asked them to discuss their findings and gaps. Groups were given two hours for the exercise.
200. **Plenary – Report back**
 - Group 1 (Waikiki)** – Difficult scenario. Used tools discussed during the meeting, e.g. ICS. Need good communication between labs and EpiNet, and need training on combining data from different sources. Politicians require thorough briefing as it is hard to include politician or leaders during an outbreak scenario.
 - Group 2 (Blue Lagoon)** – Found the exercise to culminate all the learnings from the whole meeting. When forming an EpiNet team or other structure, need clear roles defined, which should be in SOPs. A stand-in can be appointed. The group sketched out an ICS. We identified main roles and sub-roles. Some roles overlapped and there were some gaps. Need to ask for support to cover gaps, e.g. for IPC. Should not run out of hand sanitiser.
 - Group 4 (Blue Paradise)** – Liked the exercise which incorporated all aspects of the week. Good learnings on the importance of communication. When we request assistance, the first responders are usually New Zealand and Australia.
 - Group 5 (Hi Fives)** – Logistics are critical, e.g. supplies, consumables. A logistics representative should be on the EpiNet team. Need advance ordering in PICTs. IT support needed. Logistics and finance should be on the EpiNet team. Training essential.

Group 6 (Ono)– Found it to be a good exercise. The group took stock of everyone’s expertise areas and partners involved. Used some of the resources discussed during the meeting (e.g. ICS). Gaps in knowledge – translation of IPC to hospital setting. Noted importance of clearly defining team roles, including for communication, to reduce the chaos.

Group 7 (Lucky 7s) – Need collaboration between the private and public health sector, including sharing resources. MOUs may not cover all aspects sufficiently. The group liked the exercise. Highlighted the need to reactivate (core) EpiNet teams. Need to keep pandemic partners informed. Noted political influences, and potential for different views in EpiNet teams. Appreciated the One Health point of view – training completely lacking in some sectors.

Group 8 (SPAM) – Appreciated the scenario exercise. Noted the same views as others on the political role. We need to sharpen our skills to address multiple outbreaks. Build bridges with clinicians and IPC officers. Important to preserve institutional knowledge and also be able to call on other jurisdictions and partners to be able to address gaps. Communication with leadership and convincing them how to proceed is important.

(Dr Hancock shared that in FSM an IT colleague joined the response team, maybe IT is a skill to be included in the expanded EpiNet teams.)

Group 9 (Dikiki) – Needed to understand the background to the political decisions made. Would require policy reviews. One Health – environmental sector should be involved. Should not run out of hand sanitiser. Evaluating lessons – value of IPC, One Health, lab support and RCCE.

(Dr Hancock emphasised the need to do AARs and implement some of the recommendations made.)

Group 10 (Pipa) – Enjoyed the scenario. Looked at the data on people dying in hospital – need to get reliable information. We would first reach out to verify the data and present it in a reliable way. Communicate with various clinicians to assess the controls being implemented. Lack of hand sanitiser in wards needed addressing. IPC support essential. Important to correct misinformation and work with partners to spread good information.

Group 12 (French Group) – Enjoyed the scenario. Used the tools discussed during the week, including laboratory, ICS, RCCE etc. Thought reaction should have been quicker, based on the number of deaths. Important to communicate and reassure the population. Consider that such exercises should be conducted two or three times a year, and include decision makers.

Discussion

201. Tonga: after the Tongan tsunami, Australia and New Zealand teams arrived the next day, while other partners arrived later. Some partners have their own systems and tend to take over, while others blend into existing systems.
202. Dr Eka Buadromo (SPC): SPC deployed a team to Tonga. SPC is ready to respond provided we can manage the logistics.
203. American Samoa: External agencies often don’t talk to each other, even though they are addressing the same issue. We recommend that these communication gaps are addressed.

204. Dr Hancock (CDC) noted the comment on collaboration between the public/private sectors and the inclusion of IT expertise in the EpiNet team. He agreed that lack of coordination of agencies after a disaster is a reality. The ICS could help to address this. He thanked all teams and facilitators and asked for feedback on the usefulness of group exercises as opposed to presentations

Draft recommendations

Dr Berlin Kafoa, Director PHD, SPC

205. Dr Kafoa briefly summarised the recommendations (Annex 2), which will be circulated to participants for comment before being finalised.

Close of meeting

Dr Berlin Kafoa, Director PHD, SPC; Emi Chutaró, Executive Director, PIHOA

206. Dr Kafoa said SPC is committed to PPHSN, its networks, and capacity building of each component, including EpiNet. In relation to SHIP-DDM, he noted the question of moving the course online and the resistance to this. The preference is for face-to-face delivery of the course. 'Pacific time can also be the right idea, right time, right environment'. Dr Kafoa acknowledged the work of the Co-Chairs, all partners and PICT representatives. He thanked all those responsible for the meeting logistics and PIHOA as hosts.
207. Emi Chutaró said PIHOA wanted to strengthen the bonds between the north and south Pacific and stressed the need to work collaboratively – 'We'd like to continue meetings in the north'. The recommendations exemplified the learning from COVID-19. She congratulated everyone on their work during the pandemic and recognised the resilience of Pacific people. She acknowledged the Co-Chairs and all partners.
208. The Chair, Dr Sylvie Laumond, thanked Dr Kafoa and Emi for their remarks and also thanked CDC and all participants. She noted the effect of COVID-19 and the new dynamics instigated by the response to the pandemic. She acknowledged the secretariat and all service providers.
209. Dr Laumond's announcement that she will retire at the end of the year was met by prolonged applause from the meeting in appreciation of her service.
210. The meeting ended with the presentation of leis from PIHOA to the Co-Chairs, Emi Chutaró, Dr Kafoa and the secretariat team members from SPC.

ANNEX 1: LABNET MEETING REPORT

PACIFIC PUBLIC HEALTH SURVEILLANCE NETWORK (PPHSN)

LABNET MEETING REPORT

ALMOANA HOTEL, HAWAII,

25TH -26TH JULY 2023

Co-sponsored by the:

Pacific Community (SPC)

and

Pacific Health Officers Association (PIHOA)



Pacific
Community
Communauté
du Pacifique



Day 1: TUESDAY, 25TH JULY 2023

TIME 1.30 PM

(Moderator: Michael Diaz (Ebeye) and Paul Lalita (Majuro), Rapporteur: Mrs. Seini Biukoto, American Samoa)

ITEM L1: ADDRESSING THE NEEDS OF PUBLIC HEALTH /CLINICAL LABORATORY WORKFORCE CHALLENGES IN THE PACIFIC.

- i. Dr. Aruna Devi (Head of Medical Laboratory Health Science (BMLS) Program, Fiji National University stressed that the BMLS program needs to address some resolutions for the clinical lab workload challenges as indicated in a survey that was conducted by the program and is listed below:
 - a. 24/7 challenges & expectations, a time-demanding career, that requires passion & motivation, burnout/exhaustion experiences, etc.
 - b. COVID-19 disrupting workload, burnout/exhaustion experiences may result in staff considering a career change.
 - c. shortage of staff, lab supplies resource challenges
 - d. The lab profession is predominantly female than male.
 - e. Salaries are not competitive.
- ii. She highlighted the challenges faced by the BMLS program such as:
 - a. Lack of funding & inadequate resources
 - b. Lack of proper accreditation of labs
 - c. Keeping on par with new technology
 - d. Data management and security challenges of data.
 - e. Professional development for job satisfaction, retention of staff
- iii. Dr. Aruna concluded that the current BMLS programs i.e. Medical Laboratory Science is AIMS accredited whilst the Certificate program is yet to be accredited.

ITEM L2: "TRAINING OF THE LOCAL MEDICAL LAB WORKFORCE- THE TONGAN EXPERIENCE"

- i. Ms. Vaohoi Moala (Tonga Hospital Laboratory Representative) presented the history of the Tonga Lab personnel who were trained locally to assist them with their human resource need. She also elaborated on the training support delivered by the Pacific Pathology Training Centre which is delivered online with time duration of 3 months and 2 years.
- ii. Ms. Vaohoi mentioned that local training courses summative & formative assessments along with competency logbooks and is accredited by the Tongan National Qualification Accreditation Board. It is important that local training is recognized and supported by partners e.g., WHO.
- iii. She also mentioned that there are plans for some South Pacific Labs including Tonga to undergo ISO accreditation.

DISCUSSIONS

- i. The participants noted that laboratory accreditation is very expensive and to be sustained by individual countries.

ITEM L3: “IMPROVING LQMS THROUGH SLIPTA & SLIMTA IN THE USAPI”

- i. Mr. Manasa Mainaquelevu’s (PIHOA) presentation was in 2 parts:
 - A. Improving Laboratory Quality Management System (LQMS)
 - Mr. Manasa elaborated on Stepwise Laboratory Improvement Process Towards Accreditation (SLIPTA) objective to improve and fulfill ISO 15189 standards with its framework to be used to encourage and support in a stepwise manner.
 - He discussed that Strengthening Laboratory Management Toward Accreditation (SLMTA) has 10 modules that can address the gaps and non-conformities that are identified during the SLIPTA audit. Furthermore, SLMTA which has a component of Quality Improvement Projects (QIP) is assessed during site visits and this is used to prepare labs for accreditation. There are 7 targeted labs in the USAPI of which 4 labs have been enrolled in the SLMTA program (Yap, Palau, Majuro, Pohnpei). The SLMPTA program has had a great impact on the Labs showing great improvement in Standard Operating Procedures (SOP) review and formulation of Lab Handbooks in the USAPI’S (Pohnpei completed and launched its handbook in 2021).
 - B. Harmonisation of SLIPTA audit checklist.
 - Mr. Manasa elaborated on the different types of audit checklists used by partners to audit countries which could cause confusion among countries. He recommended that the WHO SLIPTA checklist must be adopted by all partners to remove variations when carrying out audits in the Pacific region.

DISCUSSIONS: It was clarified that the SLIPTA audit is standardized using the WHO SLIPTA audit tool and there has been very good collation of scores between auditors in the Southern Pacific countries. PPTC and SPC used the SLIPTA 2012 audit tool to standardize audits of Southern Pacific countries, but SPC has recently progressed to using the SLIPTA tool 2015 and has automated the scoring system using the Pbi program to ease the summation of scores post-audit. There is no such tool as an institutional or partner SLIPTA audit tool.

ITEM L4-1: “THE COVID 19 PANDEMIC- MAJOR LESSONS LEARNED AND PREPARING THE LAB FOR THE NEXT PANDEMIC/OUTBREAK”

- I. Ms. Shalini Singh (Lab manager, Fiji Centre for Disease Control highlighted the need to plan and prepare for the next pandemic from the lessons learned and challenges faced during the Covid-19 pandemic.
- II. Shalini stressed the importance of networking with partners and the in-country ministries due to the support needed during the pandemic which boosted the laboratory routine work e.g., data entry and the Lab personnel were only concentrating on laboratory testing.
- III. She concluded that with the high demand for testing during the pandemic, laboratory staff had to work for 12 hours and about 4,000 tests were performed in a 24-hr period.
- IV. Mr. Alan Mallari (Guam Public Health Lab) shared their testing implementation timeline from March 2020 using different platforms with varying work volumes till February 2023. GPH Lab used whatever platform that was available. He stressed that it is challenging to use only one testing platform when there is a great demand for testing and it’s important to have public and private partnerships to support the demands for testing.
- V. He concluded that it is crucial to have the lab staff for continuous capacity building, instrument upgrade, and maintenance to support and prepare the lab for future pandemics or outbreaks.

- VI. Mere Cama (Belau National Hospital Lab, Palau) gave a brief history of Palau Lab sharing the same challenges as other labs with governance and logistics. She emphasized on the lessons learned from the pandemic as below:
- Training to meet the lab's needs.
 - Lab networks to assist with the communication of lab needs.
 - The utilisation of any guidance available to assist with lab testing and test implementation.
 - Pandemic preparedness: sustaining covid emergency supplies, digitisation and having regional blueprint of lab preparedness and response.

ITEM L5: "CURRENT INFLUENZA SURVEILLANCE UPDATES"

- VII. Professor Patrick Reading (VIDRL– Doherty Institute, Australia) elaborated that Influenza types A and B viruses are common to humans. He outlined the seasonal trend of influenza infection which peaks in July to September in the Southern Hemisphere and December to February in the Northern Hemisphere. Many PICTs do not display classic seasonal activity (outbreaks, importation of viruses from travellers, etc.)
- VIII. A number of different subtypes of avian viruses (including HPAI) circulate in wild birds and poultry, and cause occasional infections in humans:
- H7N9, H5N1, H7N3, H5N6 and others
 - No sustained human-to-human transmission has been detected so far.
- IX. Dr. Patrick briefly outlined the VIDRL's role as Influenza collaborating centre facilitating Global Influenza Surveillance Response System (GISRS) to :
- Identify & monitor influenza viruses circulating in the human population,
 - Monitor antigenic drift in seasonal viruses,
 - Monitor the emergence of seasonal virus variants resistant to antiviral drugs.
 - Early detection of unusual influenza viruses in the human population (rapidly identify viruses with pandemic potential).
 - It was identified that a small number of PCR testing for influenza testing as compared to 2023 and PCR testing remains the gold standard of diagnostic testing in the world.
 - Mentorship training program to visit Tonga and Vanuatu.
 - the establishment of multiplex PCR (flu sc2) and training to be conducted at the different islands of Tonga and Vanuatu.

ITEM L6:1 "PROMOTING THE PPHSN LABNET CATALOGUE"

- X. Ms. Talica Cabemaiwai (SPC) presented the summary of the PPHSN Laboratory catalogue which reflects the services that are provided by L1 of the 22 PICTs & Reference L2 & L3 Laboratories available supporting the Level 1 Laboratory for priority diseases confirmation and whole genome sequencing.
- Emphasis is on the improvement on countries submission of information from lab focal persons and creating a dashboard for easy visualization of lab services in the region.

ITEM L6.2. VIDRL'S ASSISTANCE TO PACIFIC ISLAND LABS

- XI. Mr. Navin Karan gave an overview of VIDRL's role, reference services, and functionality at three levels including, at State Level (Victoria), National Level (Australia), and International/ regional level including WHO CC for *Influenza Reference and Research, Viral Hepatitis and for Mycobacterium ulcerans*, as well as WHO regional reference laboratory for Poliovirus, Measles and Rubella, Hepatitis B/D, and National Influenza Centre.
- VIDRL's key focus areas were discussed, and of interest is the regional and global health area, which aims to build and support laboratory capability in the Indo-Pacific region with a focus on pandemic preparedness and emerging infectious diseases.
 - Navin highlighted the VIDRL's activities in the Pacific region and Asian countries including the reference laboratory support provided to the Pacific Ministries of Health through for Enterovirus/ Poliovirus, Measles and Rubella Virus Identification, and Hepatitis B/D in recent years.
 - Indo-Pac-Lab Program was also highlighted, including quality management support provided to PNG, Cambodia, and Lao PDR. Attachments at VIDRL, with recent molecular training provided to Vanuatu and Solomon Islands, supported by SPC.
 - Other Support available from VIDRL and the Doherty Institute to the Pacific were listed and included:
 - a. technical advice and reference testing/ sequencing and characterization of flavivirus and arbovirus, Influenza and other ILI, viral hepatitis, HIV, measles, and rubella, and other emerging infectious diseases
 - b. Remote and in-country technical support to labs
 - c. reagents, controls, proficiency panels
 - d. sustainable options and testing algorithms for countries to use.
 - e. Workshops and Training
 - f. Advice, sharing expertise.
 - g. Work in collaboration with regional and country partners
 - VIDRL welcomes further collaboration with the Pacific countries and regional partners and encourages countries to reach out if they need to send samples for reference testing to Melbourne, including for AMR and influenza to the Doherty Institute.

ITEM L7 & L8: LOGISTICS OF PROCUREMENT FOR THE PACIFIC REGION LESSONS LEARNED FROM THE COVID-19 PANDEMIC & STRENGTHENING AND STREAMLINING COMMUNICATION DURING A PANDEMIC

- XII. Dr. Darwin Operario (WHO) elaborated on the importance of sustainability of Molecular capabilities in the PICTS with long-term planning in place. Each country with its unique setting should be able to address the following:
- a. human capacities
 - b. gaps and challenges
 - c. supply chain and forecasting
 - d. determine core testing services.

He also stressed the importance of Epi surveillance and the Laboratory team to be working together in carrying out a combined assessment.

ITEM L9: PACIFIC PATHOLOGY TRAINING CENTRE EXTERNAL QUALITY ASSURANCE (EQA) PROGRAM

- XIII. Mr. Filipo Faiga (PPTC) presented the overview of the EQA program delivered by PPTC to the PICTs and its importance in monitoring Lab performance and contributing to initiating quality improvements. The EQA program has been financially supported initially by WHO and currently by the New Zealand MFAT. PPTC has been providing the EQA program to 150 Labs in 22 PICTs and it's free of charge for any Pacific Island countries to participate.
- Furthermore, countries are benefiting from performing the EQA as it is a requirement for ISO accreditation.
 - PPTC is also monitoring the performance of each laboratory on the scores achieved by the country and stressed carrying out corrective actions.
 - Encouraged laboratories' participation in the EQA program by processing samples and submitting results for assessment and ensure corrective measures are put in place when results are received.

ITEM L10: DEVELOPING A TEST ALGORITHM TO CONTROL TESTING DURING OUTBREAKS

- XIV. Dr. Eka Buadromo (SPC) presented on the role of Level 1 Lab to support public health and clinical testing to support outbreak and syndromic surveillance.
- She elaborated on the importance of Laboratories not using up all their resources during an outbreak. Communication within the laboratory between bench workers and administration and externally to the clinicians and Public Health Surveillance officers.
 - More emphasis was on the need to stop laboratory testing once the threshold of the disease has been reached by a particular country and good testing algorithms to be in place to guide the testing process.
 - Furthermore, Dr. Eka recommended the following:
 - a. Differentiate syndromic surveillance and laboratory surveillance.
 - b. Need to standardize protocol, SOP, and algorithm.
 - c. Testing protocols during outbreaks and SOPs to be reviewed.
 - d. Stop screening tests once the outbreak is declared and reserve testing only for clinically indicated cases needing hospital admission during an outbreak.
 - e. Regular communications with the surveillance team.

Day 2: WEDNESDAY 26th JULY 2023

TIME 1.30 PM

(Moderator: Dr Litia Tudravu, Rapporteur: Mrs Talica Cabemaiwai)

ITEM L11: AMERICAN SAMOA AMR LAB SURVEILLANCE UPDATES

- XV. Ms Seini Biukoto (LBJTMC, American Samoa) mentioned that LBJTMC must strengthen serological testing to support notifiable diseases notification, and this has been a challenge due to staff shortage.
- According to Ms. Seini, there is a decline in number of multi-drug resistant organisms (MRO) reported in 2015-2021 as well as Methicillin Resistant Staphylococcus. Aureus (MRSA) during the Covid-19 pandemic due to good hygiene practices.
 - Currently in the process of implementation of WHONET to assist AMR reporting with the support of Dr. John Sterling of WHO.

- XVI. Ms Rosemary Tekoaua (Kiribati) shared their experience on the use of the SPC Antibioqram tool which assist them to visualize and analyse data for multiple time points and this has been useful for them to present in the hospital's monthly meeting.
- She elaborated on a few disadvantages of using the said antibiogram as noted below:
 - a. Not able to capture the 2nd line of antimicrobial drugs and Extended-spectrum β -Lactamases positives.
 - b. Discrepancies in critical breakpoints between Clinical & Laboratory Standard Institute (CLSI) and European Committee for Antimicrobial Susceptibility Testing (EUCAST).
 - c. For a repeat sample for a particular patient will require a new patient identifier to be used.

ITEM L12: SPC ANTIBIOGRAM TOOL

- XVII. Dr Eka Buadromo presented on the SPC Antibioqram database which has been created for PIC labs that do not have Lab Information System (LIS) or Vitek to standardize AMS data entry.
- She emphasized the rollout of this antibiogram tool this year with countries mostly in the Southern Pacific region (Kiribati, Samoa, Tonga, Cook Island, Vanuatu, Solomon Island), and some countries have required amendments to the tool to suit their need.
 - Dr. Eka was able to show all the features of the antibiogram tool from specimen reception data entry to data analysis and report printout version.
 - Dr. John Sterling commented on the antibiogram reference sheet (formula) for the antibiotic zone sizes to be relooked into.
 - Vasiti also commented to have the trend of AMR be reflected in this antibiogram tool.

ITEM L13: WHONET WORKSHOP FOR LABORATORIANS.

- XVIII. Dr. John Sterling (WHO) delivered training to participants on the use of WHONET.
- The WHONET training consisted of 3 modules – WHONET configuration, Data analysis (manual /automated), Exporting WHONET files to the GLASS exchange format.
 - There is a tutorial program that can be accessed by the participants which includes all 3 modules.
 - Partners SPC and PIHOA to organize virtual meetings for troubleshooting and Q&A on WHONET upon the requests of countries.

ITEM L14: PPHSN LABNET UPDATE

- XIX. Dr Litia Tudravu (LabNet Chair) presented the 2022 Southern LabNet recommendations and there will be a changeover of chair position in 2024 which has to be taken up by Micronesia or Polynesia nominated chair. She also highlighted that some of the recommendations have been implemented e.g., LabNet/PISP monthly presentations.
- She also stressed that only one LabNet meeting will be conducted every two years for both regions i.e., South and Northern Pacific. Subregional meetings will only occur on very special occasions like this year's combined EPINET/LabNet meeting.
 - In addition, she described the enormous assistance and support offered by the partners (WHO, VIDRL, PPTC, PIHOA, SPC) to the countries during the Covid-19 pandemic and the importance of sustaining some of these services e.g., Molecular testing.

LABNET RECOMMENDATIONS

1. Develop a regional Lab Preparedness and Response Protocol as a guideline for PICTs (to include surveillance testing and reporting protocol).
2. WHO and allied partners to support establishing regional /national testing threshold for infectious disease outbreaks, to serve as guideline for PICTs laboratories to develop outbreak surveillance testing algorithms.
3. National/ jurisdiction outbreak response team to define a clear communication pathway between surveillance and laboratories and vice versa to allow prompt reporting of positive cases and for laboratories to initiate the outbreak surveillance testing algorithm.
4. Develop a Regional Database on regional stockpiles of lab resources (e.g., lab supplies, human resources, etc.).
5. Build the capacity of Lab Leadership in the PICTs through training and mentorship programs with support from partner agencies (e.g., SPC, PIHOA, WHO, CDC, APHL, etc.).
6. Provision of proficiency testing program for viral hepatitis testing and measles & Rubella [ELISA & rapid testing (RDT)] with support from the WHO Collaborating Centers for Viral Hepatitis, Measles, and Rubella.
7. Review, revive and strengthen antibiotic stewardship for hospitals.
8. Strengthen serological testing to support notifiable disease notifications.
9. Recommend the use of the SPC antibiogram tool for microbiology labs without Lab Information Systems (LIS).
10. SPC to review the antibiogram reference sheet for antimicrobial susceptibility testing (AST) sensitivity zones and resistance trends in the SPC antibiogram tool.
11. To strengthen AMR surveillance by implementing WHONET in microbiology labs with LIS) and automated antimicrobial susceptibility testing (AST).
12. WHONET to support backlinking of SPC antibiogram tool or other existing AST software.

ANNEX A: PARTICIPANTS LIST

Country	Name	Position /Email
USAPI		
1. American Samoa	Annette Ilimalleota	Lab Manager ASDOH annette.ilimalleota@doh.as
2. American Samoa	Seine Biukoto	Microbiology Supervisor, LBJ Tropical Centre seine.biukoto@lbj.as
3. CNMI	Jason Pangelinan	Lab Manager, CHC Saipan jason.pangelinan@chcc.health
4. FSM - Chuuk	Monuken Dias	Lab technician
5. FSM - Kosrae	Ms Aralai Tuione	Lab Manager ATuione@fsmhealth.fm
6. FSM - Kosrae	Mr. William J. Nena	Lab Supervisor wijnena@fsmhealth.fm
7. FSM - Pohnpei	Mr. Herbert Johnny	Lab Supervisor hjohnny@fsmhealth.fm
8. FSM - Yap	Daisy Donna Fanapin Phal	Lab Manager dphal@fsmhealth.fm
9. Guam	Alan Mallari	Microbiologist III Alan.Mallari@dphss.guam.gov
10. Palau	Carmin Pipit	Medical Laboratory Technician carmin.pipit@palauhealth.org
11. Palau	Mere Cama	Laboratory Biosafety and Quality Officer mere.cama@palauhealth.org
12. RMI - Majuro	Paul Lalita	Lab Manager, Majuro Hospital plalita@rmihealth.org
13. RMI - Ebeye	Michael Diaz	Lab Supervisor, Ebeye Medical Health Centre justmyk0105@gmail.com
SOUTH PACIFIC		
14. Cook Islands	Douglas Tou	Lab Manager douglas.tou@cookislands.gov.ck
15. Fiji	Shalini Singh	Lab Manager shalini.singh@govnet.gov.fj
16. Fiji	Dr Litia Tudravu	Consultant Pathologist litia.tudravu@govnet.gov.fj
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21. FNU	Dr Aruna Devi	Assistant Professor, FNU Labaruna.devi@fnu.ac.fj
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23. VIDRL - Doherty Institute	Professor Patrick Reading	Senior Virologist Patrick.Reading@influenzacentre.org
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ANNEX B: LABNET SESSION AGENDA

Time	Tuesday 07/25/2023 Facilitator: RMI Rapporteur: American Samoa	Wednesday 07/26/2023 Facilitator: Fiji Rapporteur: SPC
1.30 – 1.45 pm	L1. Addressing the needs of public health/clinical laboratory workforce challenges in the Pacific Dr Aruna Devi (BMLS Faculty - Fiji National University)	L11. American Samoa AMR lab surveillance updates Seini Biukoto American Samoa, LBJTMC
1.45 – 2.10 pm	L2. Training of the local medical lab workforce – The Tongan Experience Vaohoi Moala (Tonga Hospital Lab)	L12. AMR lab surveillance updates Cook Islands/Kiribati/Vanuatu
2.10 – 2.30 pm	L3. Improving LQMS through SLIPTA & SLMTA in the USAPI & Harmonization of SLIPTA audit checklist for use in the Pacific laboratories Manasa Mainqelevu (PIHOA)	L13. SPC ANTIBIOGRAM TOOL -DR EKA BUADROMO (SPC)
2.30 – 2.50 pm	L4. The COVID-19 Pandemic – Major lessons learned and preparing my lab for the next outbreak/pandemic. Fiji (Shalini Singh) GPHL (Alan Mallari) Palau (Mere Cama)	L14. WHONET Workshop for Laboratorians Dr John Stelling (WHO)
2.50 – 3.10 pm	L5. Current influenza surveillance updates Dr Patrick Reading (VIDRL - Doherty Institute, Australia)	
3.10 – 3.30 pm	TEA BREAK	TEA BREAK
3.30 – 3.50 pm	L6. VIDRL's assistance to Pacific Island Labs Navin Karan (VIDRL - Doherty Institute, Australia) An update on the new PPHSN Laboratory Catalogue Talica Cabemaiwai (SPC)	WHONET Workshop for Laboratorians Dr John Stelling (WHO)
3.50 – 4.10 pm	L7. Logistics of procurement for the Pacific region – lessons learned from the COVID-19 pandemic (WHO)	
4.10 – 4.40 pm	L8. Strengthening and streamlining communication during a pandemic (WHO)	
4.40 – 5.10 pm	L9: PPTC EQA - Filipino Faiga (PPTC)	
5.10 – 5.15 pm	L10: Developing a testing algorithm to control testing during outbreaks (SPC)	L15. PPHSN LabNet Update Dr Litia Buadromo (LabNet Chair)
5.15 – 5.30 pm	Review & Reflection of Day 1 by American Samoa	Review & Reflection of Day 2 by SPC End of LabNet meeting

ANNEX 2: EPINET RECOMMENDATIONS



Pacific Public Health Surveillance Network (PPHSN) EpiNet Regional Meeting
25–28 July 2023, Honolulu, Hawaii

Co-sponsored by

The Pacific Islands Health Officers Association and the Pacific Community

1. EpiNet

- i. A working group to be established to update the national/jurisdictional outbreak response teams (the “EpiNet Teams”) Terms of Reference, with the following comments considered:
 - a. EpiNet teams should diversify their areas of expertise to include risk communication and community engagement, disaster/emergency management, etc. and should bring in additional specific expertise as required by the situation.
 - b. EpiNet team plans and preparation should be regularly updated and immediately available in the event of an outbreak or disaster, recognising that they may need adaptation to the situation.
 - c. Ensure the size and composition of core EpiNet team is appropriate for the national/jurisdictional context.
 - d. Conduct exercises regularly to build the capacity of EpiNet teams.
 - e. Maintain clear paths for communication between EpiNet teams and health leaders/managers and all stakeholders, including the community.
 - f. Maintain an updated list of EpiNet members.
- ii. Allied partners to develop a concept paper on the formation of regional outbreak response mechanism(s) (e.g. “Regional EpiNet Team” that can respond rapidly in the Pacific Island countries and territories context, with the paper to be presented to the PPHSN-Coordinating Body (CB).
- iii. PICTs to express gaps in national/ jurisdictional EpiNet team’s capabilities to identify training needs.
- iv. Allied partners to continue to support country requests for capacity development, including conducting exercises.
- v. PICTs and Allied partners to support communication channels that enable national/jurisdiction EpiNet teams to share information and initiatives with each other, and request support, e.g. through the monthly Pacific Epidemic Preparedness and Intelligence (EPI) Rounds¹⁰ virtual meetings.
- vi. PPHSN-CB focal point to communicate updated list of EpiNet focal points through the EpiNet group email list and on the PPHSN website.

¹⁰ EPI Rounds is a monthly meeting designed to link those working in Pacific public health security. It’s an opportunity to discuss emerging threats, current signals, and have an in-depth discussion on a pertinent public health topic.

2. **Laboratory support**

- i. PICT laboratories to support epidemic response capacity by performing timely and reliable testing of specimens, shipping of samples to reference laboratories (if needed) and communicating results to decision makers.

3. **SHIP-DDM**

- i. Pacific Island health ministries/departments share responsibility with FNU, PIHOA, SPC and WHO for the provision of SHIP-DDM.
- ii. PICTs to continue to (i) provide protected me to those participating in the capacity development programme to ensure completion of course and of implementation of improvement projects; (ii) ensure that TORs of job posts take into account competencies gained in the programme; (iii) provide career opportunities to maintain and sustain expertise in the team.
- iii. Allied partners and PICTs to support raising awareness of SHIP-DDM programme achievements to senior authorities in the PICTs.

4. **One Health**

- i. PICTS and allied members explore options for establishing a Pacific One Health Network.

5. **PacNet/Pacific Syndromic Surveillance System (PSSS)**

- i. PICTs to continue timely reporting of data and situation reports through PacNet and PSSS.

6. **Pacific Outbreak Manual (POM)**

- i. A working group to be established to update the POM, with consideration of the meeting's discussions, including alignment of the manual and the LabNet Catalogue.

7. **Incident Command Structure (ICS)**

- i. PICTs consider implementing coordination structures for enhanced response coordination.

8. **International Health Regulations (IHR 2005)**

- i. PICTs to request support from WHO for monitoring and evaluation of IHR core competencies, e.g. Joint External Evaluation (JEE) and After-Action Review (AAR).
- ii. PICTs to consider designation of contact person for Points-of-Entry alert response and external partners coordination on Border Health Security, e.g. drafting a response plan for health alerts at points of entry.

9. **LabNet meeting recommendations for EpiNet teams**

- i. WHO and allied partners to support establishing a regional/national testing threshold for infectious disease outbreaks, to serve as a guideline for PICTs laboratories and national/jurisdictional outbreak response teams (the "EpiNet teams") to develop outbreak testing strategies.
- ii. National/jurisdictional outbreak response teams (the "EpiNet teams") to define a clear communication pathway between surveillance and laboratories and vice versa to allow

prompt reporting of positive cases and for laboratories to initiate the outbreak surveillance testing algorithm.

10. **GOARN**

- i. PICTs and allied partners to consider joining and participating in the Global Outbreak Alert and Response Network (GOARN) to gain access to resources for strengthening capacity for outbreak response.

ANNEX 3: LIST OF PARTICIPANTS

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ANNEX 4A and 4B: OUTBREAK SCENARIOS– Day 1

PPHSN EPINET/LABNET
EXERCISE SCENARIO DAY 1**FACILITATOR HANDBOOK***OVERVIEW for facilitators only:*

DO NOT READ THIS TO THE PARTICIPANTS: This exercise runs through the detection and response to a dengue outbreak in a fictional island jurisdiction (Papahesina). As a facilitator, you will help guide your group (the new Papahesina EpiNet team) through the scenario. There are some questions to help with discussion, and notes for you to guide the discussion. Please try not to reveal the cause of the outbreak until the results are shared in the participant scenario.

Introduction:

At 3:30 on Friday afternoon you get a phone call from your hospital laboratorian reporting a positive result for leptospirosis IgM by a rapid test. She doesn't have all the clinical information, but the sample was from a 23-year-old female who was seen at the outpatient clinic that morning. The laboratorian says she believes there may have been a few more positives that missed getting reported while she was on leave.

You call the outpatient clinic to get more details on the case from the nurse, but she's too busy to talk to you. She's in the process of admitting two patients into the hospital who are in respiratory distress and coughing-up blood.

Discussion:

What do you think of the two situations?

-Could be leptospirosis infections going on, but might need to have some insight to the current rain pattern, any possible reason for increased exposures to contaminated water.

-Might be weary of a lone positive leptospirosis IgM. In endemic places with frequent exposure, individuals may often test positive for leptospirosis IgM via rapid test, but the acute illness might be due to something else.

Could they be related?

-Yes, they could be related. Severe leptospirosis can cause hemoptysis and require hospitalization.

-There might also be other illnesses that share clinical features similar to leptospirosis that shouldn't be overlooked.

Which one would you prioritize for investigation (especially on a Friday afternoon)?

-It seems that further investigation of the two hospitalizations might be best to prioritize at this point (severity, likely infectious etiology).

What are your next steps?

-Consider ways to get additional information on the hospital cases. Might include going to the outpatient department or something like calling head of emergency department to find out more. If participants are unsure on how to get additional details from the emergency department, this might be a connection to flag for further development.

-Consider ways to strengthen the reporting link between the laboratory and the EpiNet team. It appears this connection is purely based on the personal relationship between the laboratorian and the epidemiologist that is good, but might need a system that allows for redundancy.

What are your knowledge gaps; what topics might you flag for additional learning?

Note: This will be a recurring question that will allow participants to think about their own knowledge gaps and hopefully link to upcoming presentations and/or inspire future self-driven learning.

- Potential topics for further learning: Sensitivity and specificity of leptospirosis tests
- Systems for laboratory-based surveillance
- Systems for hospital-based surveillance or enhancing event-based surveillance in clinical settings
- Overview of leptospirosis: epi, symptoms, diagnosis, treatment, differential diagnosis
- How to conduct a risk assessment of an event

Facilitator Overview:

DO NOT READ THIS TO PARTICIPANTS: *In this inject, you find out that there are two unrelated and dissimilar patients who are being admitted for a similar severe condition. At this point there is no specific diagnosis, and the symptoms could fit a wide range of diseases including: leptospirosis, dengue, pneumonia, rickettsia, COVID, TB, etc.*

In this scenario, it will be difficult to know exactly what testing capacity is available for our fictional island. It might be best for individuals to share the testing capacity and off-island referral process for their own islands.

Scenario Inject 2:

You decide to focus your initial investigation on the two severe patients being admitted. You go to the outpatient clinic to get details on the two patients currently being admitted. It's a bit chaotic, but you find the admitting physician who reports the following:

The two patients appear to be unrelated and live in different parts of the island.

Patient 1: 57-year-old female

- **Past medical history:** diabetes, high blood pressure, coronary heart disease
- **Routine medications:** aspirin, metformin, and lisinopril
- **Vaccination history:** unknown
- **Present illness:** Started about 6 days ago with high fever and headaches. Patient wasn't able to eat or drink much. Took ibuprofen for the fever and headache. After 4 days, the patient's fever went away and she seemed to be getting a little better before starting to vomit and complain of abdominal pain. This morning she was restless and was breathing fast. She started coughing up blood and was brought into the emergency room. No other family members reported having similar symptoms.

Patient 2: 12-year-old male

- **Past medical history:** none
- **Routine medications:** none
- **Vaccination history:** up to date with childhood vaccinations
- **Present illness:** 5 days ago developed high fevers with headache and muscle pain. Patient took paracetamol for his headache/fever. The patient seemed better yesterday, but still wasn't eating or drinking much. He became restless overnight and was difficult to arouse. His breathing became fast and was brought into the clinic. The doctor noted the patient was in respiratory distress and placed a breathing tube that when suctioned showed bright red blood. The family reported that two other individuals had chills, fever, and joint pain two weeks ago, but have since recovered.

Discussion:

What type of lab specimens would you want collected from these patients?

-Whole blood, serum? Nasopharyngeal, sputum? Urine stool?

What tests would you perform, where would you do the testing?

-Leptospirosis (rapid test? MAAT testing? PCR testing?)

-What other disease might they order tests for?

-If they can't do some of the requested tests on island, where and how would you send them out off for testing?

-Do any participants have familiarity with panel testing (e.g. biofire?) where multiple tests can be done at one time?

How would you find additional cases and collect information?

-It might be good to do chart reviews to identify past cases and then create a prospective surveillance system to collect new cases presenting to clinics. Appropriate specimen collection should be included in those meeting the case definition.

What case definition would you use?

-Likely no perfect answer, but should include the WHO, WHAT, WHERE, WHEN:

e.g.: Illness in a person residing in Papahesina with acute onset of fever and one of the following: headache, muscle aches, rash, difficulty breathing.

Scenario Inject 3:

You work with the attending physician to collect blood and a nasopharyngeal swab on the two patients. Your local laboratory reports the following results:

Patient 1: (57 y/o Woman)

Dengue Rapid:	-NS1 Antigen: Negative	-IgM Antibody: Positive	-IgG Antibody: Positive
COVID-19 Rapid:	-Antigen: Negative		
Leptospirosis Rapid:	-IgM Antibody: Positive		
Typhoid Rapid:	-IgM Antibody: Negative		

Patient 2: (12 y/o Male)

Dengue Rapid:	-NS1 Antigen: Positive	-IgM Antibody: Negative	-IgG Antibody: Negative
COVID-19 Rapid:	-Antigen: Negative		
Leptospirosis Rapid:	-IgM Antibody: Negative		
Typhoid Rapid:	-IgM Antibody: Positive		

You establish the following case definition: Acute onset of fever and headache, joint pain, or rash in a patient residing in Papahesina island from July 1, 2023

You create a system to collect information on patients presenting to all outpatient clinics who meet the case definition. The data is entered and sent to you daily for analysis and reporting. Additional laboratory samples are collected on patients meeting the case definition.

You speak with the medical team and find out that the physicians have been seeing these febrile cases for the past two weeks. A query of clinic records and finds that there were 21 patients who met the case definition seen between July 1-July 21, 2023.

An investigation at the hospitalized patients' homes identifies 5 other patients who reported symptoms that met the case definition but have recovered. Investigators also identified 3 family members who were acutely ill with fever and joint pain. They completed the investigation form and collected specimens on these patients.

Discussion:

At this point what do you think is causing the outbreak?

-the laboratory testing is not terribly conclusive. The NS1 antigen is fairly specific (low rates of false positives). It may have been that patient 1 was far enough into her illness that she was no longer NS1 positive.

-Serologic results on rapid tests are generally not as specific (higher false positives, especially as the cause of the acute illness).

How will you confirm the diagnosis?

-It would be good to get confirmatory PCR testing (might require off-island shipping).

What information sharing would you conduct at this time?

-Need internal information sharing to health leadership and to clinical providers to be aware.

-Should also prepare for public messaging about the cluster of cases, might be OK to wait a day to see if additional information would better inform what guidance to give the public.

-In general best to be transparent and get information out as early as possible. It's OK to say "we don't know."

What topics might you flag for additional learning?

- Laboratory testing of dengue, leptospirosis?
- Sensitivity and specificity of rapid tests.
- Typhoid overview

Scenario Inject 4:

The 12-year-old patient admitted to the hospital has died. The 57-year-old patient is still in critical condition. Your Minister of Health has heard about the death and that the patient was for positive Typhoid.

He asks that you set-up a response task force. He wants to take quick action to stop typhoid by implementing a boil-water advisory and stopping sales of bottled water until water testing for each producer and importer can be completed.

Discussion:

How do you approach the Minister's recommended response actions?

-Setting up a response "task force" is probably a good thing at this point. Could be under the EpiNet team or expanded to a larger group.

-It is probably too early to implement a large response to typhoid based on one serologic test result. It's likely better to take a step-wise approach to the response at this point.

How will you structure your response?

[Draw an initial organizational chart diagramming your response team and their general roles]

-We will have a discussion on the incident command system. Would encourage the team to try to sketch out who should be the response team lead, the chain of command and the other key roles/responsibilities needed at this point. Roles to consider include public information officer, medical lead, surveillance lead, logistics, etc.

What topics might you flag for additional learning?

- Typhoid response activities
- Response management, incident command system

Scenario Inject 5:

Your clinic surveillance systems identifies and additional 13 cases in its first day of operation. NP swabs and blood were collected from each of these patients. Test results from these cases and the home investigation team are summarized below:

Test	Positive	Negative	Total
Dengue NS1	15	6	21
Dengue IgM	10	11	21
Dengue IgG	9	12	21
COVID-19	1	20	21
Leptospirosis IgM	3	18	21
*Typhoid IgM	1	12	13

*Laboratory ran out of rapid tests for typhoid

DISCUSSION:

What do you think is causing this cluster of illness?

-These results seem to indicate that there is a dengue outbreak. The high number of NS1 positives is indicative of a dengue outbreak. The IgM positives may be from individuals where specimens were collected later in the course of illness (or false positives). IgG positives may be from individuals who had exposure a bit earlier (and/or had a previous dengue infection.)

-The other results could be other infections mixed in with the dengue cases, and/or false positives.

-Note that leptospirosis cases seem to always increase during dengue outbreaks. This may be a real increase as both diseases have a relationship with increased rainfall. It also may be an artifact as the clinical presentation of dengue is similar to leptospirosis and there may be increased requests for lepto testing during a dengue outbreak that could result in more lepto positives being identified despite the endemic levels of leptospirosis staying the same.

What information sharing would you conduct at this time?

-Would need to ensure the ministry and public are aware of the situation. Might include key messaging to public on what is going on, what they can do to protect themselves and others, and when to expect additional information.

-Might consider a traveller's notification -Should develop a SitRep to share with jurisdiction leadership and on PacNet

What will your Situation Report for the outbreak look like?

SitRep should include the descriptive epi of the outbreak (Who, What, Where, When). Include lab testing results, epidemic curve, map of municipal attack rates, the current response activities and needs.

What topics might you flag for additional learning?

-Dengue epidemiology, diagnosis, prevention and management -How to build a SitRep

Scenario Inject 6:

You immediately notify the minister of health that there appears to be a dengue outbreak. Typhoid doesn't appear to be a major issue at this point.

He asks you what the health ministry should do now? Does the ministry need any special supplies for the response?

He suggests spraying inbound airplanes to ensure there isn't introduction of more mosquitoes with the virus and stopping individuals diagnosed with dengue from boarding outbound flights.

Discussion:

What would be your next response steps?

-Would need to shift to a dengue response.

Environmental?

-Suggest source reduction through removing standing water, covering water catchment, and applying larvicide in high-risk areas.

-Might consider residual spraying in high-risk areas

Clinical?

-Need to ensure providers are up to date on identifying and managing dengue

At borders?

-Spraying planes probably not necessary, do not board for dengue patients also unlikely (will have a border health lecture in conference)

What messaging would you share with providers?

-Specifics on identifying and treating severe dengue (very important to reducing mortality during a dengue outbreak)

What messaging would you share with the public?

-Many things are appropriate: but key to avoid mosquito exposure, reduce mosquitoes through cleaning/removing standing water, and know the signs of severe dengue and where to get treatment.

Would you make any changes to your response structure/organization chart?

-likely would need to add environmental health component.

What topics might you flag for additional learning?

-Clinical management of dengue

-Managing a dengue response

-Mosquito abatement

Scenario Inject 7:

You implement your dengue response plan that includes a larger role of environmental health and the inpatient services in your response structure.

You maintain your enhanced Acute Febrile Illness surveillance to monitor the outbreak and produce daily SitReps.

The environmental health team implements source reduction activities and residual spraying of high-risk areas (hospitals, clinics, schools, and churches).

Your clinical providers undergo the refresher training on dengue management, with a special focus on appropriate management of severe dengue.

A public awareness campaign using radio, social media, posters and church/school/community announcements is implemented with a focus on reducing standing water, avoiding mosquito bites, and what to do if you experience symptoms of dengue.

It takes 8 weeks for the dengue cases to recede to expected levels. During those 8 weeks you identified an additional 449 cases of dengue and 14 people were admitted for severe dengue. The physicians established a dengue ward and successfully managed all your cases of dengue resulting in no other dengue-related fatalities.

Your minister of health asks that you conduct an evaluation of the response and submit a report to him by next week.

Discussion:

How will you conduct this review? What data will you use?

-Would suggest doing an After Action Review (AAR) of the response. We will be doing a presentation on After Action Reviews and a handbook to help guide and document a quick AAR. IT includes the areas to evaluate and a structure of the report.

What areas of the response will you evaluate?

How will you structure your evaluation report?

What topics might you flag for additional learning?

-Up to the team. Note they don't need to complete the learning by the end of the meeting...

ANNEX 4B: OUTBREAK SCENARIOS

PPHSN EPINET/LABNET EXERCISE SCENARIO DAY 1

PARTICIPANT HANDBOOK

Scenario Introduction (Inject 1):

At 3:30 on Friday afternoon you get a phone call from your hospital laboratorian reporting a positive result for leptospirosis IgM by a rapid test. She doesn't have all the clinical information, but the sample was from a 23-year-old female who was seen at the outpatient clinic that morning. The laboratorian says she believes there may have been a few more positives that missed getting reported while she was on leave.

You call the outpatient clinic to get more details on the case from the nurse, but she's too busy to talk to you. She's in the process of admitting two patients into the hospital who are in respiratory distress and coughing-up blood.

Discussion:

- What do you think of the two scenarios?
- Could they be related?
- Which one would you prioritize for investigation (especially on a Friday afternoon)?
- What are your next steps?
- What are your knowledge gaps; what topics might you flag for additional learning?

Scenario Inject 2:

You decide to focus your initial investigation on the two severe patients being admitted. You go to the outpatient clinic to get details on the two patients currently being admitted. It's a bit chaotic, but you find the admitting physician who reports the following:

The two patients appear to be unrelated and live in different parts of the island.

Patient 1: 57-year-old female

- **Past medical history:** diabetes, high blood pressure, coronary heart disease
- **Routine medications:** aspirin, metformin, and lisinopril
- **Vaccination history:** unknown
- **Present illness:** Started about 6 days ago with high fever and headaches. Patient wasn't able to eat or drink much. Took ibuprofen for the fever and headache. After 4 days, the patient's fever went away and she seemed to be getting a little better before starting to vomit and complain of abdominal pain. This morning she was restless and was breathing fast. She started coughing up blood and was brought into the emergency room. No other family members reported having similar symptoms.

Patient 2: 12-year-old male

- **Past medical history:** none
- **Routine medications:** none
- **Vaccination history:** up to date with childhood vaccinations
- **Present illness:** 5 days ago developed high fevers with headache and muscle pain. Patient took paracetamol for his headache/fever. The patient seemed better yesterday, but still wasn't eating or drinking much. He became restless overnight and was difficult to arouse. His breathing became fast and was brought into the clinic. The doctor noted the patient was in respiratory distress and placed a breathing tube that when suctioned showed bright red blood. The family reported that two other individuals had chills, fever, and joint pain two weeks ago, but have since recovered.

Discussion:

- What type of lab specimens would you want collected from these patients?
- What tests would you perform, where would you do the testing?
- How would you find additional cases and collect information?
- What case definition would you use?
- What are your knowledge gaps? What topics might you flag for additional learning?

Scenario Inject 3:

You work with the attending physician to collect blood and a nasopharyngeal swab on the two patients. Your local laboratory reports the following results:

Patient 1: (57 y/o Woman)

Dengue Rapid:	-NS1 Antigen: Negative	-IgM Antibody: Positive	-IgG Antibody: Positive
COVID-19 Rapid:	-Antigen: Negative		
Leptospirosis Rapid:	-IgM Antibody: Positive		
Typhoid Rapid:	-IgM Antibody: Negative		

Patient 2: (12 y/o Male)

Dengue Rapid:	-NS1 Antigen: Positive	-IgM Antibody: Negative	-IgG Antibody: Negative
COVID-19 Rapid:	-Antigen: Negative		
Leptospirosis Rapid:	-IgM Antibody: Negative		
Typhoid Rapid:	-IgM Antibody: Positive		

You establish the following case definition: Acute onset of fever and headache, joint pain, or rash in a patient residing in Papahesina island from July 1, 2023

You create a system to collect information on patients presenting to all outpatient clinics who meet the case definition. The data is entered and sent to you daily for analysis and reporting. Additional laboratory samples are collected on patients meeting the case definition.

You speak with the medical team and find out that the physicians have been seeing these febrile cases for the past two weeks. A query of clinic records and finds that there were 21 patients who met the case definition seen between July 1-July 21, 2023.

An investigation at the hospitalized patients’ homes identifies 5 other patients who reported symptoms that met the case definition but have recovered. Investigators also identified 3 family members who were acutely ill with fever and joint pain. They completed the investigation form and collected specimens on these patients.

Discussion:

- At this point what do you think is causing the outbreak?
- How will you confirm the diagnosis?
- What information sharing would you conduct at this time?
- What topics might you flag for additional learning?

Scenario Inject 4:

The 12-year-old patient admitted to the hospital has died. The 57-year-old patient is still in critical condition. Your Minister of Health has heard about the death and that the patient was positive for Typhoid.

He asks that you set-up a response task force. He wants to take quick action to stop typhoid by implementing a boil-water advisory and stopping sales of bottled water until water testing for each producer and importer can be completed.

Discussion:

- How do you approach the Minister's recommended response actions?
- How will you structure your response?
[Draw an initial organizational chart diagramming your response team and their general roles]
- What topics might you flag for additional learning?

Scenario Inject 5:

Your clinic surveillance systems identified an additional 13 cases in its first day of operation. NP swabs and blood samples were collected from each of these patients. Test results from these cases and the home investigation team are summarized below:

Test	Positive	Negative	Total
Dengue NS1	15	6	21
Dengue IgM	10	11	21
Dengue IgG	9	12	21
COVID-19	1	20	21
Leptospirosis IgM	3	18	21
*Typhoid IgM	1	12	13

*Laboratory ran out of rapid tests for typhoid

DISCUSSION:

- What do you think is causing this cluster of illness?
- What information sharing would you conduct at this time?
- What will your Situation Report for the outbreak look like?
- What topics might you flag for additional learning?

Scenario Inject 6:

You immediately notify the minister of health that there appears to be a dengue outbreak. Typhoid doesn't appear to be a major issue at this point.

He asks you what the health ministry should do now?

He suggests spraying inbound airplanes to ensure there isn't introduction of more mosquitoes with the virus and stopping individuals diagnosed with dengue from boarding outbound flights.

Discussion:

- What would be your next response steps?
 - Environmental?
 - Clinical?
 - At borders?
- What messaging would you share with providers?
- What messaging would you share with the public?
- Would you make any changes to your response structure/organization chart?
- What topics might you flag for additional learning?

Scenario Inject 7:

You implement your dengue response plan that includes a larger role of environmental health and the inpatient services in your response structure.

You maintain enhanced Acute Febrile Illness surveillance to monitor the outbreak and produce daily SitReps.

The environmental health team implements source reduction activities and residual spraying of high-risk areas (hospitals, clinics, schools, and churches).

Your clinical providers undergo the refresher training on dengue management, with a special focus on appropriate management of severe dengue.

A public awareness campaign using radio, social media, posters and church/school/community announcements is implemented with a focus on reducing standing water, avoiding mosquito bites, and what to do if you experience symptoms of dengue.

It takes 8 weeks for the dengue cases to recede to expected levels. During those 8 weeks you identified an additional 449 cases of dengue and 14 people were admitted for severe dengue. The physicians established a dengue ward and successfully managed all your cases of dengue resulting in no other dengue-related fatalities.

Your minister of health asks that you conduct an evaluation of the response and submit a report to him by next week.

Discussion:

- How will you conduct this review? What data will you use?
- What areas of the response will you evaluate?
- How will you structure your evaluation report?
- What topics might you flag for additional learning?

ANNEX 4C: OUTBREAK SCENARIOS – Day 4

PPHSN EPINET/LABNET WRAP-UP EXERCISE DAY 4

Scenario Introduction (Inject 1):

On Monday morning, your supervisor calls you to discuss a new assignment. She explains that while at a beach barbeque over the weekend, your new Papahesina Minister of Health decided the department needs to form an “Outbreak Special Ops Rapid Strike Force.” He wants you to create the team by the end of the week.

You explain to your supervisor that Papahesina already has an EpiNet team that likely fills that role. She decides you should talk to the Minister directly.

Discussion:

- How would you approach the new minister?
- What would you tell him are the roles of your EpiNet Team?
- What is the composition of your EpiNet Team?
- What is the routine work of your EpiNet Team?
- What would be your response if he says you need to change your EpiNet Team name to Outbreak Special Ops Rapid Strike Force?

Scenario Inject 2:

You first tell the Minister that his desire to rapidly detect and respond to public health threats is important. You're impressed with his quick recognition of one of the most important aspects of health services that has been overlooked in the past.

You then share that the objectives of the EpiNet team are:

- Surveillance monitoring and early outbreak detection
- Outbreak investigation and reporting
- Response planning and operations
- Intersectoral collaboration
- Continuous refinement of response strategies

Your team's activities include:

- Developing weekly communicable surveillance report
- Detecting and responding to public health alerts
- Coordinating response
- Communicating within the health department, with other EpiNet teams, and with the public

The composition of the EpiNet team is:

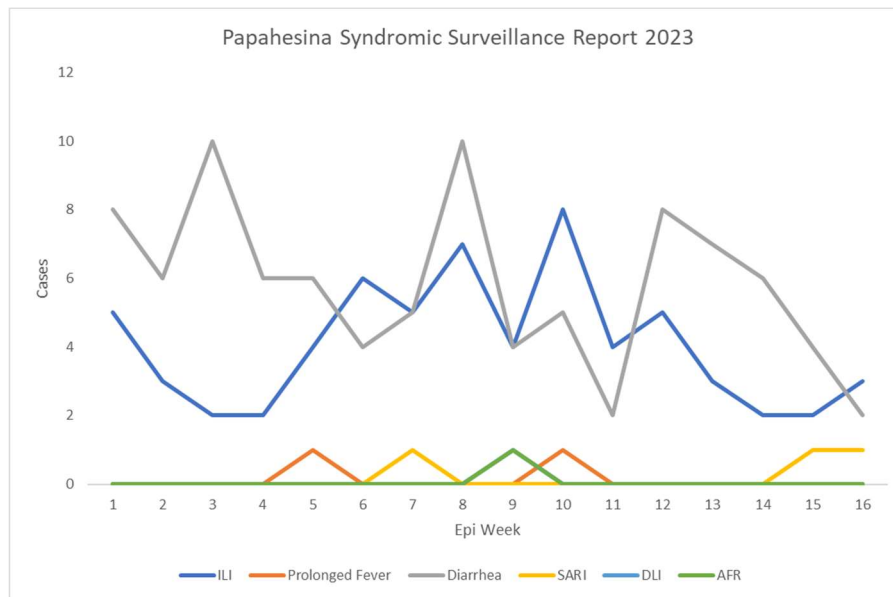
- Data management specialist
- Clinical provider
- Laboratorian
- Field investigator
- Public health management and supervision
- Disaster manager
- Risk Communicator

The Minister of Health agrees that you can keep the EpiNet Team name, for now. But, he asks if he can be designated the EpiNet "Master and Commander."

The next Monday morning you facilitate the weekly Papahehina EpiNet meeting (the "Master and Commander" didn't show up).

Your team reviews the Republic's surveillance information to generate your weekly communicable disease report. The following reports are shared:

WEEKLY PAPAHEHINA PUBLIC HEALTH LABORATORY (PPHL) LAB-BASED SURVEILLANCE BRIEF REPORT									
7 Local Tests: 1 Positive COV2, 0 Positive Flu A, 0 Positive Flu B, 1 Positive RSV, 5 Negative									
Week of 07.25.23	CHC-North	CHC-South	CHC-West	Hospital	CHC-East	OI-1	OI-2	TOTAL	%
# Positive COV2	0	0	0	0	1	0	0	1	14.29%
# Positive Flu A	0	0	0	0	0	0	0	0	0.00%
# Positive Flu B	0	0	0	0	0	0	0	0	0.00%
# Positive RSV	0	0	0	0	1	0	0	1	14.29%
# Negative	0	0	0	2	1	0	2	5	71.43%
Total Specimens	0	0	0	2	3	0	2	7	100%



Syndrome	Last Week	This Week	Threshold
ILI	2	3	10
Prolonged Fever	0	0	2
Diarrhea	4	2	10
SARI	1	1	3
DLI	0	0	2
AFR	0	0	2

Event-based surveillance Reports

Alert	Date	Source	Investigated?	Confirmed	Final
Multiple babies with jaundice	23-Jul-2023	new doctor	yes	no	tumeric powder on baby skin
All the old patients are dying in the hospital	24-Jul-2023	Facebook	pending		

Reportable Disease Surveillance: No reportable diseases for the past week

Discussion:

- Is there anything you would address now?
- If you need additional information/guidance on how to deal with a potential outbreak, where could you get it?

Scenario Inject 3:

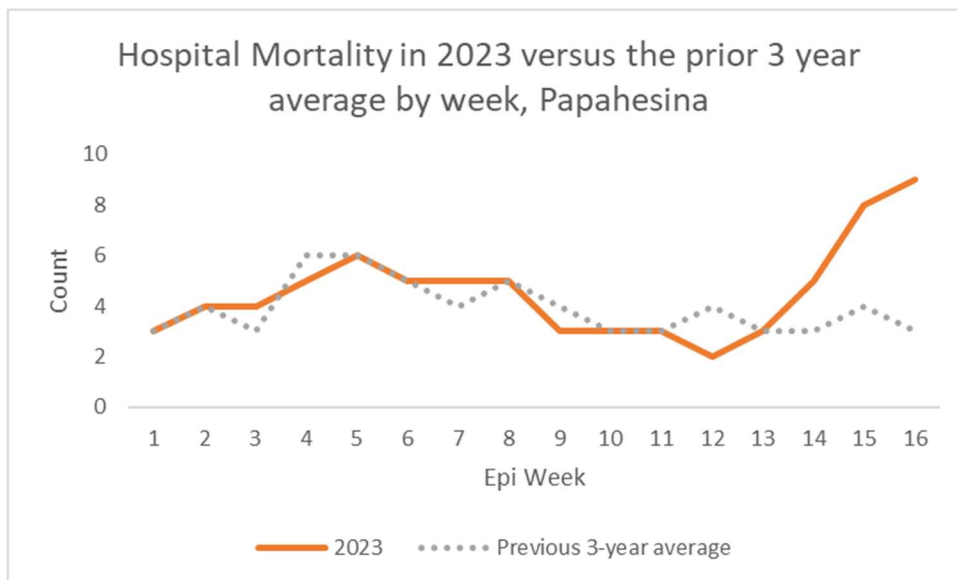
You follow up on the event-based surveillance alert of Facebook posts saying all the old patients are dying at the hospital.

You decide that you should validate and triage the alert, then draft a press release to address the rumour. You open the Pacific Outbreak Manual and use Appendix 3: “Risk Communications Challenges in Outbreaks” to guide your response.

Your surveillance officer volunteers to put together a review of the inpatient deaths for the calendar year and compare it to the three-year average.

Your laboratorian volunteers to review the WHONET data on key hospital-acquired infections. She expects to deliver the report to you later that afternoon.

In 2 hours, your surveillance officer shares the following inpatient mortality trends from the Papahesina Hospital:



Discussion:

- How would you interpret these results?
- Is there a real issue?
- What might you put in an early press release about the deaths?

Scenario Inject 4:

You share the drafted press release addressing the rumours of deaths at the hospital with the Minister (“Master and Commander”). He wonders why this would be an issue because “old people usually die.” He thinks we shouldn’t release anything before we have all the information. “We don’t even have a cause yet!”

Then he asks why you have event-based surveillance active when there isn’t a current sports event, weather event, or international barbeque competition in Papahesina? “There’s obviously a problem with your surveillance system.”

Discussion:

- Would you try to convince him to address the increased deaths now, or wait till there is a confirmation of a cause?
- What are the risks/benefits of addressing early versus late?
- Can you define event-based surveillance and explain why it’s in place routinely?

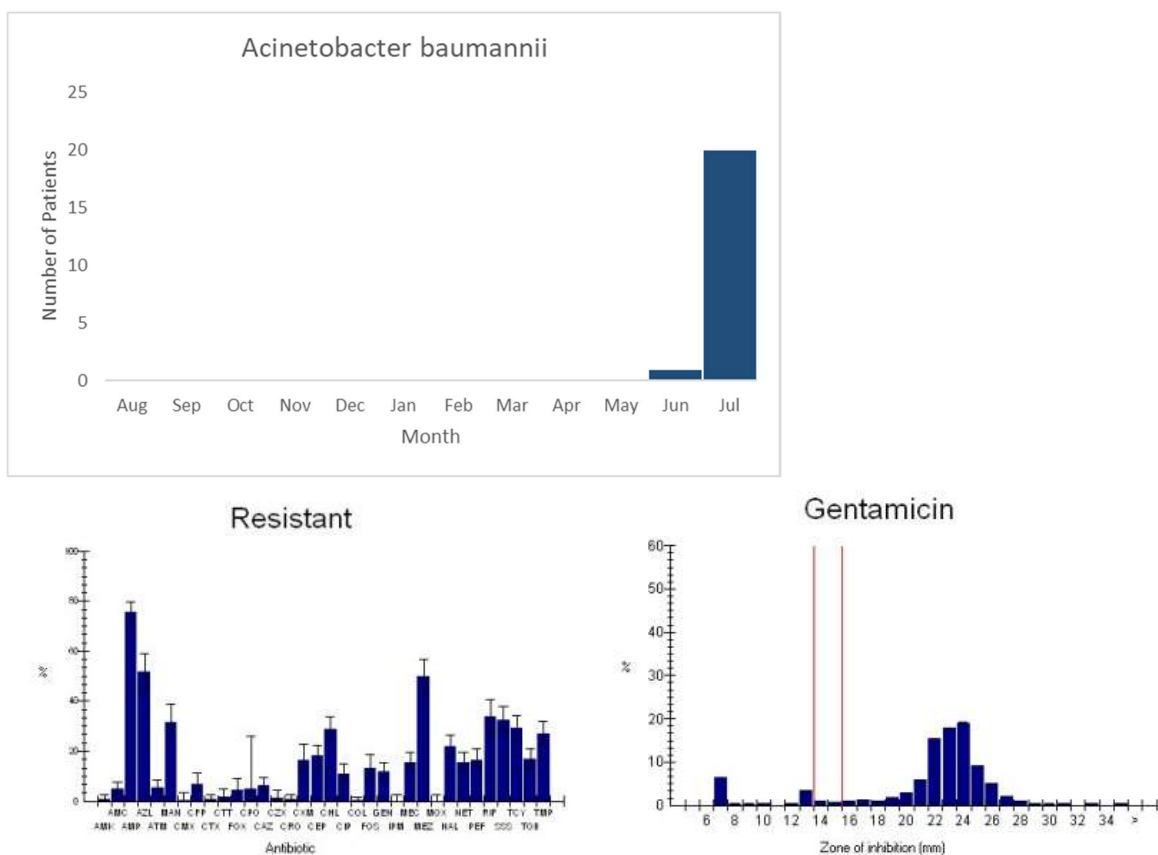
Scenario Inject 5:

You explain to him the risk of withholding information could be quite disastrous if this turns out to be a major issue. The ministry could be accused of a cover-up to hide a problem that caused additional deaths.

Recognizing this, the “Master and Commander” permits the press release. It acknowledges the apparent increase in mortality, informs the public of the ongoing investigation, current actions to address potential issues, and when to expect future updates.

You explain to the director that event-based surveillance is “the organized and rapid capture of information about events that are a potential risk to public health. This information can be rumours and other ad-hoc reports transmitted through formal channels.” It should be one component of a comprehensive multi-source surveillance system and not only used during mass gatherings or weather events.

That afternoon, your laboratorian shares the following report from WHONET.



You realize there is something going on in the ward. You cross-check and find that many of the recent deaths were positive for *Acinetobacter baumannii*. It appears these were hospital-acquired infections.

Unfortunately, your Papahesina Infection Prevention and Control nurse found a job as a night-dive instructor while at a PICNet meeting in Bora Bora last year. The Ministry is still trying to hire someone to fill the position. You realize there is a need for additional support to assist the hospital investigation and implement appropriate IPC controls.

Discussion:

- Who can you request for support?
- What would you do while waiting for the team?
- How do you organize your response team?

Scenario Inject 6:

You contact WHO and request IPC support from GOARN. Meanwhile, you use Incident Command System principles to organize your team. You make sure to assign a special Master and Commander Liaison Officer.

Your investigation team starts by reviewing infection control activities in the ward and summarizing the characteristics of the cases. You suspect that hand hygiene may have been impacted as the hospital ran out of hand sanitizer for two weeks at the beginning of July.

Dr. Sharon from GOARN arrives 48 hours later to support efforts in IPC and assist the EpiNet investigation of the hospital cases. You identify likely nosocomial transmission between a cluster of 8 elderly patients related to improper hand hygiene.

The first patient with a culture positive for *Acinetobacter baumannii* was a 30-year-old male who had been admitted for a surgical correction of an open fracture of his femur. Plotting the cases by time and location indicates the infections started in the surgical ward before spreading into the ward used for long-term (usually elderly) patients. The 30-year-old survived, but 2 patients died of pneumonia and 3 patients died of sepsis. Fortunately, all the *Acinetobacter baumannii* isolates were found to be sensitive to carbapenem and levofloxacin. Most of the other patients developed severe illness, but seem to be improving on levofloxacin.

Discussion:

- What information products would you generate at this point?
- What items would you make sure to include on your SitRep?
- Who would you share it with?

Scenario Inject 7:

You ask the team to develop a SitRep on the *Acinetobacter baumannii* cluster and post it on PacNet. When you share the draft of the SitRep with the “Master and Commander” before posting, he remarks that it is well done, but then asks if the newly hired male obstetrician did all the work. You explain that OB DR.MAN is just the mnemonic used to remember the key components of a SitRep.

The new IPC program created with assistance from GOARN is implemented and the number of new *Acinetobacter baumannii* isolates drop to zero.

Your public engagement activities have reassured the community of the safety of their hospital and what they can do to help protect their loved ones through hand hygiene.

When you report this to the Minister of Health, he immediately starts celebrating by doing a dance move he learned during a PPHSN “island break.” He decides to host a “Mission Accomplished” celebratory barbeque at his beach.

You inform him that you appreciate his enthusiasm, but there is still work to be done.

Discussion:

- What things do you still need to do?
- How will you carry them out?

Scenario Inject 8:

You conduct an After Action Review with the inpatient staff, the GOARN deployer, and the EpiNet team using the WHO framework.

You strengthen your IPC program by selecting the nurse who was at the top of the recently completed DDM/SHIP training to fill the IPC nurse role.

You post the summary of the outbreak on PacNet, and during August Pacific EPI Rounds share the summary of the outbreak and deliver a Topic of the Month on Hospital Acquired Infections.

Finally, you utilize the ICS framework to help the Master and Commander plan his “Mission Accomplished” barbeque.

Epilogue: At the barbeque you meet the Minister’s wife and her miniature poodle “Kinzi.” She tells you how poor Kinzi had to get surgery at an animal hospital in Honolulu last month, but she was able to bring Kinzi back to Papahesina; just in time to visit the Minister’s nephew who was admitted to the hospital for a leg fracture. Unfortunately, after Kinzi’s visit, the Minister’s nephew developed a wound infection and had to stay longer for a course of strong antibiotics.

You wonder if genomic sequencing and a One Health approach might help better understand how the strain snuck into the Papahesina Hospital...

ANNEX 5: PACIFIC OUTBREAK MANUAL GROUP WORK SCENARIOS

Pacific Outbreak Manual

You are given two priority syndrome/disease for detailed review. Discuss and consider how the outbreak manual aligns with existing national guidelines or protocols in place. Discuss and consider how national guidelines or protocols align or differ across your jurisdiction based on the following questions.

We suggest you spend 30 minutes on each syndrome / disease.

Please CLEARLY write responses on the flip charts, with the disease and question number on each page. We will be collecting the pages at the end.

1. Does the outbreak manual case definition for this syndrome/disease align with national guidelines? Is there a national threshold and how is it determined? Does the threshold align with national guidelines?
2. What is the testing protocol in place for this syndrome/disease? How does this protocol change once the outbreak is confirmed? How does the protocol change when there is reduced availability of tests available?
3. Do IPC and clinical management procedures change between suspected outbreak and once the aetiology of the outbreak is confirmed? If so, how?
4. Are there additional public health management measures not captured in the manual?
5. What criteria informs the resolution/deactivation of an outbreak?
6. Are there any additional learning gaps to be covered in the outbreak manual for this syndrome/disease?

ANNEX 6: MEETING EVALUATION REPORT

SPC\PPHSN\EpiNet-LabNet Meeting 2023

Meeting Evaluation report

MEETING EVALUATION REPORT



Pacific Public Health Surveillance Network (PPHSN) EpiNet/LabNet Regional Meetings

25-28 July 2023, Honolulu Hawaii

Co-sponsored by the Pacific Islands Health Officers Association (PIHOA)
and the Pacific Community (SPC)

Evaluation Report prepared by the Pacific Community



BACKGROUND

A PPHSN Meeting Evaluation was conducted with all participants on the last day of the meeting. The purpose of the evaluation was to get feedback from the members, partners and collaborators on meeting arrangements, logistics, suitability of sessions, as well as to assess if there was an increase in knowledge/capacity following this meeting.

The evaluation will assist to determine whether objectives for the EpiNet/LabNet regional meeting were met, which included;

- strengthening national EpiNet and LabNet capabilities
- improving information sharing
- updating resources
- enhancing connections between members.

METHOD

The evaluation survey was given at the conclusion of the meeting in paper format (due to internet connectivity issues in the meeting rooms, the secretariat decided against conducting an online evaluation through survey monkey) and papers were collected after completion. Data gathered on the paper forms was anonymous.

There were 13 questions in total with 3 conditional questions, one specific question that concerned EpiNet members and one specifically for LabNet member as some parallel sessions ran on the first two days of the meeting. Out of the 13 questions there were 5 opened-ended questions and the remainder were closed-ended questions. The questions were:

- Are you a:
- Did you receive financial support allowing you to participate in the meeting?
 - **If yes**, who provided the financial support (name of agency or organisation)?
- Are there topics you wish to be covered in more details, or other topics you wish to be included in future meetings?
 - **If you have answered yes**, please specify or provide more details:
- Please rank the session formats you enjoyed from most to least:
- Please rate your level of satisfaction on the following item
 - **If you answered poor to one or more items**, please share further details to help us improve in future
- **For EpiNet meeting attendees** - Do you have increased knowledge/capacity from this EpiNet meeting to assist your work?
- **For LabNet meeting attendees** - Do you have increased knowledge/capacity from this LabNet meeting to assist your work?
- Compared to before the meeting, do you feel more prepared to respond to an outbreak now?
- Describe how you professionally benefited from this meeting:
- Is there any other feedback you would like to share?

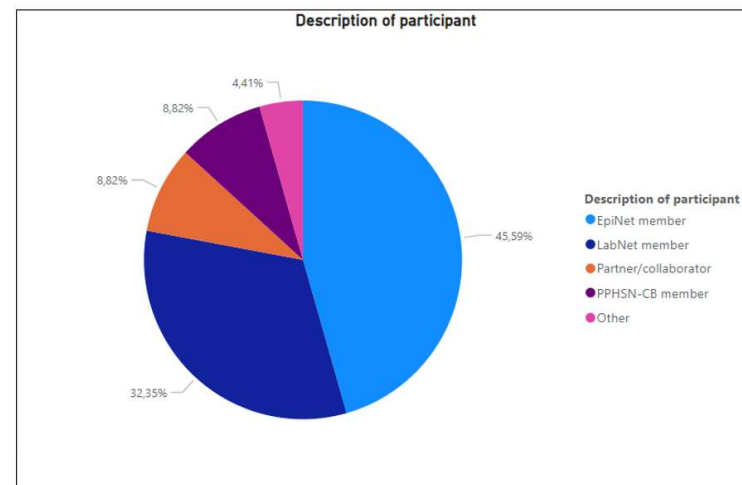
A Microsoft form was created and used for data collection from the paper forms, with data entry performed by two SPC staff. The Microsoft form was also used for data analysis of the survey.

The summary of the answers can be accessed via this [link](#).

RESULTS

A total of 68 responses were collected. According to the list of participants there were a total of 63 participants from SPC core members (Pacific Island Country and Territories) and 40 PPHNS allied members from partner organisations and institutions. The 19 secretariat, administrative and support staff did not participate. Unfortunately, no participants from Nauru, Papua New Guinea and Solomon Islands attended the EpiNet/LabNet Regional Meetings.

- Question 1: Description of participant

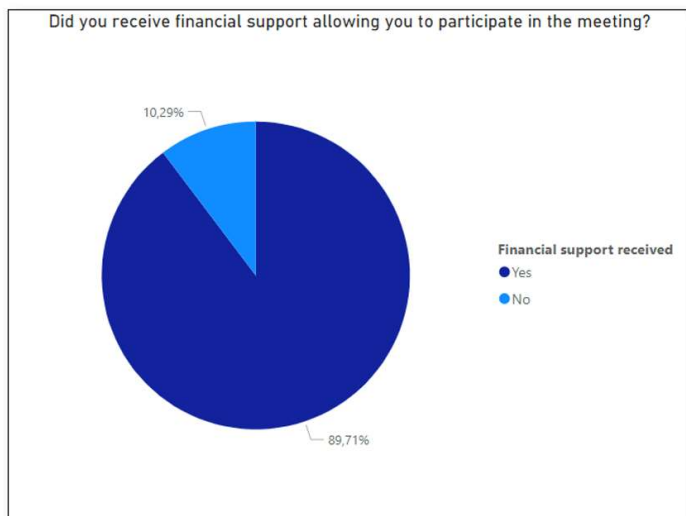


Only one answer was chosen by each participant, however many of the LabNet members are also part of the national EpiNet teams, and the PPHSN-CB members may also be an EpiNet member of from an allied partner. For the category "other" the answers were clinician, consultant or no details provided.

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Meeting Evaluation report

- Question 2: Did you receive financial support allowing you to participate in the meeting?
 - If yes, who provided the financial support (name of agency or organisation)



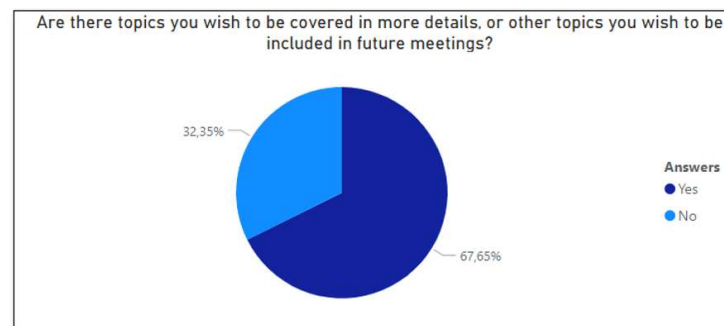
From those that received financial support, the providers of the support were:

Agency/organisation that provided financial support	Percentages
PIHOA	43.33%
SPC	43.33%
PIHOA + WHO	5.00%
PIHOA + SPC	3.33%
ESR	1.67%
Ministry of Health, Republic of Palau	1.67%
WHO	1.67%
Total	100.00%

SPC\PPHSN\EpiNet-LabNet Meeting 2023

Meeting Evaluation report

- Question 3: Are there topics you wish to be covered in more details, or other topics you wish to be included in future meetings?
 - If you have answered yes, please specify, or provide more details.



67.65% of the participants responded yes to have topics covered in more detail, or have other topics covered. All those that said yes provided an answer to the conditional question "provide more details". As it was a free text question, some categories were drawn to group the answers.

The themes of One Health, Laboratory based surveillance and laboratory testing algorithm/protocols, organisation of EpiNet teams and experience sharing were the most requested.

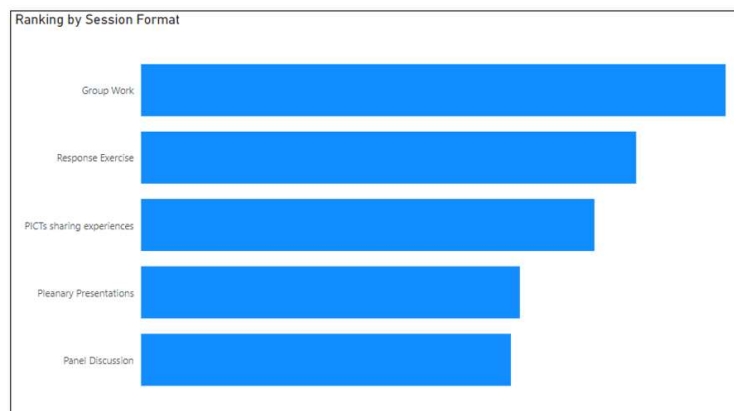
Other answers that fell under topics to be covered under more details were:

- ✓ Use LabNet/EpiNet efficiently and effectively (TORs, organisation chart; membership; institutionalization; SOPs; Policies; supporting regional outbreaks)
- ✓ Experience sharing between PICTs EpiNet teams (South Pacific Countries & French speaking territories to be more involved in sharing experiences and guests' speakers; more discussion with Northern Pacific and South Pacific labs; sharing of ideas/method test for improvement process for standardisation process)
- ✓ More scenarios and case studies
- ✓ IHR (border health control)
- ✓ Incident command
- ✓ Regional support during outbreak
- ✓ Risk communication (how to assess communication messaging and define a risk assessment plan)
- ✓ Event-based surveillance (EBS)
- ✓ Syndromic Surveillance
- ✓ Pacific Outbreak Manual (POM)
- ✓ SHIP-DDM (online training)
- ✓ WHONET
- ✓ More detail discussion on LabNet

Answers that fell under topics to be included in future meetings were:

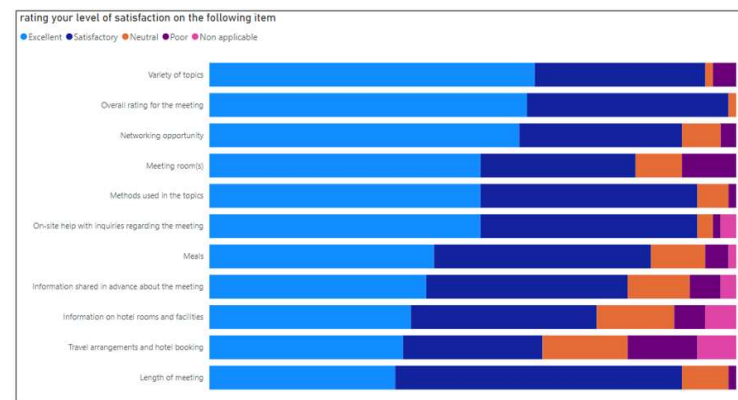
- ✓ LabNet/EpiNet roles for NCD
- ✓ Other topics (HAI investigation and response Corpse handling, executive leadership training opportunity, Global warning, Information technology)
- ✓ Workshop (writing SOP, case study)
- ✓ Strategic Planning
- ✓ Contingency Planning

- Question 4: Please rank the session formats you enjoyed from most to least



Out of the 68 respondents, 25% ranked the session formats as all equals. The session that was ranked as the best format was Group Work (33%), followed by Response Exercise (29%) and on the third place PICTs sharing experiences (22%).

- Question 5: Please rate your level of satisfaction on the following item
 - If you answered poor to one or more items, please share further details to help us improve in future.

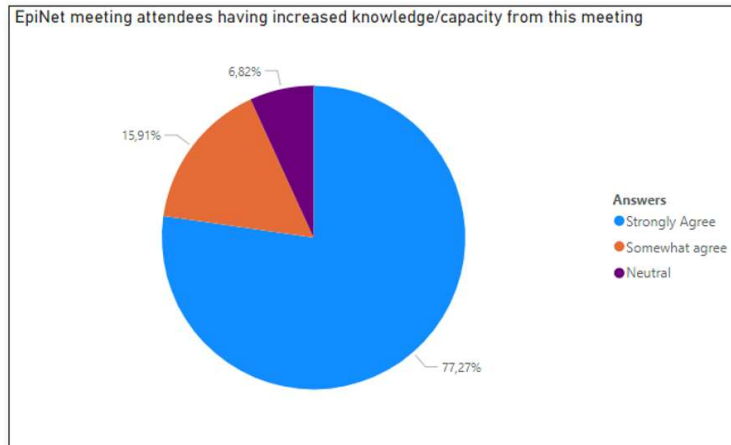


From the responses collected, 60% of the participants rated the meeting as excellent. Overall, 98% of participants were satisfied from the meeting.

The conditional question “share further details to help us improve in the future” was free text, consequently some similar thematic were recurrent regarding issues encountered during the meeting, that included:

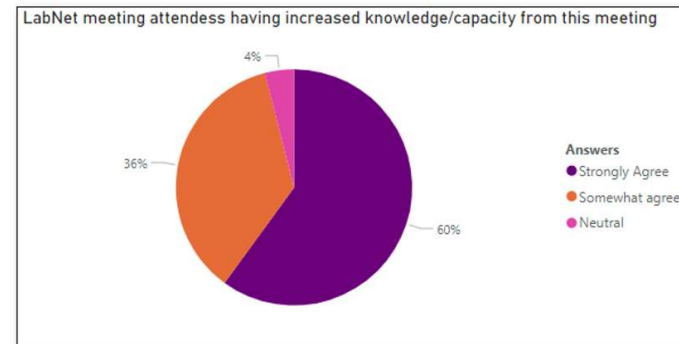
- ✓ Late communication (Provisional agenda shared earlier; information sharing on hotel and travel requirement)
- ✓ Meals (more options)
- ✓ Meeting room (improve internet connectivity & sound)
- ✓ Meeting room inappropriate (meals were served in the room and no other spaces for networking)
- ✓ Travel and hotel arrangements (particularly having airport-to-hotel transfers organised or smooth check-in for those arriving during the night)

- Question 6: For EpiNet meeting attendees - Do you have increased knowledge/capacity from this EpiNet meeting to assist your work?



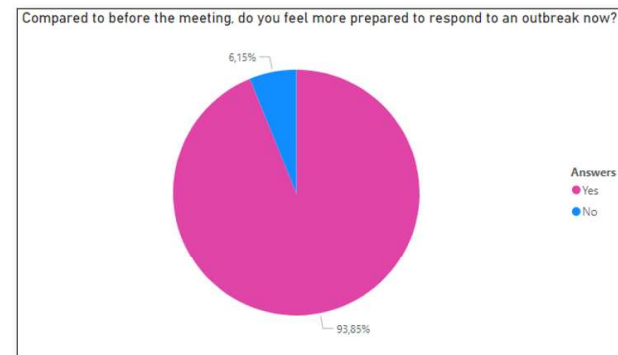
93 % of EpiNet team respondents report that the meeting has increased their knowledge/capacity to assist in their work, with 77% stating they strongly agree. (Bearing in mind that for the descriptive statistics of this question, only responses from EpiNet participants were included. NB : one participant did not provide an answer to this question.)

- Question 7: For LabNet meeting attendees - Do you have increased knowledge/capacity from this LabNet meeting to assist your work?



96% of LabNet team respondents report that the meeting has increased their knowledge/capacity to assist in their work. (Bearing in mind that for the descriptive statistics of this question, only responses from LabNet participants were included.)

- Question 8: Compared to before the meeting, do you feel more prepared to respond to an outbreak now?



Of the 68 participants, 61 (94%) feel more prepared to respond to an outbreak after attending the meeting. There were 4 participants who reported “no”, two participants did not respond and one said “depends on availability of operational resources”.

- Question 9: Describe how you professionally benefited from this meeting:

The most common responses were about sharing regional knowledge and experiences, increase in specific skills and knowledge (particularly for tools and resources for surveillance, lab testing and outbreak response) as well as good networking with other PICTs and partners. These are all aligned with the overall meeting objectives.

For the opened-ended question, enhanced knowledge on some topics were recurrent, including:

- | | |
|---|---|
| ✓ After Action Review | ✓ Networking |
| ✓ AMR | ✓ One Health |
| ✓ SHIP-DDM training | ✓ Pacific Outbreak Manual |
| ✓ EBS | ✓ PPHSN Role and support |
| ✓ EpiNet | ✓ Preparedness & Response |
| ✓ GOARN | ✓ Risk Communication |
| ✓ Great way for information/experience sharing | ✓ Role and Support of external resources |
| ✓ ICS | ✓ Role of DDM |
| ✓ Importance of HIS | ✓ Sitrep |
| ✓ Increase knowledge of EpiNet and LabNet | ✓ Strategic plans for response during an outbreak |
| ✓ Information sharing to improve current system | ✓ Surveillance system |
| ✓ Laboratory surveillance | ✓ Tools information |
| | ✓ Trained health professional |
| | ✓ WHONET |

- Question 10: Is there any other feedback you would like to share?

For the opened-ended question, some topics were recurrent, which were:

- | | |
|--|--|
| ✓ Empowering younger generations through DDM program | ✓ More meetings needed |
| ✓ EPI Round for French countries | ✓ Need refresher to have tailor information sharing |
| ✓ Excellent platform for improvement process | ✓ Public Health Participant <u>need</u> Laboratory session |
| ✓ Follow up more often to keep the network alive | ✓ Separate <u>Seperate</u> LabNet meeting |
| ✓ Great meeting overall | ✓ Sharing information among North and South |
| ✓ Improvement in IT and interpretation | ✓ Sharing of EpiNet members contact |
| ✓ More group and cases scenarios | ✓ Sharing resources electronically and contacts |
| ✓ More information on EWS and responses | ✓ Surveillance system improvement |
| ✓ More information on training opportunities | ✓ Training the management on ICS and EpiNet/LabNet |
| ✓ More information technology workshop | ✓ Training needed in surveillance system |
| ✓ More Islanders presenting and sharing | |

CONCLUSIONS

In conclusion there was good participation in the evaluation survey for the PPHSN core members, allied members representatives and partners. Overall positive feedback was reported and recorded. The EpiNet members as well as the LabNet members seemed to have had the chance to improve their knowledge/capacity during this meeting, with 93% of EpiNet and 96% of LabNet attendees reporting increased knowledge from this meeting which will assist their work. 94% of respondents feel more prepared to respond to an outbreak after attending the meeting.

The event was also good for many of the participants to listen and share experiences that will be beneficial in their own countries. Special request for gathering EpiNet members more regularly, and ongoing opportunities for sharing information and resources.

This EpiNet/LabNet regional meeting therefore met its objectives of;

- strengthening national EpiNet and LabNet capabilities
- improving information sharing
- updating resources
- enhancing connections between members.

The secretariat takes note of the feedback about timely communication, the meeting venue and travel arrangements and thanks all meeting participants for completing the meeting evaluation.

