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PACIFIC PUBLIC HEALTH SURVEILLANCE NETWORK UPDATE AND THE CALL FOR DATA SHARING AGREEMENTS

(Paper presented by the Secretariat)

At a glance

- The Pacific Public Health Surveillance Network (PPHSN) continues to support the 22 Pacific Island Countries and Territories (PICTs) improving public health surveillance and response in its 27th year. This is through the six existing service networks PacNet, EpiNet, LabNet, PICNet, Strengthening Health Interventions in the Pacific - Data for decision making (SHIP-DDM) and the Pacific Syndromic Surveillance System (PSSS), as well as the newly launched Pacific Vector Network (PVN). Meetings of these networks continue to progress activities and highlight achievements, identify priority areas of work, and endorse recommendations for the PICTs and allied partners of PPHSN.
- Data and information sharing remain crucial to public health preparedness, surveillance, and rapid response to health threats in the region. Sharing of information from the PICTs is voluntary (except for International Health Regulation (2005) (IHR) requirements to report to WHO on potential emergencies of international concern), with a wide variation between the PICTs on the type, the timeliness and the frequency of information which is shared through PPHSN. A concerted effort to address the challenges of timely data sharing is required, through transparent and accountable data sharing agreements and in the use of innovative platforms.
- An external review of PPHSN has been conducted, with final report and recommendations to be presented to the PPHSN Coordinating Body (CB) in May 2024, before wider dissemination.

Current situation

1. Twenty-seven years since PPHSN was established, a lot has happened and been undertaken towards the attainment of its goal to improve public health surveillance and response in the Pacific Island Countries and Territories (PICTs). Since 2014, PPHSN has been functioning through six service networks¹; PacNet, EpiNet, LabNet, PICNet, SHIP-DDM and PSSS.
2. Utilisation of PPHSN service networks for IHR 2005 implementation was facilitated during the COVID-19 pandemic. Updated guidelines were disseminated (e.g., Regional 2021 PPHSN Infection Prevention and Control (IPC) Guidelines, 2023 LabNet catalogue and 2023 EpiNet lists) and the Pacific Outbreak Manual is currently being updated. Enhancing epidemiological skills is continuing through the SHIP-DDM capacity development programme.
3. Early warnings about potential disease outbreaks are identified through event- and indicator-based surveillance through the PSSS, as well as the Epidemic Intelligence System maintained by the Pacific Community (SPC). Considerable sharing of information and experiences on public health surveillance and response to outbreak-prone diseases has occurred through PacNet, PPHSN's communication platform. Nine² of the 22 PICTs regularly submit communicable disease reports to SPC via focalpointpphsn-cb@spc.int. A further 11 PICTs share reports of further information upon request. As of 11 March 2024, 18³ of the PICTs reported data at least once this year into PSSS on seven agreed syndromes: Acute Fever and Rash, COVID-19, Dengue-like-illness, Diarrhoea, Influenza-like Illness, Prolonged Fever and Severe Acute Respiratory Infection.
4. Data sharing and communication is vital for outbreak and pandemic preparedness; however, data is not consistently reported by all the PICTs. Furthermore, several factors hinder the accessibility and reusability of information, including delayed reporting, use of aggregated data and indicators without standardised definitions, preventing direct comparison between countries and proper delineation of both timing and intensity of outbreaks.

¹ More information on PPHSN's six service networks is available from: <https://www.pphsn.net/services/>

² 7 PICTs share weekly reports to SPC: Commonwealth of the Northern Mariana Islands (CNMI), Federated States of Micronesia (FSM), French Polynesia, Guam, Palau, Republic of Marshall Islands (RMI), Tonga. Wallis and Futuna reports fortnightly and New Caledonia reports monthly to SPC.

³ 18 PICTs have reported into PSSS Weekly bulletins at least once in 2024: CNMI, Cook Islands, FSM, Fiji, French Polynesia, Kiribati, New Caledonia, Niue, Palau, Pitcairn Islands, RMI, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, and Wallis and Futuna.

5. Emerging and re-emerging public health risks such as the COVID-19 pandemic, the unprecedented waves of arboviral disease outbreaks and zoonoses brought about by climate change, coupled with the increasing trend of antimicrobial resistance call for new approaches to dealing with such situations. Taking a One Health multi-sectoral approach is imperative to addressing these challenges. The launch of the Pacific Vector Network, a new initiative of PPHSN, is one such example of PPHSN adapting to the needs of the region. To ensure that PPHSN is still fit for purpose in preparing and responding to such threats, an external review of PPHSN to assess the governance and operations of its service networks has been completed.

Future vision

6. PPHSN will continue to embrace the PICTs' vision for a resilient Pacific region towards health security, ensuring that Pacific peoples lead healthy and productive lives as embodied in the Healthy Island vision, the 2050 Strategy for a Blue Pacific Continent and the attainment of SDG 3. PPHSN's service networks and strategy continue to adapt, to remain aligned to the evolving needs of the PICTs, with a strong network of allied partners assisting the PICTs to continually improve public health surveillance and response in a sustainable way.

7. Even though PICTs are at the forefront of the climate change induced health threats, most health systems are not climate ready. Multi-source disease surveillance systems and early warning systems are critical in adapting to future health threats brought about by climate change. These surveillance and early warning systems must be informed by climate science requiring a multi-sectoral and multi-disciplinary approach. To facilitate easier data exchange and develop these systems, data sharing agreements are necessary to ensure timely, accurate and standardised data is available, to be accessed and used within the Pacific region for preparedness, rapid response and decision making.

Examples of recent progress

8. This update highlights the key achievements made through the PPHSN since the 14th Heads of Health meeting in April 2023.

Review of PPHSN

9. An external review of PPHSN has been undertaken between July 2023-December 2023 by a consortium of experts led by the University of Sydney, in collaboration with the University of Queensland and Griffith University. It focused on the governance of PPHSN, communication structures and mechanisms between country members and allied members involved in the operational activities of the PPHSN, as well as the effectiveness of the six service arms of the PPHSN in meeting the network's core goals and objectives. The report is being finalised following inputs from the Technical Advisory Group, to be shared at the 26th Coordinating Body meeting in May 2024, before wider dissemination.

Launch of the Pacific Vector Network

10. The Pacific Vector Network (PVN), a new initiative under PPHSN, was launched in Honolulu, Hawai'i in June 2023. The PVN is comprised of vector-borne disease control practitioners including environmental health officers, entomologists, epidemiologists, researchers, scientists, and academicians coming together to facilitate and promote the expansion of vector surveillance and control capacity across PICTs. The network aims to provide a sustainable regional mechanism to coordinate and upscale the vector surveillance and control activities of PICTs, and to ensure that initiatives are appropriately tailored to the needs and priorities of PICTs. The network is supported by a Secretariat comprised of PIHOA, SPC and WHO.

11. At the launch seven PICT representatives were nominated to act as the PVN Technical Working Body (TWB), the decision-making body for network activities⁴.

PPHSN meetings

12. The following PPHSN meetings have taken place since the last update to PHOH14 in April 2023;

- PICNet Meeting in Nadi, 24-26 May 2023⁵
- Inaugural meeting of the Pacific Vector Network (PVN) in Honolulu, 5-7 June 2023⁶
- 25th meeting of the PPHSN Coordinating Body in Honolulu, 24 July 2023⁷
- EpiNet/LabNet 2023 regional meeting in Honolulu, 25-28 July 2023⁸

⁴ Draft Terms of References for the PVN TWB are available from: <https://www.pphsn.net/resources/pacific-vector-network-pvn-terms-of-reference-tor/>

⁵ PICNet Meeting 24-26 May 2023 report available from: <https://www.pphsn.net/resources/2023-picnet-meeting-report/>

⁶ Pacific Vector Network Meeting 5-7 Jun 2023 report available from: <https://www.pphsn.net/resources/2023-inaugural-meeting-of-the-pacific-vector-network/>

⁷ 25th PPHSN-Coordinating Body meeting 24 July 2023 report available from: <https://www.pphsn.net/resources/25th-pphsn-coordinating-body-meeting-report/>

⁸ EpiNet/LabNet 2023 regional meeting 25-28 July report is available from: <https://www.pphsn.net/resources/2023-pphsn-epinet-report/>

PPHSN publications, guidelines, and reports

13. The following publications have been updated / produced to assist the region;
- 2023 LabNet catalogue⁹ published July 2023
 - 2023 EpiNet list¹⁰ published October 2023
 - 50 updates of the Epidemic and Emerging Disease Alerts in the Pacific report posted on PacNet* in 2023
 - 46 reports of the Pacific Syndromic Surveillance System posted on PacNet* in 2023
 - The French version of the Infection Prevention and Control Guidelines – 2021¹¹ was disseminated
 - Updates to the Pacific Outbreak Manual (2016 version) are in progress, with a WHO consultant recruited by the WHO Suva Office to progress this work.

*There are currently 977 active subscribers on the PacNet email list (as of 12 March 2024).

The progression of capacity building through SHIP-DDM

14. The Postgraduate Certificate in Field Epidemiology (PGCFE) delivery continues; between January 2023 to March 2024, a total of 42 modules have been delivered by the Pacific Island Health Officers Association (PIHOA) and SPC, with support of faculty from Fiji National University (FNU), US Centers for Disease Control and Prevention (CDC) and Australian National University. These modules reached participants across 15 PICTs¹² (see Annex 1).
15. Another 63 PGCFE participants graduated from FNU in December 2023, from CNMI, FSM, Fiji, Guam, Kiribati, Palau and RMI, joining the 130 graduates since accreditation in 2019.
16. In 2024, new PGCFE cohorts will begin in Cook Islands, FSM – Kosrae, French Polynesia, Niue, and Samoa. Ongoing consultations are underway to begin delivery in American Samoa, CNMI, FSM – Chuuk and FSM - Pohnpei.
17. Three modules of the Postgraduate Diploma in Applied Epidemiology (PGDAE) course were delivered to RMI by PIHOA since January 2023. There are currently 4 PICTs¹³ undertaking PGDAE, with new cohorts planned for Fiji, Kiribati, Palau, and Solomon Islands. PIHOA is also piloting a regional cohort from the USAPIs in an online component of the biostatistics course, with instructor-led weekly help sessions from January-April 2024.

⁹ LabNet 2023 catalogue available from: <https://www.pphsn.net/resources/pphsn-labnet-catalogue/>

¹⁰ 2023 EpiNet list available from: <https://www.pphsn.net/wp-content/uploads/2023/12/2023-EpiNet-Teams-Equipements-EpiNet-2023.pdf>

¹¹ The French version of the IPC Manual is available from: <https://www.pphsn.net/ressources/rossp-lignes-directrices-pour-la-lutte-anti-infectieuse-2021/?lang=fr>

¹² Current participants in PGCFE are from: CNMI, Cook Islands, FSM - Yap, Fiji, Guam, Kiribati, Nauru, New Caledonia, Palau, RMI – Ebeye and Majuro, Solomon Islands, Tokelau, Tonga, Vanuatu, Wallis and Futuna.

¹³ Current participants in PGDAE are from: Fiji, RMI, Tonga and Vanuatu.

Evaluation of SHIP-DDM

18. An external evaluation of SHIP-DDM delivered in the USAPIs by PIHOA was conducted by Georgetown University Center for Global Health Science and Security between December 2022-July 2023. The final report is pending endorsement from the PIHOA Board of Directors in March 2024.

19. SPC will furthermore be conducting an internal evaluation of some SHIP-DDM graduates and those who withdrew from March – June 2024.

Data sharing

20. In response to COVID-19, some PICTs adopted an open data sharing principle, enhancing transparency, accountability, and innovation. The SPC team began recording daily COVID-19 cases deaths and vaccination rates for all 22 PICTs since 2020, shifting to weekly reporting in 2023.

21. A consolidated COVID-19 database was established and made publicly available on the Pacific Data Hub¹⁴. Epidemiological curves were created (see Annex 2) and published on SPC's website¹⁵. This assisted with determining thresholds for PICTs and analysing regional trends.

22. Other publicly available health data also exists within the Pacific Data Hub, including census data and datasets from STEPwise approach to non-communicable disease risk factor surveillance reports¹⁶ for several PICTs.

23. Several PICTs are currently sharing disease information through a variety of means. Some examples include:

- **Tonga** shares their weekly communicable disease syndromic surveillance reports with SPC and WHO (see Annex 4a). This includes data on Influenza-Like-Illness (ILI), Severe Acute Respiratory Illness (SARI), COVID-19 by age groups and laboratory confirmation results for respiratory viruses. Additionally, they provided details on diarrhoea cases. Information on challenges and recommendations are included.
- **French Polynesia's** 'Bureau de la veille sanitaire et de l'observation,' which functions as a surveillance observatory, shares their weekly report via email and on their website¹⁷ (See Annex 4b). This report includes topic of the week: Primarily related to infectious diseases, Acute Respiratory Infections (ARI), COVID, Influenza, Vector-borne diseases (Leptospirosis and Dengue), Gastroenteritis and diarrhoea data and international surveillance information. For each disease, information on cases, maps and hospitalisation rates are provided as well as recommendations / public health actions.

¹⁴ COVID-19 cases in Pacific Island Countries and Territories database can be accessed on the Pacific Data Hub: [https://stats.pacificdata.org/vis?tm=covid&pg=0&df\[ds\]=ds%3ASPC2&df\[id\]=DF_COVID&df\[ag\]=SPC&df\[vs\]=1.0&snb=4](https://stats.pacificdata.org/vis?tm=covid&pg=0&df[ds]=ds%3ASPC2&df[id]=DF_COVID&df[ag]=SPC&df[vs]=1.0&snb=4)

¹⁵ SPC's COVID-19: Pacific Community Updates: <https://www.spc.int/updates/blog/2023/02/covid-19-pacific-community-updates>

¹⁶ Country STEPS reports are available on the Pacific Data Hub: <https://pacificdata.org/data//dataset?q=steps>

¹⁷ French Polynesia's Surveillance situation reports for 2024 are available from : <https://www.service-public.pf/arass/2024-2/>

- The **CNMI's** Commonwealth Healthcare Corporation produces a Weekly Syndromic Surveillance Report (see Annex 4c). These contain information about syndromes at different health facilities (public and private sectors) with trends over the preceding weeks, compared to thresholds. Epi curves of COVID-19 cases and data on notifiable diseases are included.

24. All of these reports undergo validation and endorsement in country before being shared with partners or published online. These national situation reports are reviewed by SPC and WHO with regional risk assessments performed.

25. SPC extracts data and enters it into the Epidemic Intelligence database. Officers may reach out to PICT focal points to gather additional information. Information is included in the weekly Epidemic and Emerging Disease Alerts in the Pacific reports posted on PacNet.

Why urgent action is needed now

26. The experiences of the utility of the PPHSN service networks together with the Pacific response to the COVID-19 pandemic and the on-going threat of climate change on health and health systems are impetus enough for continued investment and improvements to this regional surveillance and response network. Support is required to allow the newly formed Pacific Vector Network to address the challenges of vector borne diseases.

27. It is now an opportune time to expand upon the databases developed to capture regional COVID-19 information. The PSSS is an established mechanism for reporting on agreed syndromes, but expansion of the system for multi-source data is timely. The Pacific Data Hub can be harnessed for data storage, visualisation, dissemination and repositories. Data sharing agreements for priority diseases would standardise the information shared, in agreed upon formats and conditions for further use. This could include the development of disease databases, which can be used nationally and regionally for longitudinal disease trends and early warning systems. Examples include the expansion of a web-app dashboard for a Dengue Early Warning System ("SPACEDEW") tool (see Annex 5) piloted in New Caledonia and Fiji in 2022 and an upcoming project to establish a model with the ability to predict periods and areas with a higher risk of leptospirosis outbreaks. These will be available for local health managers to assist in the assessment of outbreak risks in their countries.

Recommendations to be considered by the Heads of Health

Recommendations for governments

- Start exploring data sharing agreements with regional technical agencies and development partners.
- Note the newly launched Pacific Vector Network and support its nurturing and operations via the Technical Working Body and the intent to develop its strategic plan to guide the network activities.

Recommendations for development partners

- Start exploring data sharing agreements with PICTs.
- Support the development and operations of the Pacific Vector Network as a new initiative of PPHSN.

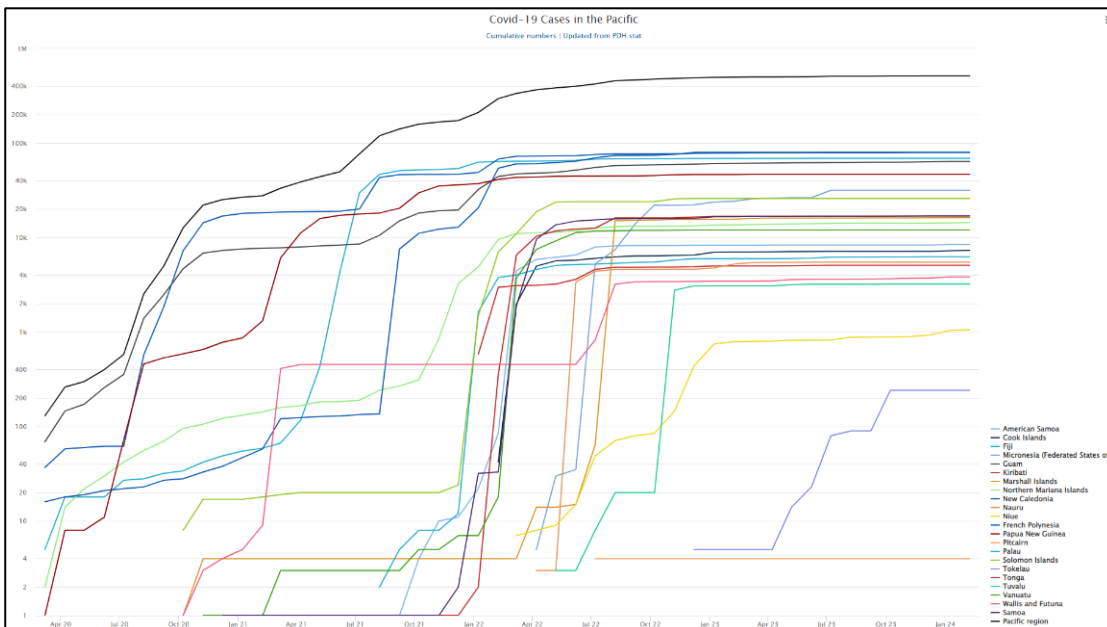
Annexes

Annex 1: Figure showing SHIP/DDM Trainings between January 2023-March 2024

PICTS with ongoing SHIP-DDM training



Annex 2: Total number of COVID-19 cases in the Pacific, March 2020-February 2024 (<https://phd.spc.int/covid-19>)



Annex 3: Exerts from PSSS Weekly Bulletin, W9 2024 (Feb 26-Mar 03)

Key indicators & Highlights | Indicateurs clé & faits saillants

W9		Cumulative ¹		Indicator
%	<i>n</i>	%	<i>n</i>	
	215		185	1. Number of sentinel sites Nombre de sites sentinelles
70%	16	67%	154	2. Number of PICs that reported ² Nombre de PICs qui ont rapporté
78%	167	79%	145	3. Number of sites that reported Nombre de sites qui ont rapporté

¹ W1 2024 to W9 2024 | S1 2024 à S9 2024

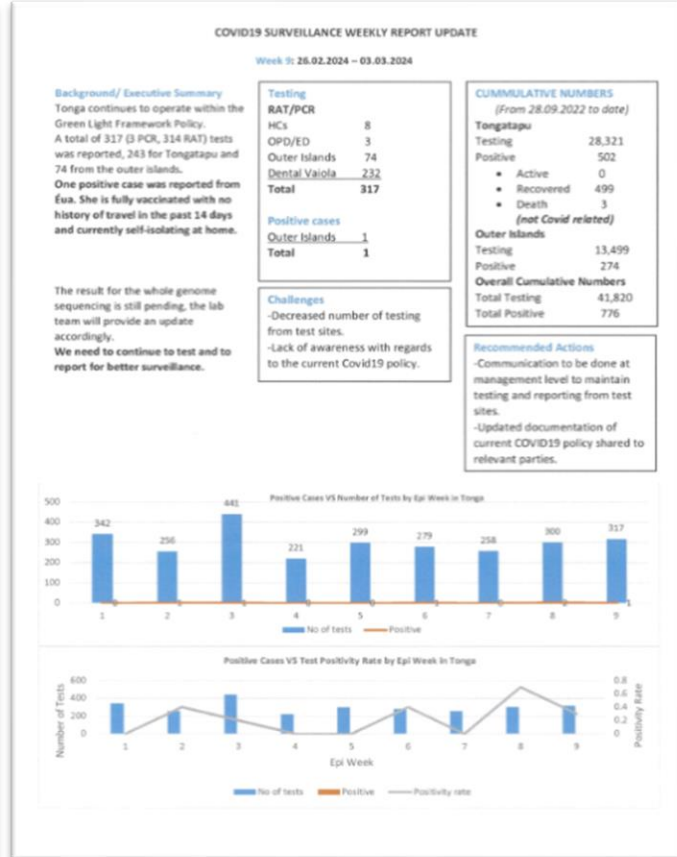
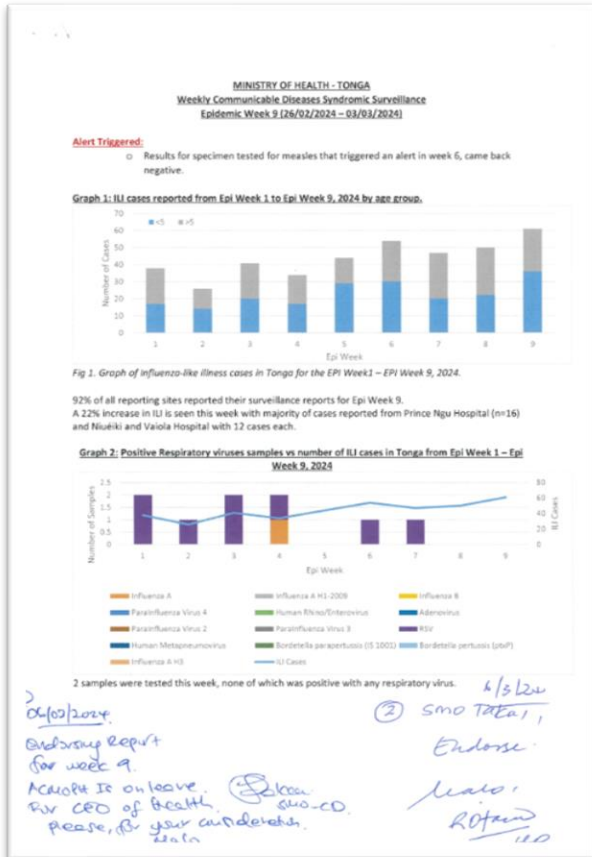
¹ Pacific Island Countries | Pays insulaires du Pacifique

Country/Area	No. sites	No. reported	% reported	AFR	PF	Diarrhoea	DLI	ILI	SARI	COVID-19
New Table										
American Samoa	0	0	0%	0	0	0	0	0	0	0
Cook Islands	14	13	93%	0	0	0	0	0	0	8
Fiji	29	29	100%	3	0	1148	213	574	13	2
French Polynesia	40	30	75%	40	0	94	43	271	0	0
Guam	0	0	0%	0	0	0	0	0	0	0
Kiribati	10	10	100%	0	0	787	0	71	0	0
Marshall Islands (the)	2	2	100%	0	0	1	0	11	0	0
Micronesia (Federated States of)	4	3	75%	2	3	31	3	66	1	0
Nauru	0	0	0%	0	0	0	0	0	0	0
New Caledonia	25	18	72%	0	0	43	0	103	0	0
New Zealand	0	0	0%	0	0	0	0	0	0	0
Niue	1	1	100%	0	0	0	0	1	0	2
Northern Mariana Islands (the)	9	9	100%	0	14	8	0	37	1	24
Palau	7	7	100%	0	0	15	1	4	0	2
Papua New Guinea	0	0	0%	0	0	0	0	0	0	0
Pitcairn Islands	0	0	0%	0	0	0	0	0	0	0
Samoa	12	7	58%	0	2	106	0	458	2	0
Solomon Islands	22	13	59%	0	17	101	2	201	8	0
Tokelau	3	3	100%	0	0	5	0	5	0	0
Tonga	13	12	92%	0	1	26	0	61	5	1
Tuvalu	0	0	0%	0	0	0	0	0	0	0
Vanuatu	22	8	36%	0	0	0	2	76	2	0
Wallis & Futuna	2	2	100%	0	1	13	1	71	0	1
Total	215	167	78%	45	38	2378	265	2010	32	40

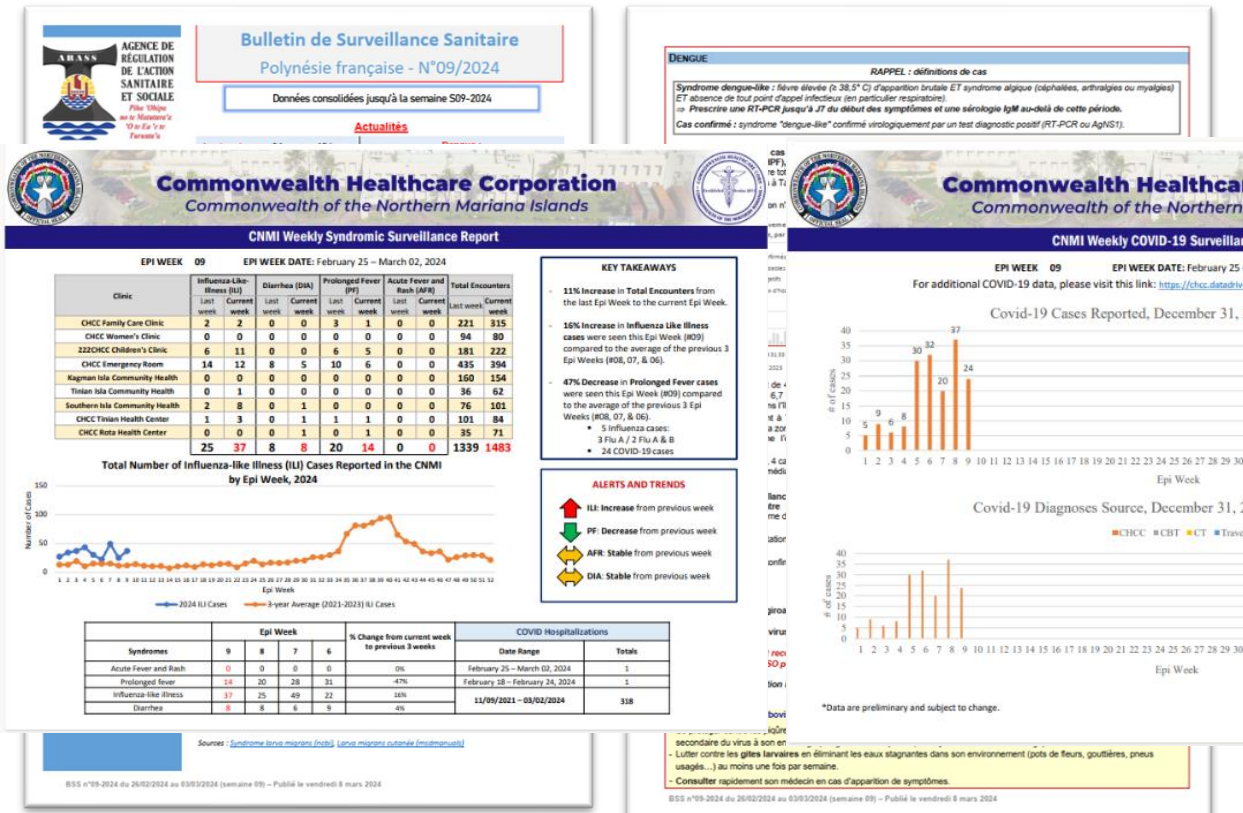
** AFR: Acute Fever and Rash; PF: Prolonged Fever; DLI: Diarrhoea-like Illness; ILI: Influenza-like Illness; SARI: Severe Acute Respiratory Infection

Annex 4: Sample PICT Situational Reports

Annex 4a: Tonga MOH Weekly Communicable Disease Syndromic Surveillance Report for EpiWeek 09, shared 6 March 2024



Annex 4b: French Polynesia Health Surveillance Report - EpiWeek 09, shared 9 March 2024



Annex 4c: CNMI Weekly Syndromic Surveillance Report - EpiWeek 09, shared 7 March 2024

Annex 5: SPACEDEW tool for dengue early warning system – estimating the local risk of outbreak based on climate and environmental variables

