Strengthening health system resilience

At a glance

- Pacific Island countries and areas (PICs) are among the world's most vulnerable to crises including emerging and re-emerging infectious disease outbreaks and disasters.

- This vulnerability is being further compounded by the increasing health impacts of climate change, including death, illness and injuries caused by extreme weather events, heat stress, waterborne and foodborne diseases, malnutrition, and the negative mental health impacts of people being displaced from their homes. Meanwhile, climate-fuelled superstorms and rising sea levels are threatening fragile health care facilities at the time they are needed most.

- Lessons learned from the COVID-19 pandemic emphasize that a resilient health system must include the ability to both maintain the provision of basic health care and respond to immediate or future health system shocks.

- Priority actions, aligned with health security action frameworks such as the Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III), are focused on enhancing and sustaining essential health services and core public health functions. Strong and equitable health systems are key to achieving universal health coverage (UHC), and a fundamental component of UHC is that these strong and equitable health systems are resilient in the face of potential threats and shocks, including but not limited to the climate crisis, public health emergencies and disasters.

- Applying lessons from COVID-19 will be helpful in efforts to enhance health system resilience in the Pacific as elsewhere.

Current situation

The coronavirus disease of 2019 (COVID-19) pandemic highlighted the wide-ranging impacts of emerging disease threats and the fragility of health systems. Many health facilities faced critical challenges maintaining normal operations and even essential health services while responding to the pandemic. This at times resulted in crippled systems and important health needs being unmet. The pandemic exposed areas of weakness that continue to exist across the six essential health system

building blocks: service delivery, health workforce, health information systems, access to essential medicines, financing, and leadership/governance.

For Pacific Island countries and areas, the interplay of emerging diseases such as COVID-19, climate change, sea level rise and other hazards compound vulnerabilities not only for health systems, but also for communities, other essential services and economies. From 2019 to 2023, the Pacific endured multiple cyclones in Solomon Islands, Vanuatu, Fiji and Tonga; flash floods in Tuvalu, Kiribati and Solomon Islands; volcanic eruptions in Tonga; drought in Kiribati and Tuvalu; and, most recently, earthquakes and cyclones in close succession in Vanuatu. The health impacts of these disasters and the spread of communicable diseases (such as dengue, cholera, leptospirosis), place additional burden on health systems strained by the response to a global pandemic. These experiences of multiple hazards and threats are far from uncommon in the disaster-prone countries of the Pacific. The literature on health system resilience stresses the need for efforts to not only absorb and recover from these shocks, but also ensure continuity in health improvement and sustained gains in health system functioning.

Groups at risk and with vulnerabilities are disproportionally affected by public health emergencies. Physiological factors can make some populations more susceptible to the health impact of an emergency, as in the case of older people, pregnant women, children and people with underlying health conditions or disabilities. Meanwhile, certain professions are at risk due to increased exposure to public health threats, as in the case of health care workers, first responders, environmental and occupational health workers, animal workers and laboratory personnel. Social determinants of health (e.g. income, education, geographical location, social inclusion and gender identity) can create barriers to accessing health, financial and social welfare resources, making it more difficult for them to cope with emergencies. And people living with chronic conditions experience adverse health consequences from interruption of their ongoing care. Prioritizing measures to engage and support groups at risk or with vulnerabilities is important to minimize the impact of the emergency on their health and well-being.

APSED III is the third generation of the common framework first established in 2005 to guide countries and partners in building the capacities required to respond to outbreaks and public health emergencies. APSED III leverages technical insight from international frameworks to prioritize the strengthening of public health functions to sustain and reinforce health systems as a whole. These frameworks include the International Health Regulations (2005), the Sustainable Development Goals, UHC, and the One Health approach. Building on these and other health security frameworks, resilient health systems encompass three interconnected priorities:
1. the infrastructure, financing, resources, fit-for-purpose health workforce, and enabling policies to deliver core essential health services including mental health;
2. the systems for early detection and early warning which allow PICs to assess and characterize potential risks; and,
3. the capabilities and readiness to respond to emerging threats and at the same time enable uninterrupted delivery of core essential health services. Given the complex nature of existing health risks, a multisectoral and coordinated approach is essential.

Future vision

To further progress towards the Healthy Islands vision, it is imperative that PICs have resilient health systems that ensure ongoing access to quality care including mental health services for their populations. Those systems must also be prepared for and appropriately respond to the climate

crisis, emerging infectious disease threats and disasters, thereby minimizing risks to their population, and enabling continued service provision.

This future vision for resilient health systems depends on long-term commitments and investment in the following:

- policies, operational plans, budgets, a fit-for-purpose health workforce and legislation to enable uninterrupted delivery of quality core essential services while maintaining emergency readiness and timely response based on a coordinated whole-of-government and multisectoral approach;
- response structures and plans that consider all hazards to health (e.g. biological, environmental, hydrometeorological, geological), with periodic testing and refinement;
- interoperable information systems and technologies to interconnect data from relevant non-health sectors with public health, clinical and other data from the health sector to enable early detection and rapid risk assessments and to inform decision-making;
- identification and mapping of populations at risk and with vulnerabilities, and engagement with them in developing appropriate interventions to minimize the risk of emergencies; and
- development of risk communications and community engagement as integral parts of the health system, thereby including the public in a shared health system vision, ensuring buy-in for whole-of-society responses to emergencies and disasters and countering distrust and misinformation.

In resource-limited settings, it is essential to be proficient in emergency readiness while simultaneously building effective health systems that continue to provide quality health services for all.

Examples of recent progress

Ensuring the continuation of essential services during a pandemic

Even during a major emergency, other essential health services must continue – after all, diabetics need ongoing doses of insulin, mothers continue giving birth, and children require the protection of routine vaccination. While there was a lot of disruption during the pandemic, some PICs implemented innovative approaches to maintain core essential health services.

The Strategy for Essential Health Service Delivery in the Federated States of Micronesia (FSM) was designed to guide members of the decentralized health system in adapting health service provision and ensuring that essential health services remain available and accessible during the pandemic. Based on comprehensive consultation with the country's four states, the strategy sets out three objectives:

1. A minimum package of essential health services is available at primary and secondary care facilities.
2. Access to essential health services is maintained for all population subgroups.
3. Governance and coordination are strengthened to ensure better coverage of essential health services.

Also in FSM, a telemedicine hub for live synchronous teleconsultations was set up to pilot the connection of Pohnpei State Hospital to a dispensary. The pilot project demonstrated that patients – in this case, patients with chronic noncommunicable diseases (NCDs) – can visit a dispensary and be connected to more specialized care. This reduces unnecessary domestic referrals and travel, saving

money and time. Similarly, Nauru piloted the use of digital tools for the management of NCDs, using SMS messages to reach patients and provide ongoing support.

During the peak of the pandemic, the Fiji Emergency Medical Assistance Team (FEMAT) was used strategically to keep COVID-19 cases out of the Colonial War Memorial hospital (CWM) so that CWM could continue providing non-COVID health services, such as maternal and child health care. FEMAT established a field hospital for COVID-19 patients at the capital city's main arena.

And while routine immunization was heavily disrupted during the pandemic, most countries followed WHO's interim guidance, "Preparing for COVID-19 in the PICs: Issues to consider for the delivery of immunization services", and made efforts to ensure that children continued to receive the life-saving protection of vaccines. Furthermore, Kiribati, Marshall Islands, Samoa and Vanuatu conducted catch-up vaccination campaigns to reach missed children; Fiji conducted a measles, mumps and rubella vaccination campaign; and FSM conducted an integrated vaccination campaign in 2022. Tonga was a particular standout in maintaining immunization coverage, with meningococcal and polio vaccination levels kept at 99–100% during 2020 and 2021.

Strengthening key components of the health system

As the COVID-19 pandemic has shown, access to local production capacity for medicinal oxygen is a key aspect of health system resilience. Having easy access to oxygen helps health workers treat COVID-19 and also many other respiratory illnesses. Recent progress has been made in increasing access to a reliable supply of quality medicinal oxygen through ongoing work to install pressure swing adsorption (PSA) oxygen generating plants in Cook Islands, Fiji, Kiribati, FSM, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu.

Policies on infection prevention and control (IPC) were also reinforced during the pandemic through the updating of national IPC guidelines, development of three-year IPC plans, isolation guidelines and health worker capacity-building to reduce the spread of infections in health care settings. Similarly, investments are being made in water, sanitation and hygiene in health care facilities, which will reduce the risk of health care-associated infections and prevent the spread of many diseases such as cholera and typhoid fever in the future.

Ensuring health facilities can continue serving patients in the face of climate change

In a Western Pacific first, Fiji completed a climate hazard and vulnerability assessment of 204 health care facilities to help determine which facilities are most at risk so that they can be prioritized for retrofitting, renovation or relocation. Over 25 health care facilities including at least one laboratory have been identified as being particularly vulnerable because of their proximity to shorelines and riverbanks. This assessment is just part of Fiji's broader efforts to strengthen the resilience of its health system, guided by the country's *Guidelines for Climate Resilient and Environmentally Sustainable Health Care Facilities*.

Bolstering early detection and early warning

Building on existing solid surveillance networks such as the Pacific Public Health Surveillance and Lab network, multisource public health surveillance has proven to be essential in detecting and assessing potential shocks as early as possible. In French Polynesia, the routine weekly monitoring of

syndromic, laboratory, and hospital surveillance for various priority syndromes and pathogens including acute respiratory infections, influenza, COVID-19, dengue, and leptospirosis provides leaders, as well as neighbouring PICs, with a comprehensive summary of disease risks in the territory and region.

During the peak of the pandemic, the integration of independently developed, disease and source-specific surveillance for COVID-19 was a critical element in timely analysis of risks, development of appropriate public health response measures, and assessment of these measures in reducing the shock.

Scaling up access to mental health and psychosocial support

The COVID-19 pandemic increased understanding of the importance of mental health and overcoming related stigma. Countries across the Pacific used various options to rapidly expand the availability of mental health and psychosocial support to meet increased needs during the pandemic. General services were provided at the primary care level, closer to where people live, preserving limited specialist mental health services for those with the most acute needs. While these approaches were used to rapidly scale up support during the pandemic, they will have continued relevance in the Pacific post-pandemic, especially given the rising mental health impacts of climate change.

Kiribati, for example, hosted a series of *talanoa* sessions at the community level, working with community members to tailor the key interventions in WHO's Mental Health Gap Action Programme (mhGAP) for the local context. The sessions looked at how to prevent mental illness, how to look after one's own and others' well-being, and what community leaders can do to identify and refer people who need support to the mental health team on the main island of South Tarawa. The i-Kiribati primary health care workers who led these community *talanoa* sessions also hosted discussions with nearly 200 nurses, nurse aides, police officers, village security personnel, church members and others working in schools in mental health identification and management, both on the main island and three outer islands.

Similarly, approximately 300 health workers across Fiji were reached virtually during lockdowns with online training in psychosocial first aid. Fijian health care staff and emergency medical team personnel from across the Pacific were also provided training in self-care to limit burnout and help retain precious health worker capacity.

Building readiness to respond to emerging threats

Fiji, Marshall Islands, FSM, Solomon Islands, Tonga and Vanuatu have all conducted intra-action reviews (IARs) to integrate lessons identified during the COVID-19 response and are now using the findings to strengthen their health systems and their response plans for future crises. IARs provide an opportunity to review the operational capacity of existing response systems at national and subnational level as well as identify actions to enhance future readiness. Key findings from the intra-action review in Vanuatu, for example, highlighted that the COVID-19 response has built significant capability in planning, preparedness and response which can be adapted to meet future needs. The IAR also emphasized that "strong multisectoral collaboration is essential for a well-coordinated and effective response to a public health emergency".

Why urgent action is needed now

Shocks to the health system can happen at any time, with little to no warning. Extreme weather events, especially cyclones, floods, and droughts are displacing populations, causing injuries and psychological trauma, and increasing the risks of infection and malnutrition in the Pacific. Outbreaks and disasters related to climate change are continuing to rise, increasing the risk of disease and death, especially among populations with vulnerabilities.

The threat of emerging diseases, exemplified by the COVID-19 pandemic, along with disasters and other shocks, demonstrate that such events can severely interrupt basic health services. Lack of action will allow vulnerabilities to remain, and the resulting health service interruptions will place additional stress on limited health workforce personnel and, in turn, disrupt economies and livelihoods. Importantly, this will also lead to further poor health outcomes including increases in disease vulnerability, exacerbation of chronic conditions, and decreased mental health. Critically, the emergence of vaccine hesitancy and resistance to public health and social measures highlight the need for both risk communication and community participation to encourage whole-of-society responses to health emergencies.

Recommendations

Recommendations for health ministers

1. Develop a country-specific definition of a **"core essential health service delivery package"** which identifies types of packages at each service delivery level which must remain uninterrupted even in the event of health system shocks. Develop plans for how these core essential health services will be maintained during health system shocks.

2. Coordinate with counterparts in other PICs along with development partners to strengthen regional supply chains and determine the feasibility of a **regional supply and logistics hub**.

3. Develop strategic plans, policies, and governance mechanisms to ensure an appropriate skill-mix within the health workforce, and to ensure **the readiness and resiliency of the workforce** during emergencies and other shocks, including through building surge capacity and providing psychosocial services.

4. Identify and **prioritize populations most at risk** from the impacts of health emergencies or other disruptions to essential health services and involve them in developing and implementing effective interventions.

5. Include **risk communication and community engagement** as an essential capacity of health system resiliency. Transparent communications with the public should be encouraged as a way of fostering whole-of-society responses.

6. Act to mitigate and adapt to the climate crisis:
    a. Use the **Guideline on Climate Resilient and Environmentally Sustainable Health Care Facilities** and the example from Fiji to inform country-level initiatives, starting by evaluating health care facility resilience.
    b. Participate in the **global Alliance for Transformative Action on Climate and Health (ATACH)**.

c. **Advocate for cross-sectoral climate action** that will benefit health, and call for climate financing for mitigation and adaptation in the health system.

7. Lead multisectoral coordination to maximize opportunities such as Joint External Evaluations, State Party Self-Assessment Annual Reporting, exercises and intra- or after-action reviews to **identify best practices and areas for improvement**. Ensure that recommendations result in concrete action.

8. **Lead collaboration with other sectors to strengthen capacity to collect and analyse data** that impact human health (such as on animal health, climate change, and hydrometeorological and geologic hazards) and to develop cross-sector technical standards to facilitate interoperable information systems.

Recommendations for development partners

1. Support PICs in their development **of core essential health service delivery packages** and follow their guidance on which areas need specific external support.

2. Support PICs' efforts to **strengthen local supply chains** and to consider the feasibility of establishing a regional supply and logistics hub.

3. Support PICs' efforts to **build a resilient health workforce** (including mental health) and increase health facility resilience.

4. Facilitate the development and **strengthening of information systems that integrate data** from across different areas of the health system

5. Partner with PICs' efforts to **boost the climate resilience and environmental sustainability** of their health systems and to advocate for the multisectoral climate action that will benefit health.

6. Provide **resources to support Joint External Evaluations, exercises and intra- or after-action reviews** to identify best practices and areas for improvement. Use the results of such evaluations to refine future support efforts.

7. Ensure that support provided for increased readiness to address emerging disease threats focuses on both **maintaining delivery of the core essential health service delivery package and the ability to respond to emergencies and disasters.**