

SECRETARIAT OF THE PACIFIC COMMUNITY

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Session 2: Health Statistics and Health Information Systems (HIS)

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EXECUTIVE SUMMARY

1. Health-related statistics are critical for evaluation health services and patient care, priority setting and resource allocation. A reliable HIS is therefore essential to the effective functioning of health systems and supporting health at a population level. A significant amount of health-related data is also captured through national statistical collections, including censuses and surveys. Improving health statistics has been identified as a priority in the second half (2013–2014) of Phase 1 of the *Ten Year Pacific Statistics Strategy* (TYPSS).

Achievements

2. Although the focus on health statistics under TYPSS is just starting, a broad range of networks are already active in health statistics and HIS in the Pacific, including the *Pacific Health Information Network* (PHIN) and the *Pacific Public Health Surveillance Network* (PPHSN). Through these, several countries have begun assessments of their HIS and are developing strategic plans and all countries have been involved in capacity building activities. SPC's *National Minimum Development Indicator* (NMDI) database also includes 58 health related indicators.

Challenges

3. Many Pacific Island countries and territories still operate without sufficient information to make timely and effective policy decisions. Key challenges for countries include: integrating data from a range of sources and data collections into an accessible shared system; the need for stronger HIS leadership and governance; the limited 'culture of information use'; building capacity among individuals and institutions (particularly in analysis and reporting); limited IT infrastructure and support; timeliness of information; and data completeness.
4. The secretariat for PHIN is currently hosted by the HIS Hub at the University of Queensland which is anticipated to close by the end of 2013. SPC has offered to host the network, should PHIN choose this option, although additional resources would be required.

Way forward/Recommendations

5. There are several initiatives supporting ongoing improvements in HIS in the Pacific. This includes the 2012–2017 PHIN Regional HIS Strategic Plan and the work to build epidemiological capacity through PPHSN. Countries are encouraged to develop a national committee for the oversight of HIS activities, conduct an assessment of their HIS if not already done, and develop detailed, costed national strategic plans. Plans should also be embedded in statistics coordination at a national level through the National Statistics Strategy.
6. SPC is about to commence recruitment for a HIS Specialist as a shared position between the Public Health and Statistics for Development Divisions to further strengthen the existing HIS related capacity.

INTRODUCTION

1. A reliable health information system (HIS) is essential to the effective functioning of health systems. Health service managers and policymakers use data for patient care; enhancing efficiency and effectiveness; decision-making; prioritisation and resource allocation. HIS's involve a broad range of primary stakeholders in the data collection and reporting processes including national statistics and civil registry offices.
2. The goal of a health information system (HIS) is to produce relevant and quality information that stakeholders can use for making transparent and evidence-based decisions for health. Sources of data include:
 - a. Civil and vital registration (e.g., births, deaths and cause-of- death)
 - b. Census and surveys
 - c. Medical and health facility service records
 - d. Financial and resource tracking information.
3. The performance of a health information system is measured not only on the quantity and quality of data produced, but on evidence of the continued use of data to improve health system performance, to respond to emergent threats, and to enhance public health.
4. Routine health information systems, such as those operated through health information departments, provide information on:
 - a. Health problems
 - b. Risk factors associated with disease
 - c. Mortality and morbidity
 - d. Health service coverage
 - e. Health system resources
 - f. Public health emergencies
 - g. The implementation and evaluation of interventions.
5. Improved social statistics (focussing on health and education) has been identified as a priority for the second half (2013-2014) of Phase 1 of the Ten Year Pacific Statistics Strategy (2011-2014).

ACHIEVEMENTS

6. Although the focus on health information under TYPSS was scheduled for the latter part of phase 1 and is just now getting underway, there are a broad range of networks already active in supporting health information in the Pacific. These include:
 - a. **The Pacific Health Information Network.** PHIN aims to support health outcomes and systems through strengthening the quality and use of information. An important target goal of PHIN is to provide a capacity building mechanism for networking, support, information sharing and training for people working as health information professionals.
 - b. **Health Information Systems Knowledge Hub:** The HIS Hub at the University of Queensland (an AusAID-funded initiative) has developed and provided for Pacific countries technical tools, guidance, and capacity building support as part of the region's HIS and CRVS strengthening activities.
 - c. **Pacific Public Health Surveillance Network.** The PPHSN was established in December 1996, under the joint auspices of SPC and WHO. The PPHSN is a voluntary network of countries and organisations dedicated to the promotion of public health surveillance.
 - d. **Brisbane Accord Group.** The BAG is responsible for implementation and coordination of the Pacific Vital Statistics Action Plan 2011-2014, which aims to improve the availability, accuracy and

- use of vital statistics on births, deaths and cause-of-death data. The Pacific Vital Statistics Action Plan sits under the TYPSS and is co-coordinated by SPC and the UQ HIS Hub.
- e. **Centre for Health Information, Policy and Systems Research.** The CHIPSR at Fiji National University was developed to ensure the use of evidence-based research in national policies.
 - f. **Pacific Research Centre for the Prevention of Obesity and Non-Communicable Diseases.** C-POND is a partnership between Fiji National University and Deakin University that conducts solution-orientated research on obesity and NCDs for the Pacific.
7. A number of countries have begun the complicated task of improving and strengthening their HIS by conducting comprehensive assessments and reviews of their system and developing detailed, costed HIS strategic plans that address core weaknesses. The 2012-2017 Regional Health Information System Strategic Plan developed by PHIN (www.phinnetwork.org) has been an essential guide to countries in these processes. A small number of countries have also begun to develop or update HIS policy, legislation and regulation. All countries in the region have been involved in capacity building activities, including supporting staff to attend workshops and training opportunities on HIS and CRVS principles and practices. Targeted activities supported by partners have been implemented, such as developing health data dictionaries, enhancing existing and implementing new software applications, and improving the quality of annual health reports.
 8. Soon after inception, from 1997 to the early 2000s the PPHSN was involved in building capacity for HIS strengthening at country level. WHO and SPC assisted PIHOA in conducting ICD coding workshops in the USAPI (e.g. in FSM States) as well as reviewing the quality and completeness of medical records in hospitals and Primary Health Care facilities. Two series of four sub-regional two-week workshops on “Epi Info and Surveillance” (basic then advanced level) were conducted between 1998 and 2001 involving 21 PICTs and aiming at, among other objectives, establishing and managing surveillance and PH programme databases (e.g. MCH, EPI) with a view of better integrating disease surveillance and HIS data. Extensive HIS mapping workshops were also conducted during the same period in all four FSM States with the technical assistance of SPC and WHO.
 9. National statistics offices, and the broader regional statistics community also play an important part in the collection and sharing of health data. This includes:
 - a. Census collections
 - Provide denominators for population rates
 - Information on births, fertility rates by age, teenage pregnancies etc
 - Measures of infant and childhood mortality
 - Indirect measures of adult mortality and life expectancy. These are an important proxy measure for NCD mortality where CRVS is not complete
 - b. DHS collections
 - Measures of infant and childhood mortality
 - Maternal mortality and health outcomes
 - Collects proxy measures of adult mortality and life expectancy through indirect estimation
 - Collects risk factor and disability prevalence through population based surveys
 - c. HIES collections
 - Collect household expenditure on extent and type of health care
 - Other surveys
 - Can provide sampling/ survey advice as need
 10. Under the TYPSS, 58 health-related indicators are collected and reported in SPC’s National Minimum Development Indicator database. These cover themes including: Vital Statistics, Vector Borne

Diseases (Malaria), Tuberculosis, Sexual Health (HIV/AIDS & STI), Maternal Health, Child Health, Non-Communicable Diseases, Environmental Health, and Health Systems. This plays an important role in ensuring that country based data is available for planning and priority setting at a regional level, providing accountability and monitoring for international agreements such as the MDG's and allowing benchmarking between countries.

11. Statistics agencies (along with other stakeholders) from Fiji, Samoa, Solomon Islands, Tonga, Vanuatu also recently participated in the HIS leadership forum facilitated by PHIN, UQ HIS Hub, WHO and SPC at Pacific Harbour in Fiji. Invitations were also made to Kiribati and PNG which had country representatives from the Ministry of Health at the meeting. Objectives of this meeting were as follows:
 - a. Delegates will broaden their perspectives on implementation options, challenges and roles related to health information systems (HIS) by interacting with colleagues from other countries and sectors.
 - b. Delegates will develop a shared awareness of the roles of various sectors in strengthening HIS and the options and strategies for improving cross-sector coordination.
 - c. Delegates will explore leadership roles in managing health information systems as a national asset.
 - d. Delegates and development partner participants will work together to develop preliminary action plans to promote stakeholder engagement, advocacy, leadership and sustainable commitment to HIS.
 - e. Development partners will highlight relevant follow-on resources (information, financial and technical assistance) available in their respective sectors to strengthen HIS.

CHALLENGES

12. Despite the importance of data for decision-making, many Pacific Island countries and territories still operate without sufficient information needed to make timely and effective policy decisions. While most countries have health facility registries, reporting forms, medical records rooms or health information units with an abundance of data, countries are still challenged with timely reporting, analysing data and transforming it into useful information for policy and planning. Investments in health information are scarce or limited. Little visibility or trust in health data and statistics that are incomplete, not up-to-date, or of poor quality compromises the HIS's ability to provide proper evidence for decision-makers. A culture of information use must be fostered to ensure reliable health information is used in country and reported from countries.
13. A 2009 regional assessment of health information systems by the Pacific Health Information Network (PHIN), which is the regional network of HIS professionals, found one of the key challenges for countries was integrating data from a range of sources and data collections undertaken for various health programs into an accessible shared system. Other key issues for systems were:
 - a. The need for stronger HIS leadership and governance
 - b. The limited 'culture of information use'
 - c. Building capacity among individuals and institutions
 - d. Limited (or non-existent) infrastructure and support for information technologies
 - e. Timeliness of information
 - f. Data completeness.
14. Ensuring health data is seen as a national asset and is accessible to all potential users is also important, as is ensuring health has access to health-related data that is generated outside of the immediate health structure such as generated through censuses and surveys. Integrating health

statistics into the broader national statistics framework through national statistics strategies is therefore critical, although a challenge, with the complexity of the health structure often resulting in territorial issues between these agencies.

15. There is also an opportunity to better coordinate activities supported by networks such as PHIN and PPHSN in order to leverage the greatest possible impact from these investments and avoid duplication.
16. The secretariat for PHIN is currently hosted at the HIS Hub at the University of Queensland. The Hub is currently anticipated to close by the end of 2013, with the end of their current funding cycle. SPC has offered to host the network, although additional resources would be required. This offer is currently being reviewed by the PHIN executive team.

THE WAY FORWARD

17. There are several initiatives for supporting ongoing improvements in HIS. Two key initiatives are the PHIN 2012-2017 Regional HIS Strategic Plan which was developed by PHIN, HIS Hub, and WHO and the PPHSN continuum of training in Field Epidemiology. Significant progress has already been made by most countries, but there is further work to be done. Countries are encouraged to:
 - a. **Develop national committee(s) for the oversight of HIS activities.** The committee should have clearly a defined Terms of Reference, and have members from health, statistics and other key stakeholders. Countries are encouraged to develop clear reporting mechanisms to ensure that senior management (both within and beyond health) are kept informed of progress and challenges.
 - b. **Conduct an assessment of their HIS if not already done.** These assessments should to be coordinated and implemented through the national committee (to ensure involvement of all relevant stakeholders). Standardised tools and processes have been developed for HIS assessments and are readily available, and technical assistance is available through PHIN and SPC to complete this work.
 - c. **Develop detailed, costed national HIS improvement (or strategic plans).** These plans build upon results from the assessments, and offer a prioritised list of actions that countries and partners can use to coordinate and streamline investments. These plans also allow partners to contribute technical assistance in a manner that best meets identified country needs and avoid conflicting or duplicative advice or support.
 - d. **Implement and monitor progress.** The national committee should oversee implementation of the plan, including tracking progress.
 - e. **Obtain high-level endorsement and support for the improvement plans.** Coordination and leadership at the national (and regional) level is crucial for the success of any plan. The assessment and planning process requires long-term commitment and support from senior levels within government.
 - f. **Ensure health information is embedded in the National Statistics Strategy.** As health data requires multi-sectoral cooperation, it is important that this is embedded in statistics coordination at a national level.
 - g. **Ensure health data is routinely updated in NMDIs.** The sharing of data between countries (such as through the NMDIs) is important to improve country decision-making and enhance Pacific representation on a global scale. Additionally, this allows country data to be utilised at a regional level for project planning and identifying priorities areas for support.
18. In August 2013, SPC, in partnership with other PPHSN partners, are commencing a continuum of training in Field Epidemiology. The goal of this is to address the need for epidemiology capacity building in the region and best meet the 2011 Ministers of Health Meeting's recommendations (Honiara outcome) on the need to address training of EpiTechs and Epidemiologists in the Pacific

Islands region. It will range from a one-week basic level, to the 4-week training of EpiTechs, to ultimately reaching the specialized Pacific Field Epidemiologist Training Programme (FETP). Curriculum development for the EpiTech training and a regional feasibility study for the FETP are currently underway.

19. These actions, with technical support from regional networks and agencies, will allow countries to work towards developing world-class HIS systems that provide the sound evidence for policy making, planning and evaluation that is critical in the Pacific given current health concerns.
20. In recognition of the importance of improving HIS systems in the region, SPC is currently recruiting a specialist HIS position to improve country support and link with existing regional networks (such as PHIN). This will be a shared position between the Public Health Division and the Statistics for Development Division and will add to the existing expertise in both programs.
21. The SPC Public Health Division consists of two programmes, each headed by a Deputy-Director, i.e.: the Research, Evidence and Information (REI) Programme, and the Policy, Planning and Regulation (PPR) Programme. The Research, Evidence and Information Programme of the SPC Public Health Division has a number of epidemiologists with expertise in elements of HIS. With the addition of a specific HIS position, this should progressively evolve towards the formation of a small HIS Strengthening Team in 2014 onwards. The team will complement the work of the SDD in the following main areas of activities: (i) strengthening HIS in country, especially with regard to better integrating disease surveillance and public health programmes' data (e.g. Maternal and Child Health, Expanded Programme on Immunization, Environmental Health); (ii) contributing to improvements in the completeness and quality of health-related indicators of the NMDI national and regional databases; (iii) leading the development of innovative users' interfaces for both surveillance and public health activities' databases (e.g. post-disaster risk assessment and surveillance systems) supported by new technologies (e.g. web-based); and (iv) conducting selected operational research projects on HIS in conjunction with PICTs and regional partners.

POINTS FOR DISCUSSION

22. The meeting is invited to comment on:
 - a. The integration of health statistics into the national statistics strategy
 - b. The role of the national statistics office in providing data of interest to health through routine collections such as census and surveys, and what role national statistics offices may play in the analysis and dissemination of data from administrative health sources.