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SUSTAINABLE PRACTICE-BASED CAPACITY BUILDING TOWARDS DATA DRIVEN CULTURE IN HEALTHCARE ORGANIZATION IN PACIFIC ISLAND COUNTRIES (PICS)

(Paper presented by the World Health Organization and the Pacific Community)

At a glance

Positioned within the commitments by our Pacific Health Ministers at its fifteenth meeting in Nukualofa, Tonga 2023; this paper focuses on addressing some key recommendations in the priority areas for *rethinking human resource for health* and *advancing health information and digital transformation* under following areas.

- Practice-based capacity building approach in **data management cycle** independent of information system-based capacity building in digital health implementations.
- **Data driven organization culture** across healthcare organization inculcating the teamwork around data reporting and feedback across all levels of the health workforce.
- **Data management capacity building** to withstand human resource turnover in the health sector with continuous professional development to make health sector employment more attractive with clear career advancement opportunities.
- **Workplace-based capacity building programmes** that are transferable across the region aligning with the digital health maturity of PICs with the collaboration of development partners and academic institutions.

CURRENT SITUATION

1. Advancing the health information and digital transformation and its integration into country digital health enhancement plan and strategies were a priority area highlighted in the 15th Pacific Health Ministers Meeting (PHMM)¹. In this context, data management is foundational towards a data driven organizational culture. A data informed decision-making process involves robust data specifications and processes to support data collection at community, health facility and health programme levels. Strong data analytics allows the transformation of data into information for decision making and to inform policy. Good data use requires establishing sustainable reporting processes supported by digital health tools that enable data collection and analysis². A well-established decision-making process may span across changes in clinical approaches and programme management to the optimization of resources and investments. The key to promote a data driven organization culture in health sector in PICs is to actively drive decision-making using collected data and create a feedback loop so that health staff collecting the data are also involved with the decisions made by the data generated through the efforts of the data producers. Such decision-making process should encompass data collection at community and health facility levels and transform data into information for decision making and policy formulation at managerial and administrative levels.

2. The *Healthy Islands Monitoring Framework (HIMF) Updates* presented at the Pacific Head of the Health meeting 2023 stressed promoting data use to inform policy actions³. The report revealed that, despite eight years since the establishment of the HIMF, data availability remained scarce in many PICs. An in-depth HIMF evaluation revealed that PICs faced persistent challenges in data generation and reporting related to HIMF. The recommended remedial actions included providing coordinated support to PICs to improve the consistency, quality, and accessibility of health information through building digital capacity in the health workforce.

3. According to the 15th Health Ministers Meeting¹, sustaining a sufficient number of well-trained health workers is an escalating challenge in PICs. The digital health capacity building was no exception due to several challenges. A main issue noted in such capacity building attempt was that the training usually comes with a specific digital health tool such as a health information system (HIS). The training is focused on the HIS and its functionality within the health system level the tool is implemented, such as a health facility. Hence, the data use across all levels of the health system with the participation of multiple occupational roles will not be addressed during a such training sessions. Often the attendees were health facility and programme level data entry operators and, mostly data capturing, and bottom-up reporting were the priority of the training ignoring the health system focus with a data use and top-down feedback loops. Similarly, human resource dynamics of a health system may also adversely affect it reaching data-driven organizational culture. These may include, but not be limited to, the factors such as, lack of motivation employees demonstrates in attending training programmes, trained staff leaving the posts, difficulty of retaining trained staff in the health system, and new recruitments where employees with no previous data management training joining the health workforce. Hence, health systems across PICs require a sustainable capacity building approach for the region, which can inculcate data use across all levels of the health system with a data driven organization culture.

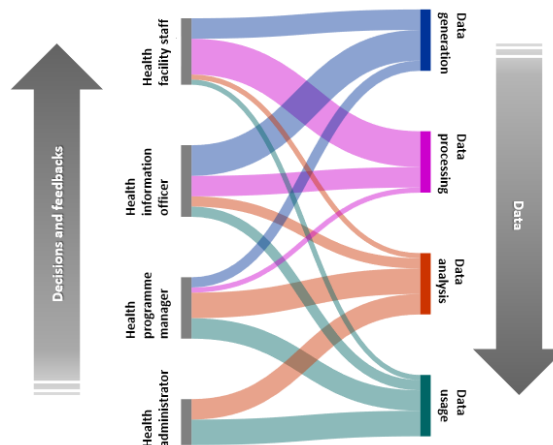
¹ 15th Pacific Health Ministers Meeting (2023). Outcome of the Fifteenth Pacific Health Ministers Meeting. September 20 – 22, Tonga

² Asian Development Bank (2021). Digital Health Implementation Guide for the Pacific.

³ Pacific Heads of Health Meeting (2022). Healthy Islands Monitoring Framework Update. PHoH 13/ID/6/3.1.

FUTURE VISION

4. In agreement with the vision of the PHMM¹ and HIMF recommendations³, this paper aims at proposing a practice-based capacity building approach to establish data-driven organizational culture in the health sector. In this approach it is vital to understand the association between the occupational roles, such as the health facility staff, the health information officer, the health programme manager, and the health administrator and the stages of data management cycle, data generation, data processing, data analysis and data usage to illustrate how a role-based capacity building can be organized for a health care team to promote data driven organizational culture.



5. Hence, practice-based training will demonstrate the usefulness of data driven organizational culture for the healthcare decision making while highlighting the vital nature of the occupational roles in the reporting and decision-making process. Hence, HIS focused training can be realigned to a data focused training empowering the roles played by each layer in the health workforce. The vision proposing in this paper is to improve data utilization with structured in-service trainings for the health workforce on data collection, analysis, reporting, use and data visualization. Training should target different occupational roles in the healthcare delivery system from data producers to policy makers. Similarly, such a capacity building programme should focus on continuous hands-on training in a workplace-based learning environment, in a self-paced manner.

6. As iterated in PHMM, retaining existing healthcare workers with digital health skills, and making the health sector more attractive to prospective employees who are joining the digital health workforce are both important in PICs context. The Ministry of Health has a significant role to play in motivating its employees to participate in capacity building programmes and in maintaining a sufficient pool of trained staff with digital health skills. In this context, the measures to provide leadership to capacity building can include, introducing Continuous Professional Development (CPD) based incentive system and career advancement options to the employees, organizing regular training programmes, and to offer sponsorships and paid time-offs to attend the training programmes. Encouraging the higher officials of the Ministry of Health to ground the decisions and policy on data and to provide feedback for the reporting process are also important in adopting a data driven organization culture.

7. Attracting and retaining the digital health talents with internal arrangements and optimizing the skills with partnership of academic institutions and development partners should be the vision of the Ministry of Health. In organizing practice-based capacity building, the Ministry of Health shall seek the support of Development Partners and academic institutions as highlighted in the PHMM¹. Academic institutions will be able to improve the quality of the training programmes with their expertise. In addition to funding and technical assistance, development partners will be able to coordinate across PICs in delivering regional capacity building programmes.

EXAMPLES OF RECENT PROGRESS

8. Recently, the Western Pacific Regional Office of the World Health Organization (WHO) has introduced the *Data Management Competency Framework (DMCF)*⁴ as a generic concept standardizing the digital health capacity building around health data management. DMCF comprise of four competency areas reflecting the four distinct stages of the data management cycle, namely data processing, data generation, data analysis and data usage. The competency areas are further divided to 17 competency domains in total. Each competency domain was further aligned with four proficiency levels from Learner – Beginner to Master Practitioner which describes incremental levels of proficiency. The DMCF can be used to define the data management competencies of an occupational role in formulating practice-based capacity building programmes, in addition to using as a tool to assess the actual data management competencies of employees based on occupational roles.

9. Digital health capacity building had been attempted in the PICs context, mainly as targeted training focusing on health information systems implementations or through accredited educational programmes, such as healthcare informatics graduate courses⁵. However, both these approaches did not yield much impact in the health sector due to the following reasons.

- Limited availability of accredited courses in the region and hence, a smaller number of participants from PICs and attending employees generally have to leave the region for extended periods
- High turnover of the workforce leading to Ministry of Health constantly losing the skills
- Misalignment with digital health maturity and ignoring the reporting and data use hierarchy of the PICs

10. To address this gap, Pacific Health Information Network (PHIN), supported by the Pacific Community (SPC), WHO and the Pacific Health Information Support Hub (PHISH) are developing a regional data management training schedule to commence later this year. The schedule will include a range of practical modules designed to support health workers to develop skills that align with the proficiency levels of the DMCF. Parallel to this the PHISH and SPC are collaborating with higher learning institutes within Australia and the Pacific to explore options to increase pacific based accredited training.

11. The Pacific Qualification Framework (PQF)⁶ is a part of the Educational Quality Assurance Framework introduced by the SPC to overcome the capacity building gaps in the Pacific region. The PQF defines level descriptors for Technical and Vocational Education and Training in accrediting CPD programmes. It is a meta-framework (reference framework) to establish comparability and to facilitate recognition of educational qualifications across PICs, as well as with other regional or international frameworks. PQF Level 4 (Certificate) can be benchmarked against school qualifications for early career employees whereas level 5 (Diploma) course can build upon prior qualifications or experience for senior employees.

⁴ World Health Organization, Regional Office for the Western Pacific (2023). Data Management Competency Framework.

⁵ World Health Organization, Regional Office for the Western Pacific (2017). Health Information Systems in the Pacific at a Glance 2016.

⁶ Pacific Community (2015). Pacific Qualification Framework.

12. The micro-qualifications short courses⁷ concept introduced by the Fiji National University, College of Medicine, Nursing and Health Sciences is a successful regional example for capacity building supported by development partners. The theoretical teaching of a micro-qualifications short course is delivered as a blended Massive Open Online Course the practical components are arranged as work-place based activities under a pre-identified supervisor. Blended learning approach eliminates the need for the trainee to leave the workplace for a longer period.

WHY URGENT ACTION IS NEEDED NOW.

13. The PHMM had envisioned a country-owned health information and digital health transformation process¹ in its 15th meeting. To sustain a such nation-wide digital health transformation, there needs to be an organizational culture that values the collection of high-quality data followed by the practice of actions being taken grounded upon the insight generated by the data gathered. The vision of Pacific Health ministers is to advancing health information systems and digital health to lighten the burden on health workers, arm them with better data to informed decision-making, and strengthen the delivery of health services for people across the Pacific, especially those on the most remote islands. To achieve this all levels of health system needs to be strengthened with the skills that can be used to improve data quality and usage of data for local actions. Hence, a sustainable capacity building for the PICs is a timely need in the region aligning with the human resource strategy PHMM recommended to the member States.

14. Similarly, many PICs are leapfrogging to digital health solutions, sometimes exceeding the digital health maturity of the region and in country capability. Most PICs lack the technical capacity in the workforce to translate data, so that it is useful for evidence-based decision making. This justifies urgent action and priority investments in DMCF based training programmes across the region. Standardization of training across the region and aligning training programmes to the digital health maturity within countries has been lacking among existing training programmes. The concept paper the SPC and the WHO submitted to the 15th Pacific Health Ministers Meeting⁸ also highlights the urgent need of institutional capacity building in a sustainable manner to improve the work force aligning with the current health labour market dynamics (at country, regional, and global levels) in PICs.

RECOMMENDATIONS TO BE CONSIDERED BY THE HEADS OF HEALTH

- Promoting data driven organizational culture in the health sector by developing country specific mechanisms for,
 - evidence-based decision making at all levels of the healthcare system, including often overlooked health facility level.
 - feedback mechanisms to ensure those who collect and report data across all levels of the healthcare organization are encouraged to use data for their own use.
- Organizing periodic and regular training programmes to withstand the human resource turnover of the health system and to impart core skills to the health workforce with the support of development partners and educational institutes.
- Formally recognise capacity building programmes that focus on core data management and data analysis skills by linking CPD points or accredited training programmes-based qualifications useful for career advancement within healthcare systems and ensuring the employee being offered a relevant occupational role to the training received.

⁷ Fiji National University (2021). Strategic Plan 2021 - 2025.

⁸ Pacific Community & World Health Organization (2023). Advancing health information and digital transformation in the health sector. 15th Pacific Health Ministers Meeting. Tonga.

RECOMMENDATIONS FOR DEVELOPMENT PARTNERS

- Supporting (funding and technical assistance) standardised and localised foundational data management and data analysis capacity building programs as essential skills for the health work force of the future, based on national plans and PICs vision.
 - Partnering with regional higher education institutions to launch data management and data analysis training programmes.
 - Planning for the handing over strategy early in digital solution implementation process with the support of suitable capacity building programmes, specifically focusing on data management which is a crucial factor determining the institutionalization of the solution after the funding period.
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