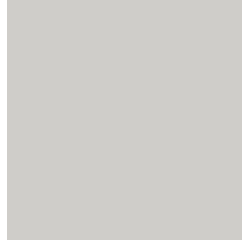


National Health Workforce Accounts Case Study Series | March 2021



On the Road to Universal Health Care : Improving Use of Health Workforce Data in the Philippines

Creating an Available, Accessible, and Quality Health Workforce for UHC

With more than 100 million people across 7,000 islands, the Philippines faces increasing health expenditures and demand for health services, and outcomes in maternal and child health (MCH), family planning (FP) and tuberculosis (TB) remain weak. Filipino policymakers recognize these health outcomes cannot be improved without an available, accessible, and high performing health workforce. Underlying issues affecting the health workforce span the education sector, which sees approximately 30,000 new enrollees a year, and the labor market, which includes nearly 720,000 health workers. Education issues include inequitable distribution of health science institutions, most of which are private sector—thus limiting quality regulation despite efforts by key stakeholders and resulting in high tuition fees—limiting options for poorer students. In the labor market, health workforce salary differentials vary greatly between the public and private sector, leading to understaffed private sector. Attrition is also elevated. Between the perennial pull of health workers abroad and losses to high-paying non-health job opportunities (e.g., call centers), more than 25,000 health workers leave the Philippines health sector annually.

Stakeholders across the health labor market require access to quality health workforce data and an enabling environment for use of data to make strategic, evidence-based health workforce decisions. In the Philippines, the human resource information systems (HRIS)—as well as the data within these systems—have been limited in scope, and thus have not provided a comprehensive picture on the complexities of the Filipino workforce that is needed to develop policies and plans to respond to the MCH, FP, and TB health services needs of the population.

In 2019, the Government of the Philippines passed into law the [Universal Health Care \(UHC\) Act](#), signifying its commitment to improving the availability, accessibility, and quality of its human resources for health (HRH) to meet population health needs.

In general, the Philippines has rich health workforce documentation, policies, and plans, such as the 2005-2030 HRH Master Plan, [National Objectives for Health 2017-2022](#), and the [Philippine Health Agenda](#). However, through the UHC Act policymaking process, the Department of Health (DOH) recognized the critical gaps in health workforce information to inform their planning. For example, there was no consensus on how health worker data should be collated and analyzed, which made it harder to understand the opportunities to strengthen the health workforce around the country. An interoperable platform (one that connects different systems to reliably and safely exchange data) was needed by stakeholders supporting both the health education and the labor market to bring all of this rich information together. Further, the DOH realized it needed a structure and policy to share or collect health workforce data across the Philippines' devolved structure to support implementation of the UHC Act. Therefore, the DOH included a call to develop a Health Worker Registry within the 2019 Act, to gather data from across the health labor market at all levels and spur a multi-sectoral approach for improving data and information that would strengthen health workforce policy and planning.

In this context, the Philippines adopted the World Health Organization (WHO)'s [National Health Workforce Accounts](#) (NHWA) platform as their roadmap for improving the availability and use of quality health workforce data, to answer

key policy questions to improve the availability, accessibility, and quality of its health workforce to effectively implement the UHC Act throughout the country and improve key health outcomes. This case study highlights the key health workforce priorities identified by the Philippines, and documents the process undertaken to implement NHWA in the country, including lessons learned.

Joint NHWA Collaboration with DOH, USAID/HRH2030, and WHO

To support the DOH's Health Human Resources Development Bureau (HHRDB) in implementing NHWA, the United States Agency for International Development (USAID), through its Human Resources for Health in 2030 Project (HRH2030) in the Philippines, and the WHO with representatives from Headquarters, the Western Pacific Regional Office and the Philippines Country Office, held a joint mission in October 2018. It served to orient stakeholders—including high-level DOH officials—on NHWA (see box at right), develop a preliminary roadmap to institutionalize NHWA and build capacity of HHRDB and other DOH stakeholders on the NHWA implementation process. The joint mission also delivered an initial mapping of stakeholders and data sources and documented potential priority health workforce issues for NHWA efforts to target. Finally, several priority areas for initial activities were identified, such as ensuring equity, retention, management and information systems, as well as potential risks and limitations.

Health Workforce Priorities for UHC in the Philippines

The NHWA is a modular system, tied to the three main areas of the Health Labor Market Framework: education, labor markets, the labor market, and serving population health needs. There are 10 modules in total, spread out across these three areas. See box at right.

Guided by the NHWA health labor market framework, the DOH developed the Human Resources for Health Framework for UHC (see Figure 1 below).

Based on this framework, the DOH identified the following key policy directions and questions:

Policy directions

- Redistributing the public sector health workforce more equitably to geographically isolated and disadvantaged areas
- Improving working conditions for both retention and quality health services
- Strengthening leadership and management capacities
- Strengthening HR data and information systems

Policy Questions

- How do we improve equitable access to health workers to advance UHC?

What are National Health Workforce Accounts?

Developed by the WHO and adopted by the global health community, National Health Workforce Accounts (NHWA) support countries to **progressively** (step-by-step) improve the **availability, quality, and use** of health workforce data to help achieve HRH and health goals for a high-performing health system.

NHWA groups HRH indicators through a set of **10 modules**, categorized under the three main areas of the Health Labor Market Framework: **education, labor markets, and serving population health needs**. The modules are:

1. *Active health workforce stock*
2. *Health workforce in education*
3. *Education regulation*
4. *Education finances*
5. *Health labor market flows*
6. *Employment characteristics and working conditions*
7. *Health workforce spending and remuneration*
8. *Skill mix compositions for models of care*
9. *Performance and productivity*
10. *Health workforce governance, information systems and planning*

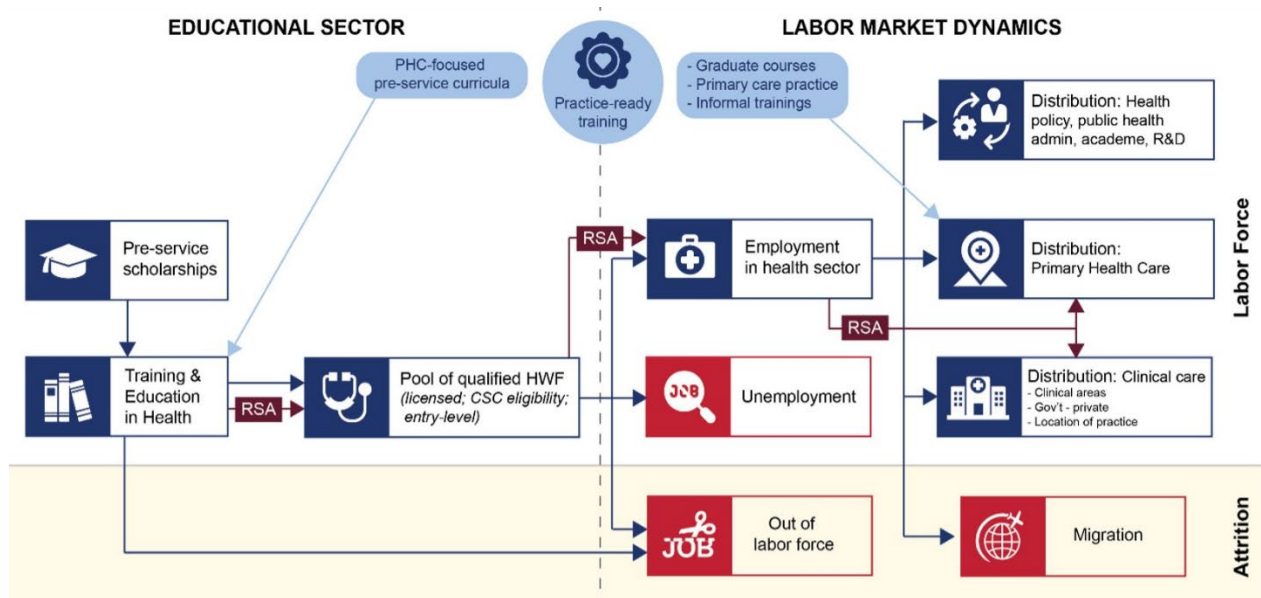
Through the online, DHIS2-enabled NHWA platform, country governments can routinely report and review data.

The NHWA promotes effective stakeholder relationships to define country-level data standards, governance, and interoperability, allowing **efficient multisectoral data sharing** for **real-time data analysis and decision making** sustained within a self-reliant health system.

- What are the cost implications (investment cost) and funding sources of the HRH component in the UHC Act?
- What is a sustainable international migration policy for the Philippines?
- How should health facilities be staffed to ensure UHC goals are attained?
- What are the workload components per facility?

In 2019, HRH2030 assisted the HHRDB to evaluate available data based on these policy directions and questions. The DOH and collaborating partners prioritized the following indicators for the Philippines' initial implementation of NHWA:

FIGURE I: HRH FRAMEWORK FOR UHC



- *Active Health Workforce Stock:* Indicators 1-01/1-02: Health worker density; and 1-05/1-06: Health worker distribution
- *Health Labor Market Flows:* Indicator 5-04: Voluntary & exit rate from health labor market
- *Employment Characteristics and Working Conditions:* Indicators 6-01: Standard working hours; 6-03: Regulation on working hours and conditions; 6-04: Regulation on minimum wage; and 6-05: Regulation on social protection
- *Health Workforce Spending and Remuneration:* Indicator 7-06: Policies on public sector wage ceilings
- *Skill-mix Composition for Models of Care:* Indicators 8-01: Percentage of health workforce working in hospitals; and 8-03: Percentage of health workforce working in ambulatory health care
- *Governance and Health Workforce Policies:* Indicators 9-01: Mechanisms to coordinate an intersectoral health workforce agenda; 9-02: Central health workforce unit; 9-03: Health workforce planning processes; and 9-05: Institutional models for assessing health care staffing needs
- *Health Workforce Information Systems:* Indicators 10-06: HRHIS for tracking number of active stock on the labor market; and 10-07: HRHIS for tracking the number of exits from the labor market.

Progressive Implementation of NHTA

NHTA implementation in the Philippines was progressive—done in a stepwise fashion, based on availability and quality of data—multisectoral, and built on existing systems. It focused on improving availability, quality, and—most of all—use of data to strengthen evidence-based decision-making on the health workforce.

The Philippines offers a unique perspective on NHTA implementation, in terms of developing a governance structure to engage stakeholders, assessing current information systems, responding to issues with data standards and establishing mechanisms for data sharing, and designing the strategy for roll out.

Establishing the NHTA Governance Structure

Due to the decentralized regulatory environment in the Philippines, developing a strong governance structure, noting roles, responsibilities, and relationships was a critical step to address early in conceptualizing NHTA. Soon after the joint mission, HRH2030 supported the HHRDB to design the appropriate governance structure to ensure not only the operationalization of NHTA, but also the institutionalization of efforts to strengthen data and evidence.

The core governance structure mandated the sharing of data between institutions and ensured that complete, quality, and harmonized data is disseminated and used. It was composed of already existing committees and networks, such as the DOH's Steering Committee for HRH Initiatives and the multi-sectoral [HRH Network](#). Existing staff were also engaged and given NHTA-specific roles, such as the director of the HHRDB serving as the NHTA focal person/data manager; NHTA data clerk as a staff appointed from the division within the HHRDB tasked with supporting NHTA; and a Technical Secretariat based within the HHRDB's Planning and Standards Division.

The only new component developed for NHTA implementation was the HRH Information Technical Working Committee (TWC), which sits under the HRH Network and is the main body operationalizing NHTA. The governance

structure also included the DOH's eHealth Technical Working Group to ensure that aspects related to data and information systems aligned with existing DOH and government processes, policies, and strategies. Though the devolved health workforce stakeholders did not have a specified role in the governance structure, their role in managing data was critical and thus an orientation was held to ensure that the Regional Health Offices understood the concept of NHTWA and their role in managing health workforce data.

NHTWA Roadmap: Conceptualization, Operationalization, and Sustainability

To assist in NHTWA implementation, the DOH, with support from HRH2030, developed a roadmap. This was done by conducting joint discussions and internal reviews at the HHRDB, as well as consultations with other DOH bureaus, HRH Network members, and meetings with WHO and other HRH stakeholders. The roadmap provided a living guidance document for the HHRDB, laying out the detailed steps for the "how to" process for DOH, HHRDB, and other HRH stakeholders, such as those from the Commission of Higher Education, Department of Labor, the National Health Insurance Program (PhilHealth), professional associations, Commission on Filipinos Overseas, and other critical actors within the health labor market that manage HRH data and information systems and are engaged in health workforce policy and planning (see Figure 2).

The roadmap was structured according to the WHO's three phases of NHTWA implementation: conceptualization, operationalization, and process revision and sustainability, (i.e., regular monitoring and evaluation). A cross cutting component, capacity building, was created. Due to the extensive grouping of stakeholders from various sectors within

the health labor market that must be engaged in this process, the DOH and partners determined that capacity building would be needed on aspects general to NHTWA, such as data collection, cleaning, and analysis; information systems management; and using data for decision making. The roadmap provided guidance on all NHTWA activities, including how to monitor and evaluate activity progress, as well as a high-level costing and sustainability plan. As a living document, the roadmap was informed by assessments, reviews, and other activities conducted by the HHRDB described below.

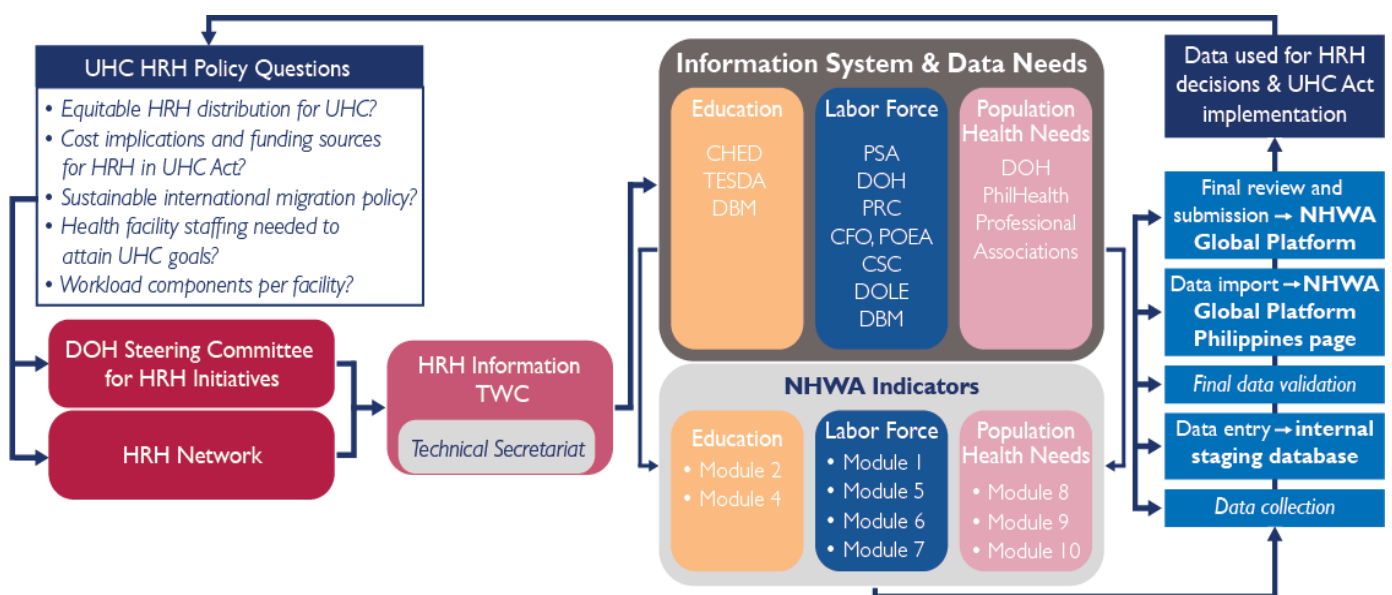
Uniting the Philippines' Diverse Health Workforce Data & Information Systems

To provide an evidence base for conceptualization of NHTWA, the DOH with support from HRH2030 and collaborative partners conducted two reviews. First, [the HRIS Assessment Framework \(HAF\) was applied](#) to better understand the functionalities and capacities of the health workforce information systems in the country. Second, the Integrated Database System for HRH (IDSHRH) was reviewed to better understand what would be needed for this system to serve as an internal central staging database for NHTWA.

HRIS Assessment Framework

While the HHRDB was already aware of most gaps in and barriers to health workforce information systems at the beginning stages of NHTWA implementation, it was critical that responsive, participatory, and constructive activities were designed to address these issues. [Using PEPFAR's HAF in 2018](#) had permitted the HHRDB to systematically review and assess the maturity of the functionalities and capacities of the various human resource information systems in the country, while also engaging NHTWA stakeholders in a common effort.

FIGURE 2: NHTWA DATA FLOWS AND DECISION-MAKING



The HAF revealed the multisectoral nature of HRIS functionalities, thus reinforcing the value of the NHTWA governance structure. It showed a need for HRH data standards, data ownership, data sharing, coordination, governance structures, and policies to be defined and strengthened to link multiple, fragmented HRIS both within and outside the DOH, harmonize data, and improve data quality. It also uncovered financial reporting bias in HRIS data management and showed that the use of current HRIS and their data quality were limited, despite the fact that several mature HRIS had existed for years.

Based on the assessment, the HHRDB and collaborators outlined the following recommendations to strengthen the HRIS:

- For *data standards*, the DOH and partners should develop a data dictionary, using a unique identifier, and establishing national standards for recording health workforce cadres and professions.
- To *improve data quality*, HRIS managers should build automated validation and data quality checks into software to flag potential data entry errors or duplication; develop protocols for checking data accuracy; and implement regular data quality assessments.
- To *strengthen coordination*, the DOH should advocate for the formal appointment of an institution to serve as the custodian for HRH data, to aggregate, store, analyze, disseminate, and otherwise manage the HRIS.

Central Integrated Information System as Internal Staging Database

After the initial NHTWA governance and stakeholders were defined, the HHRDB and collaborators determined that a central integrated information system would be needed to gather data from multiple sources in a single repository for review, cleaning, and analysis, with further sharing to the [WHO NHTWA Online Data Platform](#).

To build on existing systems for this central system, a deep dive review of the IDSHRH was conducted to better understand the technical functionality and software requirements needed for an internal staging database. The IDSHRH, which has been in place for some time, serves as a database for the sharing of specific data between HRH stakeholders, but has limited functionality. To inform the focus of the deep dive review, the [Principles of Digital Development](#) were used, as these principles describe indicators for scalability and sustainability, two vital components needed for the NHTWA staging database to collect increasingly large volumes of data throughout the progressive, step-by-step iteration of NHTWA.

Findings from the review revolved around governance and technology. In terms of governance, the review recommended a clear governance structure be established with a new data sharing agreement that would acknowledge the multi-sectoral joint ownership of the system. Regarding technology, the

review recommended developing web technologies to share data (such as web application programming interfaces [APIs]); the use of data standards such as [International Fast Healthcare Interoperability Resource \(HL7 FHIR\)](#); and exploring existing hosting options (such as the Department of Information Communication Technology), among other areas.

While information systems are only one component of NHTWA implementation, strong information systems can have a domino effect. Investing in strengthening information systems can improve the overall quality of data and reinforce the carrying forward of strong governance structures. This ultimately promotes stakeholders' confidence in the data, and their subsequent use of data to inform their decisions.

Data Standards and Sharing HRH Data Dictionary

To address the fractured nature of data management, an HRH Data Dictionary was developed in 2020 to standardize the definition of relevant HRH terminologies. With the assistance of HRH2030, the HHRDB conducted a thorough review of policies and various data dictionaries used throughout the country, followed by consultation meetings and workshops with relevant stakeholders. The data dictionary provides the definition of standard HRH terminologies (mapped to NHTWA indicators), primary data sources, formats, and the associated data to be adopted and used across different sectors in sharing HRH and HRH-related information. The HRH terminologies are also aligned with the DOH's sector-wide National Health Data Dictionary. Providing stakeholders with a common reference guide the HRH Data Dictionary was a huge achievement to move forward NHTWA.

Data Collection and Sharing

The WHO does not prescribe a specific process for data collection and sharing for NHTWA but recommends that countries utilize existing processes and mechanisms. Building on the common data terminologies and definitions established through the HRH Data Dictionary, stakeholders planned and coordinated data collection to ensure data completeness, reinforce data sharing policies and mechanisms, develop measures for data quality, and create strategies for information dissemination.

To begin, the HHRDB and collaborators developed a NHTWA Data Flow Conceptual Framework that describes how the data should flow through the NHTWA governance structure from the multi-stakeholder groups in charge of education, labor force, and population health needs data. The NHTWA data clerk receives the pre-defined data from the respective points of contacts of contributing agencies, usually HRH Information TWC members. The NHTWA data clerk then processes the data in the internal staging server, for validation with the HRH Information TWC prior to submitting it to the NHTWA focal person for validation. After validation, the NHTWA data clerk uploads the data to the WHO NHTWA Philippines Dashboard of the global platform for submission by the official NHTWA focal person. Using the WHO dashboard, the data clerk extracts, analyzes, and presents data to the HRH Information

TWC, HRH Network, and Steering Committee as necessary for use in decision-making (see Figure 2).

An NHWA Data Collection plan was also developed, which includes the detailed tasks for data collection, sharing, consolidation, and information dissemination, as well as tools and tasks related to HRIS infrastructure. In addition, the HHRDB reviewed the data sharing agreement originally developed by the HRH Network for the IDSHRH and proposed edits to the agreement based on the 2012 [Data Privacy Act](#), which will ensure that stakeholders understand how data are protected. These modifications to the Data Sharing Agreement will serve to mitigate perceived data sharing barriers by stakeholders who may believe that the act limits data sharing between stakeholders.

Lessons Learned

As the DOH, HHRDB, and other stakeholders continue to operationalize NHWA as an integral part of Philippines' broader health goals, these three lessons from their experience can be shared that lay critical groundwork for longer term successes.

I. ENGAGE NHWA PARTNERS EARLY

The HHRDB has attested that engaging stakeholders as early as possible in NHWA conceptualization was critical to its short- and longer-term success. Involving key stakeholders in all processes, including at devolved levels, from the planning to monitoring and evaluation is important to build buy-in and ownership of NHWA processes. Building on existing coordination mechanisms is critical to provide a familiar space and create an opportunity for collective discussion to progress NHWA. Finally, the HHRDB recommended maintaining constant communication with stakeholders to continuously build trust and collaboration as NHWA is not just about data collection, but about ensuring stakeholders are using evidence to make decisions about the health workforce.

2. ALIGN NHWA UNDERSTANDING THROUGH A SHARED VISION

Having a vision and knowing your purpose is a critical part of planning. This goes beyond the identification of policy questions to an understanding of why NHWA and improving the availability and use of quality health workforce data is needed to meet population health needs. This vision should be the basis of the development of an action plan, work plan, or roadmap for NHWA. The HHRDB also recommends the

development of an HRH master plan or strategic plan that will serve as the country's blueprint for holistic management of HRH and guide the alignment of HRH information systems. Overall, such a larger strategic plan can provide the policy directions and key questions that will inform the roll out of NHWA in the country.

3. ENSURE DATA AND POLICY PRIORITIES ALIGN

To begin, the HHRDB recommends that data priorities are defined according to policy priorities, so there can be a focus on developing a common understanding of data definitions and variables and determining the true owners or sources of data. Following this, developing a governance structure with defined roles and responsibilities of key stakeholders is critical. As was seen above, governance continued to be a major component to ensure collaboration between stakeholders, sharing of data and even use of data. Further, formulating a policy that would support the development, implementation, monitoring, evaluation and sustainability of HRH information systems, including the mandate as repository and custodian of HRH data is key. This policy should leverage existing laws, plans, or other agreements and be collaboratively validated with those stakeholders across the health labor market to ensure buy in and consensus.

Next Steps

In the Philippines, NHWA next steps will revolve around progressive implementation, with simultaneous focus on conceptualization, operationalization and monitoring and evaluation. Specifically, in the short term, the HRH Network will be engaged further in their critical role in the governance structure of NHWA. In addition, activities will be put in place to enact data standardization. In the longer term, it is expected that the Philippines will use NHWA to not only respond to the specified policy directions and questions within the UHC Act, but to inform future health labor market analyses, monitor progress on outcome indicators in the HRH Masterplan, inform other HRH policies, and future investments in planning and optimizing the health workforce.

Overall, the HHRDB expects that implementing NHWA will provide the Philippines with the roadmap and tools needed to progressively improve the availability and use of quality data, contributing to evidence based policy and planning on the health workforce, and ultimately ensuring equitable access to health care for all.



HRH2030 strives to build the accessible, available, acceptable, and high-quality health workforce needed to improve health outcomes.



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