Health Labor Market Analysis of the Philippines

USAID HRH2030/Philippines: Human Resources for Health in 2030 in the Philippines

s

Contents

Acknowledgments

List of Figures

List of Tables

Abbreviations

4Ps	Pantawid Pamilyang Pilipino Program
BHS	Barangay Health Station
BHW	Barangay Health Worker
BNS	Barangay Nutrition Scholar
BPO	Business Process Outsourcing
CAR	Cordillera Administrative Region
CCT	Conditional Cash Transfer
CFO	Commission on Filipinos Overseas
CHED	Commission on Higher Education
CMCI	Cities and Municipalities Competitiveness Index
DA	Department of Agriculture
DBM	Department of Budget and Management
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
FHSIS	Field Health Service Information System
FIES	Family Income and Expenditure Survey
GIDA	Geographically Isolated and Disadvantaged Area
HHRDB	Human Health Resources Development Bureau
IBPAP	IT and Business Process Association of the Philippines
IELTS	International English Language Testing System
IRR	Implementing Rules and Regulations
ISLE	Integrated Survey on Labor and Employment
JCI	Joint Commission International
KMITS	Knowledge Management and Information Technology Service
LCE	Local Chief Executives
LFS	Labor Force Survey
LGU	Local Government Unit
LUC	Local Universities and Colleges
MDG	Millennium Development Goals
ML	Municipal Link
NCLEX	National Council Licensure Examination
NCR	National Capital Region
NDHS	National Demographic and Health Survey
NDP	National Deployment Program
OGS	Other Government Schools
OWS	Occupational Wages Survey
PCHRD	Philippine Council for Health Research and Development
PHC	Primary Health Care
POEA	Philippine Overseas Employment Administration
PRC	Philippine Regulations Commission
PSA	Philippine Statistics Authority
SSN	Social Security Number
SUC	State Universities and Colleges
SY	School Year
TB	Tuberculosis
TESDA	Technical Education and Skills Development Authority
TRO	Temporary Restraining Order
UHC	Universal Health Care
WHO	World Health Organization

Executive Summary

With strong economic growth, it is expected that the Philippines will achieve middle income status by 2040. Health expenditures and demand for health services are growing as the country enters this period of economic growth. Though this is the case, the country's health outcomes remain weak especially in terms of maternal and child health (MCH), family planning (FP) and tuberculosis (TB).

Responding to these challenges, the country has currently strengthened efforts to address them head on through the passage of the Republic Act 11223 also known as the Universal Health Care Act. Under this Act, the country is working to improve the availability, accessibility and quality of its Human Resources for Health to meet population health needs. Ensuring that there are adequate numbers of health workers at all levels, require an understanding of the health labor market of the country. A health labor market analysis (HLMA) allows policy makers and decisions makers to understand the dynamics in both the education sector and labor market which can be used to both respond to specific policy questions and overall provide an insight into what factors are facilitating or impeding health workforce goals under UHC. In addition, the Government of the Philippines (GOP) has clearly delineated its framework for the health workforce in line with UHC to include aspects of the educational sector and labor market dynamics, positioning a HLMA as a strong tool to respond to the critical policy questions needed to inform UHC. Overall HLMA provides both decision makers with the information they need to inform policy and planning and for researchers to use to guide future analysis on the health labor market.

Due to this clear alignment, the United States Agency for International Development (USAID) Human Resources for Health in 2030 Philippines (HRH2030/Philippines) conducted a HLMA. For this study, USAID/HRH2030 Philippines focused on four cadres of doctors, nurses, midwives and medical technologists which represent the majority of HRH in the Philippines and is comparable globally for HRH needed for UHC, to respond to these policy questions:

- How do we improve equitable access to health workers to advance UHC?
- What are the cost implications (investment cost) and fund sources of the human resources for health component in the UHC?
- What is a sustainable international migration policy for the Philippines?

Overall, the analysis determined that the health labor market is currently facing a serious imbalance. The challenges stem from among others: the inequitable distribution of schools producing health sciences education; schools being dominated by private sector; salary differentials between public and private health systems; high pay being offered by the Business Process Outsourcing (BPOs) and the perennial attraction of international migration due to the relatively lower pay within the country; the coordination failure between national and local governments due to conflicting priorities, budgetary allocations and basis of governance. In terms of recommendations for the education sector, HLMA highlighted the need for collaborative planning for health workforce production, as well as an informed discussion on regulation on the number of health sciences schools per region. Regarding the health labor market, the HLMA recognized the need to examine the use of Health Care Provider Networks to contract certain provisions of primary care to the private sector and increase gender equity and diversity at both levels of pay and within cadres. The HLMA also recognized the need to maximize management of the health workforce of

LGUs throughout all decision making, as well as identify motivations and barriers for LGUs to better manage and optimize the workforce. Finally, the HLMA recommended the use of a valuation study to understand better how to resolve issues related to remuneration as salary differentials are a major underlying trend compounding the health workforce issues of the country.

This report provides baseline data on the status and challenges facing the health labor market of the Philippines, through analysis of a robust multisectoral set of data, and discussions with key stakeholders. The report provides several recommendations on policy directions to address these issues and results which were validated in workshops at the national and regional level. In addition to using the HLMA as a report to inform future policy making and direction, the HLMA was also used to inform the development of the National HRH Masterplan which uses the HLMA framework to guide the 40 year strategic HRH plan.

Background

In February 2019, the Government of Philippines (GOP) committed to improving the health of all Filipinos through the passing into law the Universal Health Care (UHC) Act. This major piece of legislation is envisioned to provide an "integrated and comprehensive approach to ensure that all Filipinos are health literate, provided with healthy living conditions and protected from hazards and risks that could affect their health." One of the general objectives of the law is to "progressively realize universal health care through a systematic approach and clear delineation of roles of key agencies and stakeholders towards better performance in the health systems (RA 11223 2019)."

To achieve this objective, the act demands that the country ensure that human resources for health (HRH) are "adequate in number at all levels with competence to deliver universal health care through the continuum of preventive, promotive, curative and rehabilitative health interventions (RA 11223 2019)." Ensuring there are adequate numbers of health workers at all levels, requires an understanding of the health labor market of the country. A health labor market analysis (HLMA) allows policy makers and decision makers to understand the dynamics in both the education sector and labor market which can be used to respond to specific policy questions and also provide an overall insight into what factors are facilitating or impeding health workforce development goals under UHC. In addition, the GOP has clearly delineated its framework for the health workforce in line with UHC to include aspects of the educational sector and labor market dynamics, positioning HLMA as a strong tool to respond to the critical policy questions needed to inform UHC.

Due to this clear alignment, the United States Agency for International Development (USAID) Human Resources for Health in 2030 Philippines (HRH2030/Philippines) conducted a HLMA. For this study, USAID/HRH2030 Philippines focused on four cadres of doctors, nurses, midwives and medical technologists which represent the majority of HRH in the Philippines and is comparable globally for HRH needed for UHC, to respond these questions:
- How do we improve equitable access to health workers to advance UHC?
- What are the cost implications (investment cost) and fund sources of the human resources for health component in the UHC?
- What is a sustainable international migration policy for the Philippines?

In addition to responding to these questions, the HLMA describes a baseline understanding of the current health labor market in terms of supply (education) and demand (labor market dynamics), following the UHC framework for the health workforce. Based on this baseline information, recommendations were provided which will help the Department of Health (DOH) and members of the HRH Network to forecast future needs, identify gaps and policy responses to steer health workforce planning to a more productive, efficient, responsive and needs based approach. In addition, this report informs cost estimates of health education, salaries and benefits of health workers, as well as quantification of wastage in health education which can help in responding to the development of financial models towards health workforce goals that will contribute to achieving UHC. Finally, the HLMA provides the backdrop on why the Philippines is having difficulty developing and sustaining its workforce. The analysis clarifies how public and private sector institutions involved in migration can steer the demand for international HRH in the context of local needs without sacrificing individual choices. Overall, the HLMA report can be used to augment the situational analysis for the Human Resources for Health Master Plan and as a reference to inform policy development

and decision making as key stakeholders work to identify the critical areas that are facilitating or impeding health workforce goals under UHC.

Methodology

Using the HLMA approach allows for a comprehensive understanding of the complete health labor market dynamics of the country. Specifically, it analyzes two markets: the market for the supply of health workers, which is also known as the health education market; and the internal and external demand for health services and health workers or the labor market. The data generated from the analysis of these markets will depict the trends that inform the policy development and decision making needed on the health workforce to achieve UHC.

Approach

The dynamics of the Philippine health labor market were analyzed using the sequential explanatory design of the mixed methods approach, which entailed two phases of data collection. First, quantitative data were collected and initially processed. Afterwards, the initial findings were either reinforced or annulled through the collection of the qualitative data. The results from the two phases were then integrated in the final interpretation of the results. The figure below depicts the framework of the sequential explanatory design.

FIGURE 1. SEQUENTIAL EXPLANATORY DESIGN FRAMEWORK

Health Labor Market Framework

To conduct the analysis, the Human Resource Framework (Figure 2) adapted by the GOP Department of Health (DOH), from the WHO HLMA framework (was used as the framework for the data collection and analysis. The framework integrates the World Health Organization (WHO) HLMA framework and Organization for Economic Cooperation and Development (OECD) frameworks with the provisions of the UHC law.

FIGURE 2. HUMAN RESOURCE FRAMEWORK FOR UHC USING HLMA FRAMEWORK
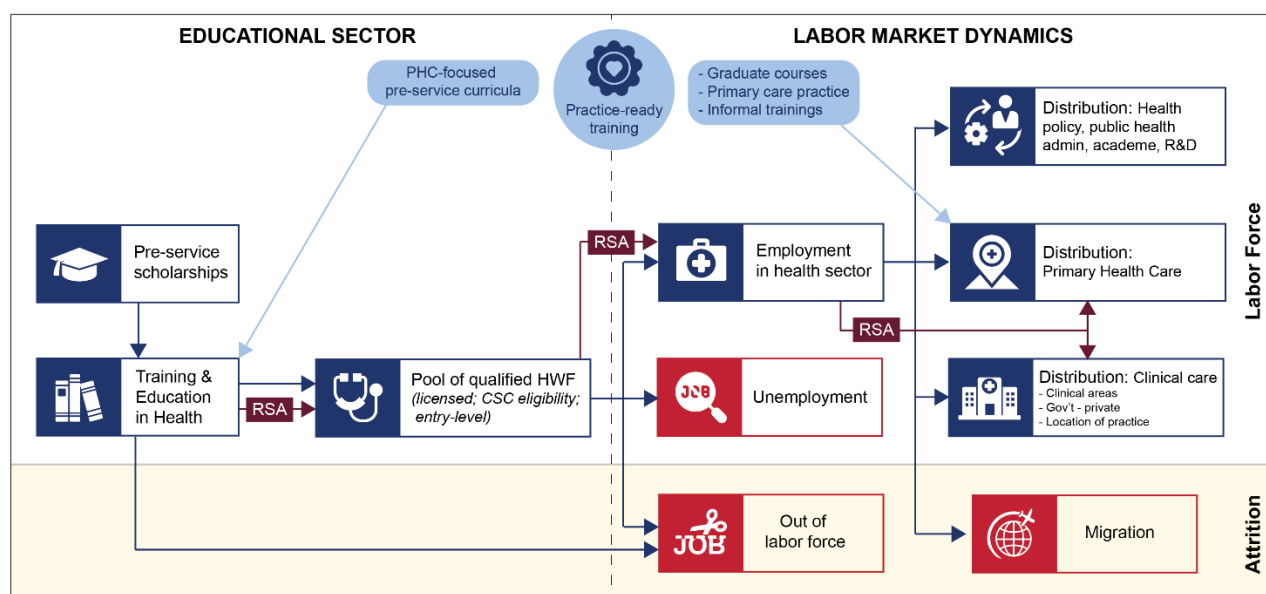
RSA = Return Service Agreement
Adapted by USAID/HRH2030 and DOH from Souza et al 2013 WHO Bulletin

Data collection methods, tools and procedures

The collection of quantitative data was separated in two phases. The first phase was a compilation of readily available data from government publications and online databases, while the second phase involved data extraction from the internal databases of government agencies. All the collected data were organized into working datasets. Subsequently, trends on key factors of the health labor market were then generated and an initial interpretation of the data was conducted. Afterwards, qualitative data from interviews with professional organizations, schools, and migration-related agencies were conducted to supplement the initial quantitative findings. Furthermore, regional focus group discussions, specifically in Cebu and Davao, were also conducted to validate aggregate trends seen nationally collected data. Locations were selected to capture feedback from all main island groups, Luzon, Visayas and Mindanao. Finally, during the July 2019 Human Resources for Health Network meeting, aggregate trends and findings from regional focus group discussions were presented for validation.

All quantitative and qualitative data, as well as key references, are available in a database format that is available upon request.

Quantitative Data Collection

The initial phase of quantitative data collection involved gathering statistics from secondary sources such as government implemented surveys and online directories. The research team began with extracting data from publications of the Philippine Statistics Authority (PSA), specifically from the Annual Survey of Philippine Business and Industry (ASPBI), Family Income and Expenditure Survey (FIES), Integrated Survey on Labor and Employment (ISLE), Labor Force Survey (LFS), Occupational Wages Survey (OWS), National Demographic and Health Survey (NDHS), Philippine National Health Accounts (PNHA), and the Philippine Statistical Yearbook (PSY).

Amongst the surveys identified, the LFS was the main source of data concerning the employment status of health workers. Surveys that tackle the working conditions of health workers included the ISLE and OWS, which provided information on the number of job vacancies and the average wages of private doctors, medical technologists, midwives and nurses, respectively. Data on the status of health facilities were extracted from the ASPBI and PSY. The ASPBI consisted of information on the number of private health facilities, while the PSY had data on the number of government and private hospitals, and the number of barangay health stations. The remaining sources, namely the PNHA, NDHS and FIES, were studied to identify the factors that concern the demand for health services. Macroeconomic indicators, such as the breakdown of health expenditures in the country and the Gross Domestic Product (GDP) ratio of total health expenditures, were retrieved from the PNHA. Factors related to health services, specific family planning and maternal care were extracted from the NDHS with factors related to TB services from the National Tuberculosis Prevalence Survey. In addition, household income and expenditures were acquired from the FIES. The PSA and the Field Health Services Information System (FHSIS) from the DOH provided the number of barangay health workers and morbidity rates, amongst others. Moreover, statistical tables from the Commission of Higher Education (CHED) was used in order to get education-sector data. The Philippine Overseas Employment Administration (POEA) was used to identify deployment data of migrant Filipino workers. Lastly, the research team also extracted demographic data from the database of the World Bank and the number of clinics from the Cities and Municipalities Competitiveness Index (CMCI) of the Department of Trade and Industry (DTI). The researchers also used online directories, such as FindUniversity and PayScale, for information that was not present in government publications. A database for the average yearly cost of tuition was created using information from FindUniversity, while the average compensation for health professionals in foreign countries was extracted from PayScale. See Table 1a for a breakdown:

TABLE 1A. PHASE 1 DATA COLLECTION

Data Type	Data Source
Statistics from secondary sources such as government implemented surveys and online directories	Philippine Statistics Authority (PSA) • Annual Survey of Philippine Business and Industry (ASPBI), • Family Income and Expenditure Survey (FIES), • Integrated Survey on Labor and Employment (ISLE), • Labor Force Survey (LFS), • Occupational Wages Survey (OWS), • National Demographic and Health Survey (NDHS), • Philippine National Health Accounts (PNHA), and • Philippine Statistical Yearbook (PSY)
Employment status of health workers	Labor Force Survey (LFS)
• **Working conditions of health workers** • **Number of job vacancies** • **Average wages of private doctors, medical technologists, midwives and nurses**	• Integrated Survey on Labor and Employment (ISLE) • Occupational Wages Survey (OWS)
Status of health facilities • **number of private health facilities**	• Annual Survey of Philippine Business and Industry (ASPBI)

Data Type	Data Source
Status of health facilities • **number of government and private hospitals** • **number of barangay health stations**	• Philippine Statistical Yearbook (PSY)
Factors that concern the demand for health services	• Philippine National Health Accounts (PNHA) • National Demographic and Health Survey (NDHS) • Family Income and Expenditure Survey (FIES)
Macroeconomic indicators • **breakdown of health expenditures in the country** • **Gross Domestic Product (GDP) ratio of total health expenditures**	• Philippine National Health Accounts (PNHA)
Factors related to health services • **family planning** • **maternal care**	• National Demographic and Health Survey (NDHS)
Factors related to TB health services	• National Tuberculosis Prevalence Survey
Household income and expenditures	• Family Income and Expenditure Survey (FIES)
Number of barangay health workers and morbidity rates	Department of Health (DOH)
Education-sector data	Commission of Higher Education (CHED)
Deployment data of migrant Filipino workers	Philippine Overseas Employment Administration (POEA)
Demographic data	World Bank
Number of clinics	Department of Trade and Industry (DTI) • Cities and Municipalities Competitiveness Index (CMCI)
Average yearly cost of tuition	FindUniversity
Compensation for health professionals in foreign countries	PayScale

The second phase of quantitative data collection involved extracting data from the internal databases of government agencies. First, the researchers visited the Office of Planning, Research, and Knowledge Management (OP-KRM) Division of CHED to gather data regarding the number of enrollees, graduates, schools and scholarships of students in medical technology, medicine, midwifery and nursing. Next, data on the number of registered and active health professionals were requested from the Professional Registry Division of the Philippine Regulation Commission (PRC). Afterwards, the number of active health professionals in hospitals, LGUs, and rural health units were retrieved from the Health Human Resource Development Bureau (HHRDB) of the DOH. In addition, the number of birthing homes, infirmaries, and rural health units were also acquired from the DOH, specifically from the Knowledge Management and Information Technology Service (KMITS). Lastly, data on the number of migrant health professionals were gathered from POEA for deployed migrant workers, and the Commission on Filipinos Overseas (CFO) for permanent migrant Filipinos. See Table 1b for phase 2 data collection.

TABLE 1B. PHASE 2 DATA COLLECTION

Data Type	Data Source
Number of enrollees, graduates, schools and scholarships of students in medical technology, medicine, midwifery and nursing	Commission of Higher Education (CHED) • Office of Planning, Research, and Knowledge Management (OP-KRM) Division
Number of registered and active health professionals	Philippine Regulation Commission (PRC) • Professional Registry Division
Number of active health professionals in hospitals, LGUs, and rural health units	Department of Health (DOH) • Health Human Resource Development Bureau (HHRDB)
Number of birthing homes, infirmaries, and rural health units	Department of Health (DOH) • Knowledge Management and Information Technology Service (KMITS)
Number of migrant health professionals • deployed migrant workers	Philippine Overseas Employment Administration (POEA)
Number of migrant health professionals • permanent migrant Filipinos	Commission on Filipinos Overseas (CFO)

Qualitative Data Collection

To supplement the initial findings of the quantitative analysis, interviews were first conducted with professional organizations based in the National Capital Region (NCR). Focus group discussion were held on the state of the health labor market were acquired from the Philippine Medical Association (PMA) and Philippine Nurses Association (PNA). For the trends in migration, recruitment agencies were approached. These include the LBS Recruitment Solutions Corporation and the GHR Healthcare Recruitment Incorporated. These agencies were selected as they represent the largest health worker recruitment agencies in the Philippines.

Regional information and trends based on the quantitative data acquisition was verified through Regional Consultations held in Cebu and Davao. Each consultation was organized as a group discussion attended by approximately 17 participants in Davao and 30 in Cebu including local/regional DOH representatives, health education providers, relevant government agencies involved in health program implementation and policy development, representatives of public and private health service providers such as hospitals and clinics as key stakeholders. Each consultation began with a short presentation on the initial HLMA findings and trends. Followed by discussion addressing the following questions:

a. Are the data collected consistent with the regional picture of the current health workforce condition in your region?
b. What aspect/s of health workforce were lacking or needs more in-depth data?
c. What are three critical issues that we need to address to ensure that the region has enough health workforce to respond to the UHC Law?

The inputs and comments from the participants were then integrated to the HLMA database (see Annex **C** and **D** full reports).

Data Collection Tools

The data collection tools for the HLMA included basic office software (excel) and a statistical software (Stata) for encoding and organizing the collected quantitative data, a questionnaire and data presentation for interviews within NCR, and a question guide and data presentation for the regional FGDs. Below is a chart that summarizes the data collection methods and tools conducted for the HLMA.

FIGURE 3. SUMMARY OF DATA COLLECTION PROCESS

Part A (1) – Quantitative Data Acquisition	
Data extraction from government publications, government surveys, and online databases	**Relevant tools:** Excel, Stata

Part A (2) – Quantitative Data Acquisition	
Data extraction from internal government databases	**Relevant tools:** Excel, Stata

Part B (1) – Qualitative Data Acquisition	
Interviews with Private Organizations	**Relevant tools:** Guide Questions, data presentation

Part B (2) – Qualitative Data Acquisition	
Regional Focus Group Discussion	**Relevant tools:** Focus Group Discussion Questions guide, data presentation

Data Analysis Procedures

Quantitative Data Analysis
Stata 13 and the pivot tables function in MS Excel were used to extract information from raw datasets. Furthermore, trends and graphs were also generated using the latter software.

Qualitative Data Analysis
FGDs and Interviews were recorded and transcribed. The results were then collated and analyzed with respect to the results of the quantitative data analysis.

Limitations
Although the HLMA attempts to give a comprehensive background of the state of our health labor market, it possesses certain limitations that must be acknowledged. These limitations are as follows:

- Majority of the data gathered focuses on the four major cadres of the health workforce: doctors, nurses, midwives, and medical technologists. Nevertheless, general statistics on other health cadres such as Barangay Health Workers, were generated through the HLMA but is considerably limited.

- The quantitative database is a compilation of information which was mostly extracted from secondary sources. Although most of these data have been gathered from government databases and publications, each secondary source has their own set of definitions and parameters which need to be understood when meticulously analyzing the generated statistics (See **Annex E** for the Data Dictionary).
- In order to capture the characteristics of each region, the HLMA breaks down most of its data to the regional level. However, it must be acknowledged that even regional level data may not be highly accurate in the description and analysis of the situations of the cities, municipalities, or even provinces of each region – at best, it is only indicative of the local situation.
- Gender analysis for HLMA has been limited based on available sex-disaggregated data, USAID's HRH2030-organized validation activity on gender competencies and relevant literature. Sex-disaggregation is only available for board exam passers, BHW and migration data. Using additional data on salary grade and foreign HRH annual salary, gender pay gaps have been estimated for Philippine and migrating health workers.
- Only a limited number of FGDs were conducted; the qualitative data collected may give a consensus of the situation but still must be subject to scrutiny.
- Due to the focus of the analysis on primary care that needs to be well understood to support UHC, there are sections like HRH employment that limit their scope to primary care and will not cover higher level hospitals and other health facilities.

Desk Review Discussion

Economic Trends

The Philippines is currently realizing its longest economic growth streak since gaining independence in 1946. Average economic growth in the last eight (8) years has now averaged 6.4% as against only 4.5% from 2000-2009 and 2.4% from the 1980s to the 1990s (World Bank, 2019). This higher growth path has allowed for the country to gain headways in lowering the poverty rates of the country. The latest poverty statistics revealed that poverty in the first semester of 2018 had lowered to 16.1% from 22.2% in 2015 (PSA, 2019). A reduction in poverty rates is well appreciated when looking at trends at the regional level, with the exception for the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) which saw an increase in poverty rates. Coinciding with this decline of poverty is an increase in income across the regions and rising health expenditures. From the last five Family Income and Expenditure Surveys (FIES) conducted from 2003 to 2015, health expenditures share from the average family budget have risen from 2.2% in 2003 to 3.7% in 2015. Across income classes, the expenditures have increased even among the poorest quintile rising from 1.2% in 2003 to 1.9% in 2015. Although not fully attributable to income increases, the rise in health expenditure shares from the budget could potentially reveal that the population health consciousness has increased, and that health is now becoming a regular part of a Filipino family's budget. A possible reason for the increase in health expenditures is the falling prices of health products, services and related items. From 1995 to 2015, the inflation rate for health and related items has fallen from highs of close to 12% in 1998 to 2000 to about 2.1% in 2014. Falling prices may be attributable to the full impact of the Generics Act passed in 1988 and various programs such as the Botika sa Barangay (Village Pharmacies) and the parallel government importation of branded medicines in 2001 (Dayrit et al 2018). In addition, the Philippines' total health expenditures (THE) at current prices, grew by 8.3 percent in 2018 amounting to PhP 799.1 billion from PhP 737.8 billion in 2017. It contributed 4.6

percent to the Gross Domestic Product (GDP). Out of pocket (OOP) household expenditures made up 53% of Total Health Expenditure (THE) (PSA, 2019). One possible reason for the high OOP expenditure is that the government is not able to provide the essential drugs and medicine for the poorest quintile. Analysis of the expenditures showed that the highest percentage goes to drugs and medicines.

FIGURE 4. PERCENTAGE SHARE OF HOUSEHOLD HEALTH EXPENDITURE TO TOTAL EXPENDITURES BY INCOME CLASS (2003-2015)
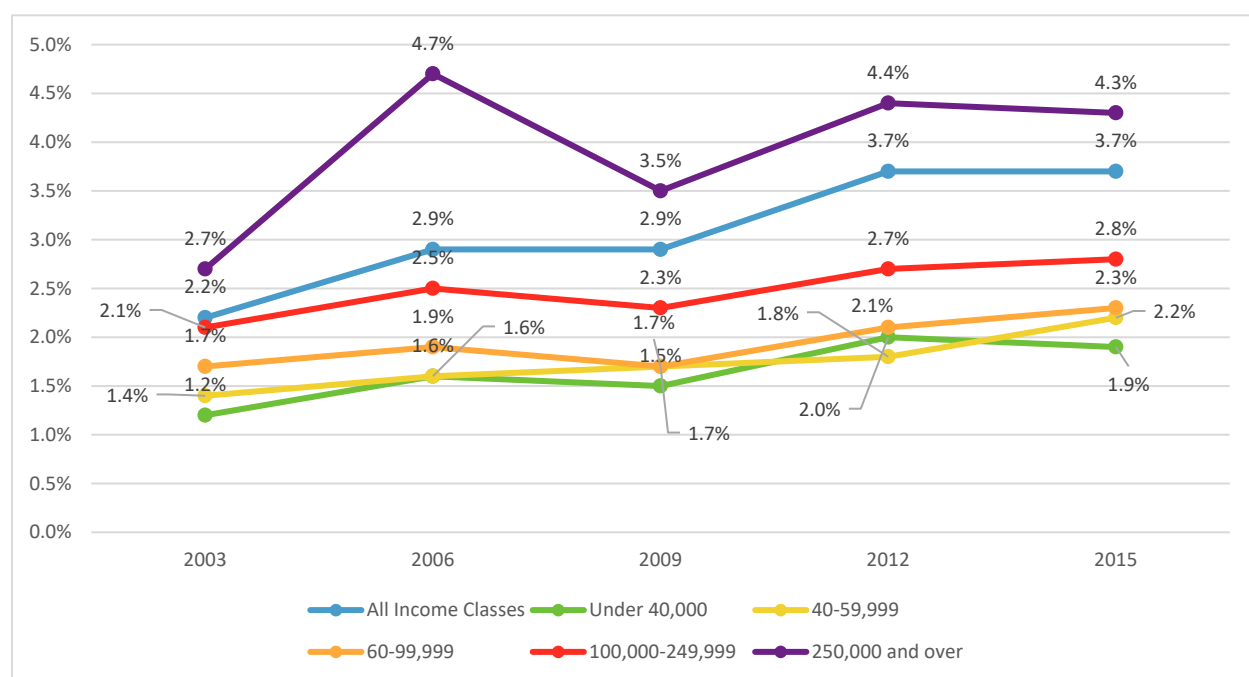
Source: PSA, 2016

Under this economic backdrop, the health sector, together with primary health care, is witnessing the onset of the Philippine Demographic Dividend[4]. With a large population base entering working age, the country is expected to enjoy the dividends for the next twenty-five (25) years. Countries that experience an economic period in the demographic dividend have had higher per capita income, savings and better life quality as fertility and mortality rates decline freeing more resources for other developmental and capital building purposes. Combining all these economic phenomena, the Philippine population is expected to further increase its demand for health care services in a sustained manner in the coming years.

FIGURE 5. PHILIPPINE POPULATION CHARACTERISTICS (2017)
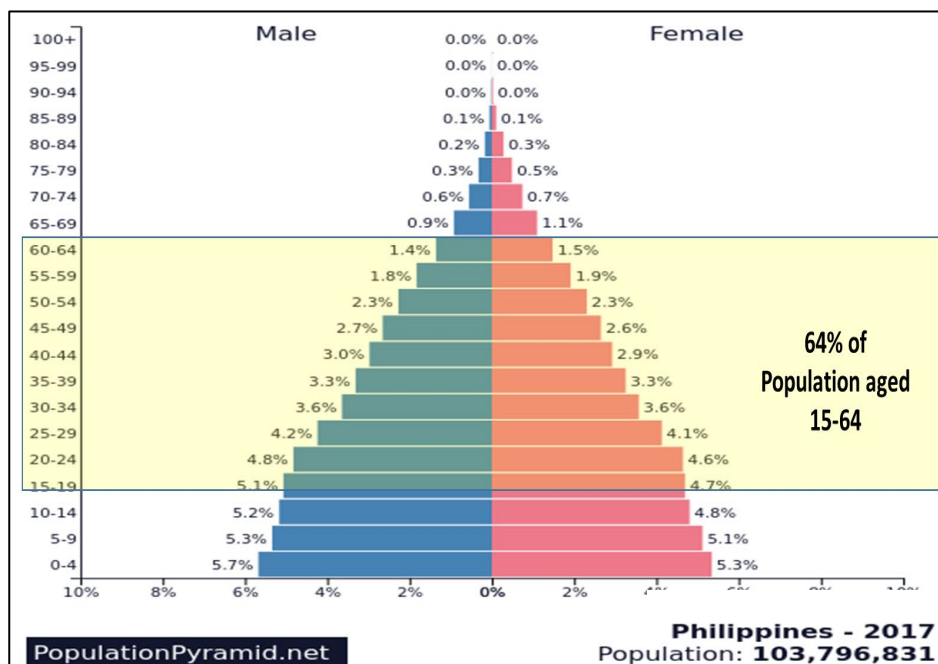
Source: Population Pyramid, 2019

Family Planning, Tuberculosis and Primary Care Health Trends

Amidst these improving economic indicators, the country's health outcomes continue to face significant challenges. The below examines overall health trends, with specific discussion on family planning, tuberculosis and primary care. An analysis of these trends is a critical component to understanding the environment in which the health workforce is operating.

Overall Health Trends: Infant and Maternal Mortality & Population Morbidity

Infant mortality has improved from 18.6 per 1,000 live births in 1995 to 12.6 in 2016, a decline of about 28.5% over a 20-year period. This was made possible by the increasing percentage of births (77%) being delivered in a health facility, with 84.4% of these births being delivered by a skilled health worker. However, maternal mortality remains a challenge. During the same period (1995 to 2016), maternal deaths have remained the same at 0.9 per 1,000 live births in 1995 to 0.86 in 2016, with a peak in 2005 with 1.03 deaths (PSA 2017).

TABLE 2. INFANT AND MATERNAL MORTALITY TRENDS

	1995	2000	2005	2010	2015	2016
Live Births	1,645,043	1,766,440	1,688,918	1,782,981	1,744,767	1,731,289
Total Registered Deaths	324,737	357,908	426,054	480,820	560,605	582,183
Maternal Deaths	1,488	1,698	1,732	1,719	1,721	1,483
Infant Deaths	30,631	27,007	21,674	22,476	20,750	21,874
Fetal Deaths	9,731	10,360	10,351	8,095	7,676	8,020
Maternal Death Rate per 1,000 livebirths	0.90	0.96	1.03	0.96	0.99	0.86
Infant Death Rate per 1,000 livebirths	18.6	15.3	12.8	12.6	11.9	12.6

Source: PSA

FIGURE 6. TOP TEN LEADING CAUSES OF MORBIDITY, RATE PER 100,000 POPULATION (2000-2017)
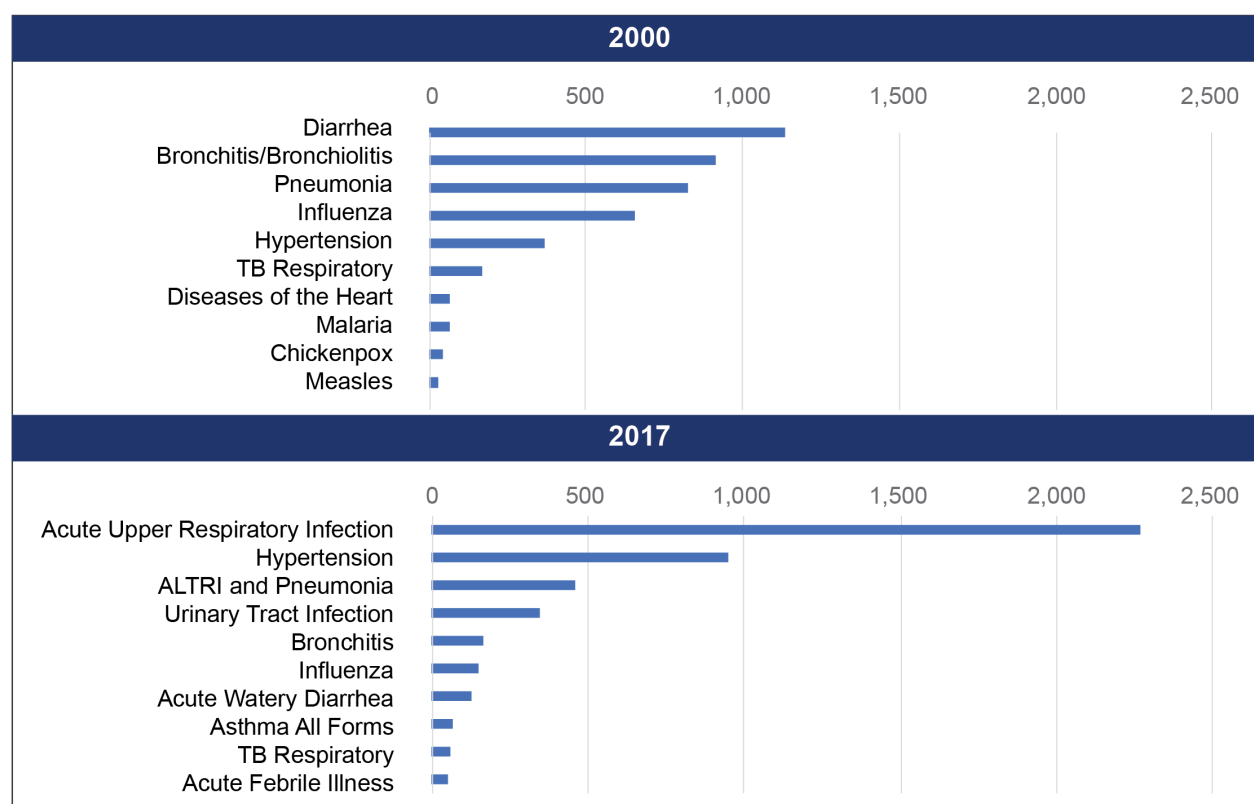
Source: FHSIS

The country's morbidity highest rates have changed from home preventable diarrheas to respiratory-related illnesses and hypertension from two decades ago. The country now is now classified as facing a triple burden of disease as a result of the changing economy, population behaviors and health trends. This is evidenced in the fact that there are still widespread communicable diseases such as TB, influenza and pneumonia, with rising non-communicable diseases such as hypertension together road safety issues are rising and rapid urbanization and industrialization is occurring (DOH, 2017).

Family Planning

Family planning utilization remains another challenge. As the economy expands and more women participate in the labor force, it is expected that there will be a higher utilization of family planning services. However, it can be observed that family planning utilization among married women increased only by 15 percentage points from 40% in 1993 to 55% in 2017 (PSA 2017). The low utilization is also contributed by family planning counseling missing key populations, most notable unmarried people for FP as well as men who are found to be primary FP decision-makers in relationships/ households[5].

FIGURE 7. UTILIZATION OF FAMILY PLANNING AMONG MARRIED WOMEN BY METHOD (1993-2017)
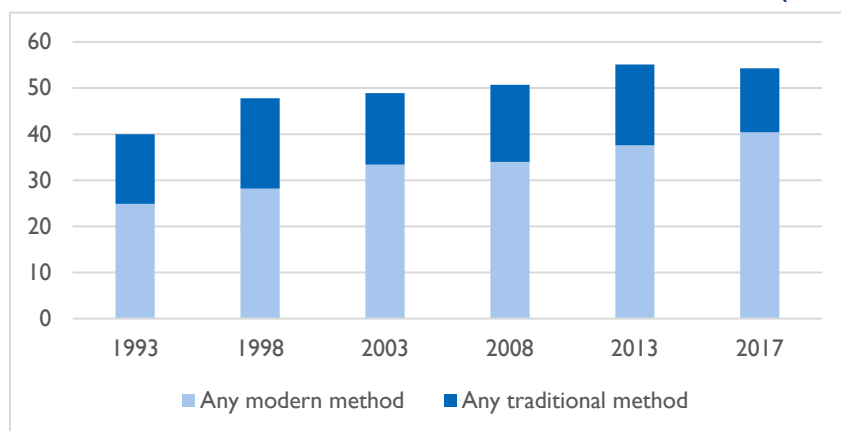
Source: PSA - NDHS, 2017

Relatedly, the contraceptive use also improved at best by 10 percentage points across the regions during the same 1993 to 2017 period. Contraceptive use is highest in Region 2 at 57% of married women, while it is lowest at BARMM at only 18.7%. Metro Manila, as the country's capital center, has a contraceptive use of 39.9% (PSA 2017).

FIGURE 8. UTILIZATION OF FAMILY PLANNING AMONG MARRIED WOMEN BY METHOD (1993-2017)
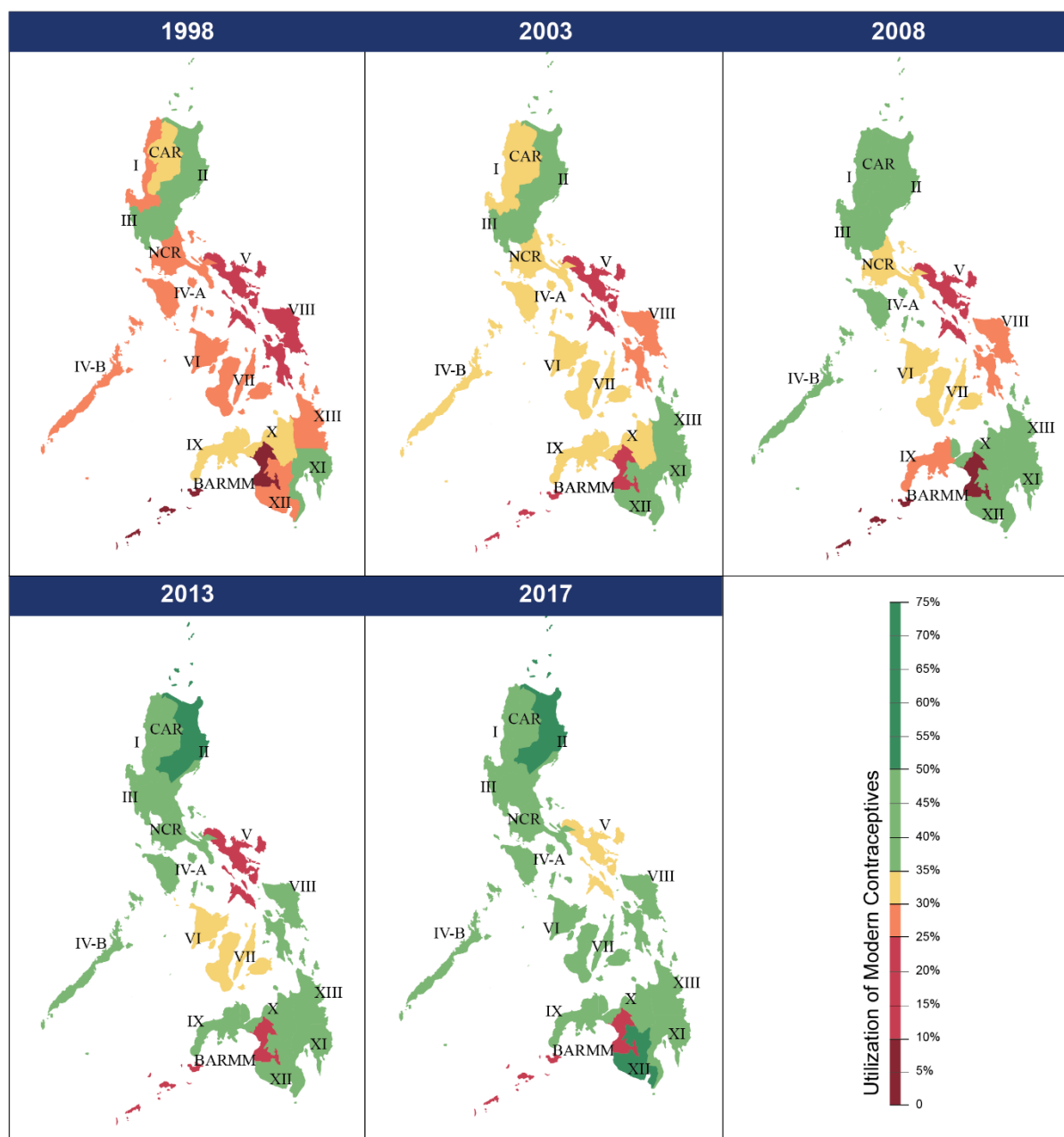
Source: PSA NDHS, 2017

The challenge of Family Planning in the Philippines has proven to be an uphill climb leading to the signing of the Responsible Parenthood and Reproductive Health Act of 2012 (RA 10354). This Act was challenged at the Supreme Court and a temporary restraining order (TRO) was issued in 2015 delaying its implementation until 2017 when the TRO was lifted. This legislative delay is further compounded by behavioral and cultural factors. Based on surveys conducted, and field validation, by the international community, the barriers to accessing family planning and contraceptive use have to do with concerns with side-effects of contraceptives, wrong beliefs and practices for both women and men, support lacking from

male partners, FP stock-outs in primary care facilities, and cost of contraceptives. This can be seen reflected in trends, where little to no progress has been made in some regions.

Tuberculosis

The Philippines has achieved its Millennium Development Goal target for Tuberculosis. In 2015, the country has achieved 90% treatment success rate for new and relapsed cases. The incidence of the disease has fallen from 590 per 100,000 population in 2000 to 520 in 2007. However, from 2007 henceforth, the incidence began to increase again and as of 2017 is back to 554 per 100,000 population. According to the National Tuberculosis Prevalence Survey in 2016, the reason for the higher incidence despite high treatment success rate is because of the use of a new case finding tool that is 1.7 times more sensitive than the previous case finding tool. In addition, the passage of the Comprehensive TB Elimination Act in 2016 is now in effect and this act could help improve the current case detection and follow up system and track possible missing cases (DOH 2017).

FIGURE 9. TUBERCULOSIS TREATMENT SUCCESS RATE AND CASE DETECTION RATE
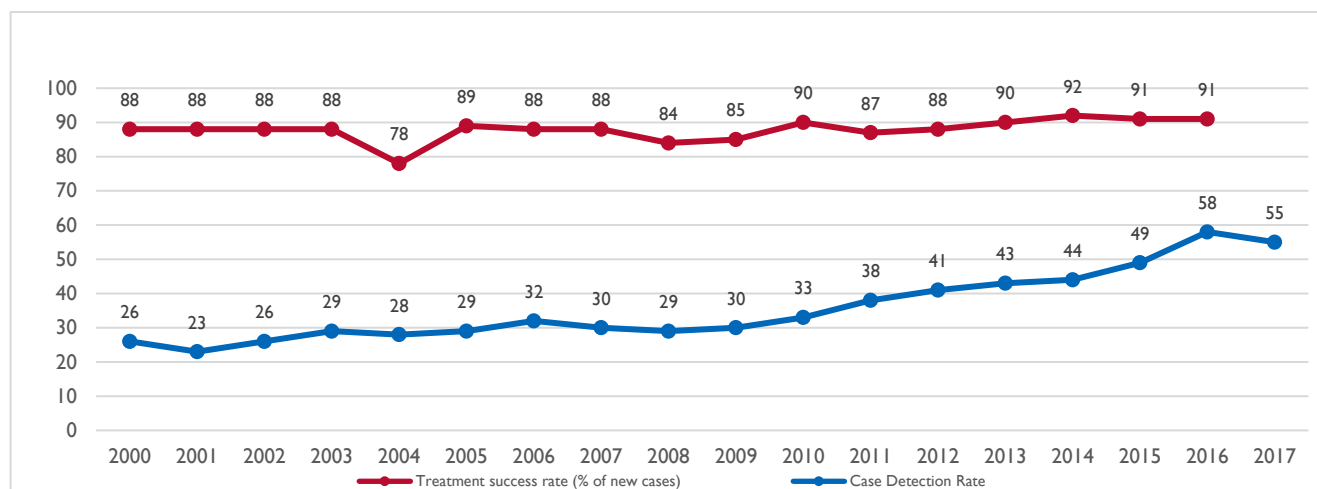
Source: World Bank

Primary Care

Immunization coverage especially of children, has been declining. From 84% in 2010, the proportion of fully immunized children went down to 69% in 2016. This is below the target coverage of 95%. For the specific case of measles in which there was an outbreak in late 2018, the main reason for the non-vaccination was that the mother was busy. In another controversy in 2017, the supposed deaths caused by the anti-Dengue vaccine has raised fears of immunization at the school level. It is possible that these occurrences have contributed to the lower coverage of child immunization. (DOH, 2018)

In relation to malnutrition, the Philippines is similarly showing flat and related unchanged patterns in the last ten years. The three key measures of stunting (more 30% of the children), underweight (more than 20% of children) and wasted (about 8% of children) reveal a significant challenge that if left unaddressed will severely pressure the health systems soon and even derail the projected impact of the demographic dividend. Stunting happens when the height for age is two standard deviations lower than the WHO

standard. This is most critical because it is irreversible once the child reaches the age of 2. The impact is poor productivity and chronic diseases. Underweight and wasting can be addressed through improving school nutrition (World Bank 2019).

FIGURE 10. TREND OF MALNUTRITION IN THE PHILIPPINES (2008-2015)
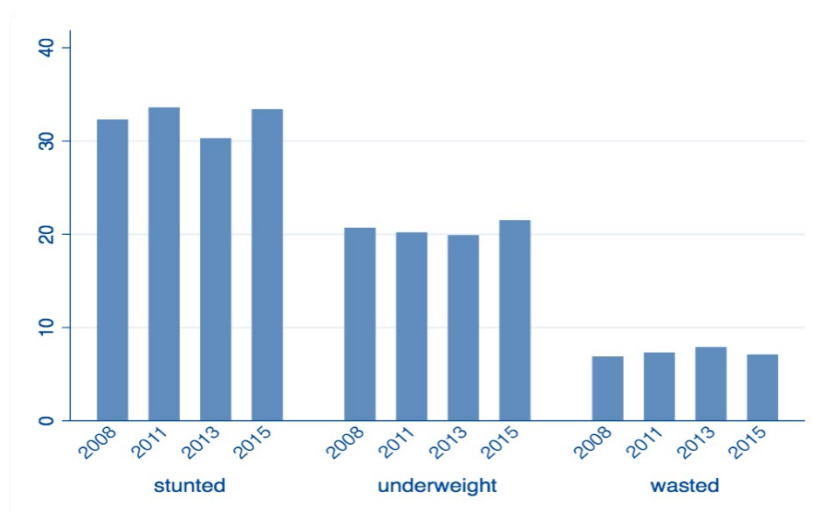
Source: World Bank

As regards safe water, the Philippines has been able to provide basic and safely managed water to about 90% of the population in both urban and rural areas. Meanwhile, about 74% of the population has improved sanitation facilities. These health-related infrastructures are critical in ensuring that water-borne diseases and home facilities related sickness are prevented. (WHO, 2016)

Health Labor Market Analysis

A foundational element for achieving the goals of Universal Health Care is ensuring the country has a fit for purpose, fit to practice health workforce to deliver primary care services, including FP/MCH and TB services. The succeeding sections look at key data points related to the health labor market in terms of the Educational Sector and Labor Sector, examining each area of the HRH Framework for UHC, focusing on the four cadres of doctors, nurses, midwives and medical technologists which represent a majority of HRH in the Philippines and is comparable globally for HRH needed for UHC.

Educational Sector

Training & Education in Health

Enrollment, Graduation and Board Examination results. Based on the data from the CHED for the school years 2005-06 to 2016-17 (a total of 12 school years), there have been a total of 3,576,159 enrollees or an annual average of 298,013 in the four health science courses. Out of this number, a total of 751,008 graduates or an annual average of 62,584 were produced representing a 20% graduation rate. During these school years, a total of 1,358,819 took the professional board examinations and 609,089 passed the examinations representing an overall 45% passing rate.[6]

FIGURE 11. ENROLLEES, GRADUATES, AND BOARD PASSERS IN HEALTH SCIENCES COURSES (2005-2017)
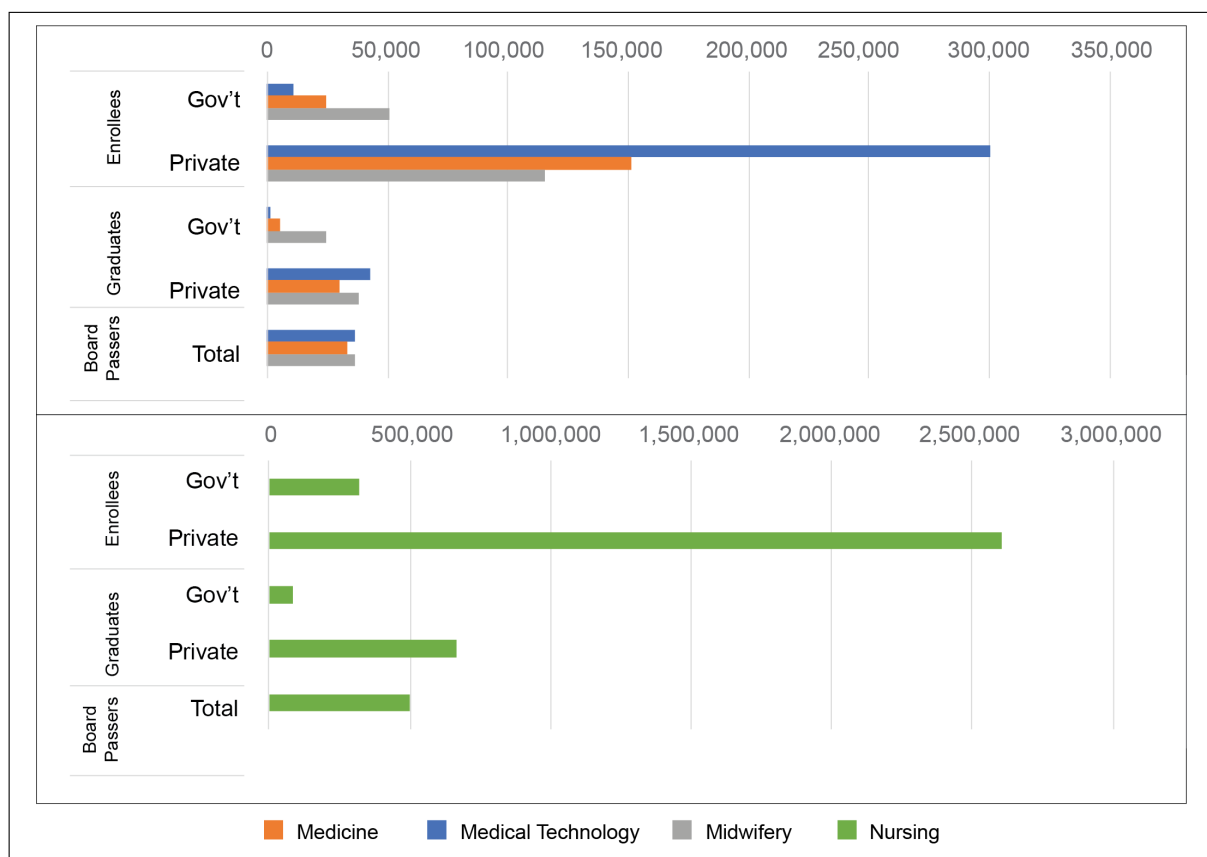
SOURCE: CHED & PRC

The enrolment trends have recently reflected a decline beginning school year (SY) 2016-17 as a result of the implementation of the K-12 Program adding two more years to high school. Thus, there will be a two-year moving gap normalizing only in school year 2022-2023. The decline was reflected sharply in the enrollment for medical technologists and nursing and slightly affected in midwifery enrollment. In addition, the curriculum for midwifery was replaced from a two-year diploma to a four-year course which will impact the gap for graduates for another two years. Medicine is not affected as it is a post-undergraduate course. (CHED, 2019)

TABLE 3. AVERAGE ANNUAL PRODUCTION OF HEALTH SCIENCES GRADUATES FOR DOCTORS, MEDICAL TECHNOLOGIST, MIDWIVES AND NURSES (2005-2017)

	TOTAL	ANNUAL AVERAGE
Enrollees	3,576,159	298,013
Graduates	847,635	62,584
Board Exam Takers	1,358,819	113,325
Passers	640,581	**53,382**

Source: CHED & PRC

FIGURE 12. TRENDS IN AVERAGE ANNUAL PRODUCTION OF HEALTH SCIENCES GRADUATES FOR DOCTORS, MEDICAL TECHNOLOGIST, MIDWIVES AND NURSES (2005-2017)
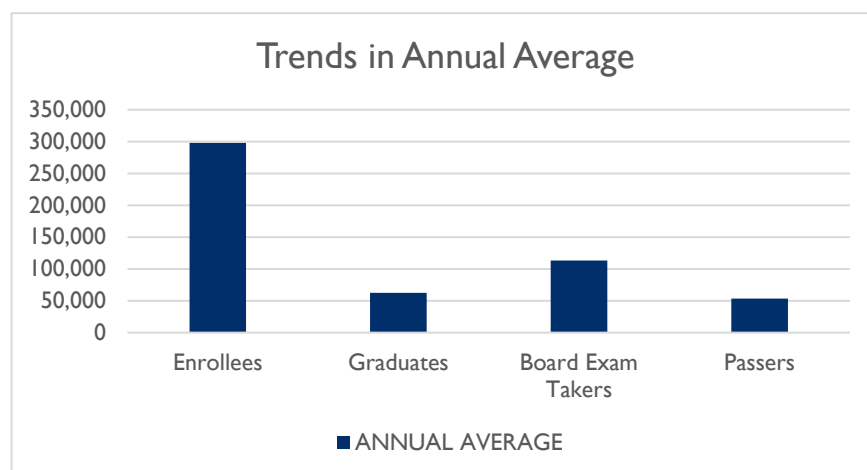
Source: CHED & PRC

On average, the annual enrolment in these four courses is 298,013 with 62,584 graduating annually. Overall, the average annual professional board examinations passers total to 50,674, which represents the health workers that are added to the pool of qualified health workers annually (PRC 2019).

Based on this information, it can be said that the education sector for health sciences produced a pool of qualified medical doctors (5.4% of total), nurses (82.6%), midwives (6.0%) and medical technologists (5.9%) totaling 609,089 from 2005 to 2017. Passing percentages for professional board examinations in the same period are: a) 67.3% for medical technologists, b) 67.1% for medicine, c) 49% for midwifery and d) 43.9% for nursing.[10]

Sex-disaggregated data on board exam passers are available but the sex-disaggregated data on total number of graduates in HRH courses who took the board exams are unavailable. Therefore, while the share of women board exam passers are generally higher than men (Figure 13), we are unable to conclude whether which gender has more board exam failures. This data is also a helpful proxy for the stock of HRH (discussed in later sections) as there is no available sex-disaggregated data on stock of HRH.

FIGURE 13. DISTRIBUTION OF BOARD EXAM PASSERS BY GENDER, 2002-2016

	Women	Men
Doctors	63%	37%
Nurses	70%	30%
Midwives	85%	15%
Medical Technologists	72%	28%
Total	71%	29%
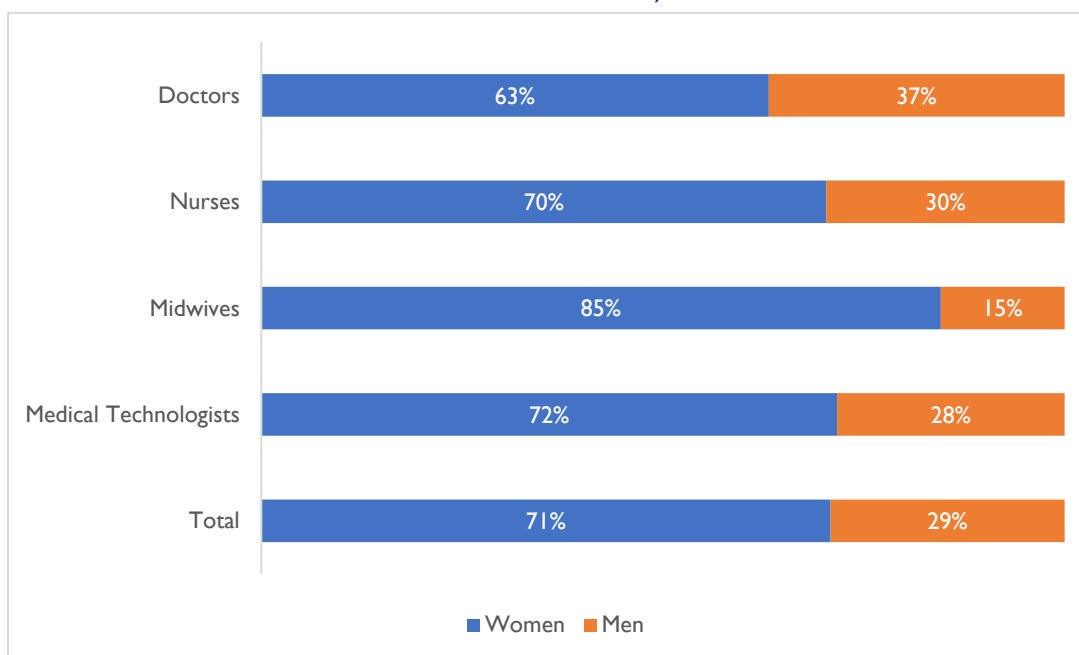
Source: CHED & PRC

Number of Schools. In terms of the number of schools for these health sciences courses, data from CHED for SY 2017-18 shows a total of **864** schools across the country. 15.5% of these schools are government-run either as state-universities/colleges, local government universities/colleges and 84.5% privately-run. It is important to note that most of the government schools have links to public hospitals and other health affiliated institutions allowing them to offer a higher quality education.[7] In terms of shares by courses, 15.1% of the schools offer Medical Technology; 5.2% offer Medicine; 31.9% offer Midwifery and 47.7% Nursing. By region, 28.3% of health sciences schools are in the National Capital Region and Region IV-A. The rest are roughly distributed ranging from 3% to 6% among the other regions. Two regions, Region IV-B and ARMM, have shares of less than 2% to total. Per course offered, midwifery is almost evenly offered in all regions. (CHED, 2017).

FIGURE 14. GOVERNMENT AND PRIVATE HIGHER EDUCATION INSTITUTIONS OFFERING HEALTH SCIENCES COURSES BY REGION (2017)
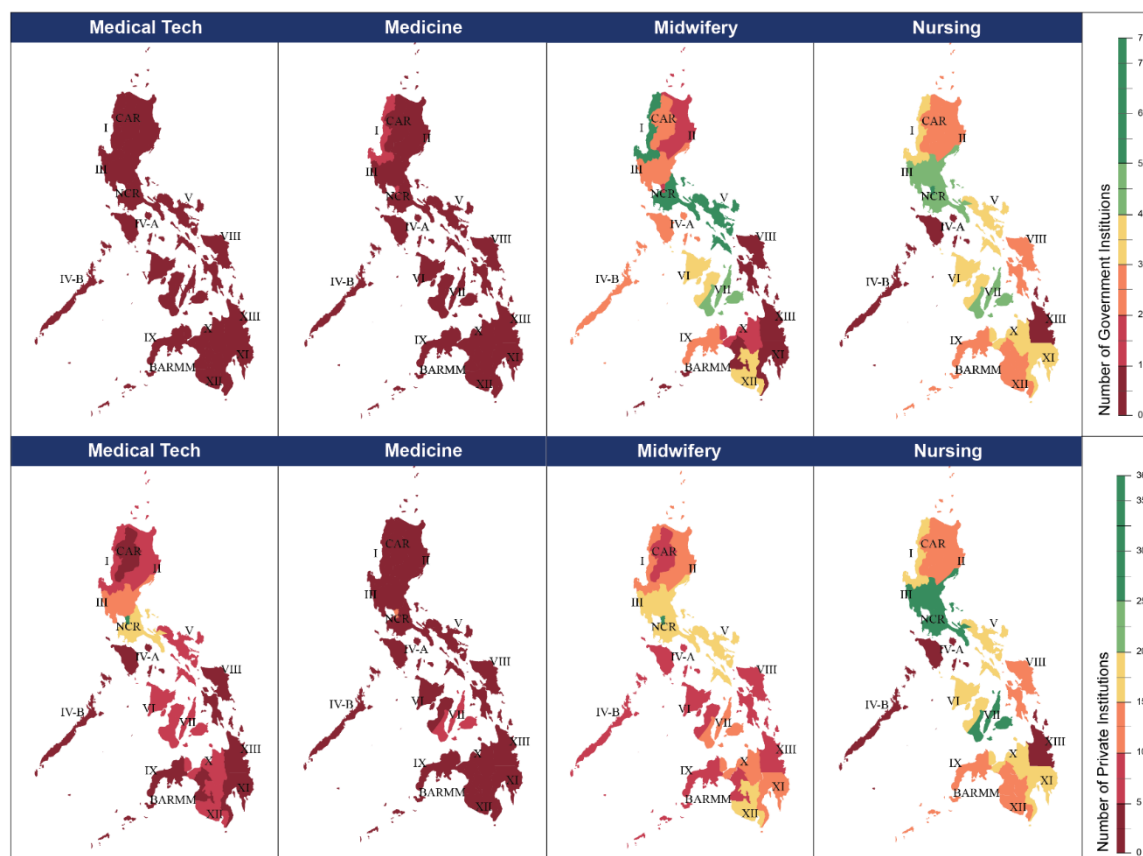
Note: Top - Government Institutions; Bottom - Private Institutions. Measure gradients are different. Source: CHED

Over the years, the number of schools, particularly nursing schools, have declined primarily due to quality concerns. Schools that continue to produce graduates but have low board passing rates or unable to comply with CHED requirements are closed if they continue to underperform. Therefore, the number of nursing schools have declined to 291 from a peak of 512 schools in SY 2010-2011 (CHED).

Cost of Education. The Philippines passed the Universal Access to Quality Tertiary Education Act in 2017 making tertiary education free in all state universities and colleges. However, for health sciences education, only 15.5% are public and majority are run by private sector. Using a quick analysis from FindUniversity[8], the average annual tuition of the four courses are as follow: a) BS Nursing – PhP 49,200, b) BS Medical Technology – PhP 55,000, c) BS Midwifery – PhP 45,000 and d) Medicine – PhP 235,700. Miscellaneous and other fees collected are observed to be approximately 30% of the average tuition (FindUniversity, 2019).

FIGURE 15. AVERAGE ANNUAL COST OF TUITION IN HEALTH SCIENCES COURSES AT PRIVATE INSTITUTIONS
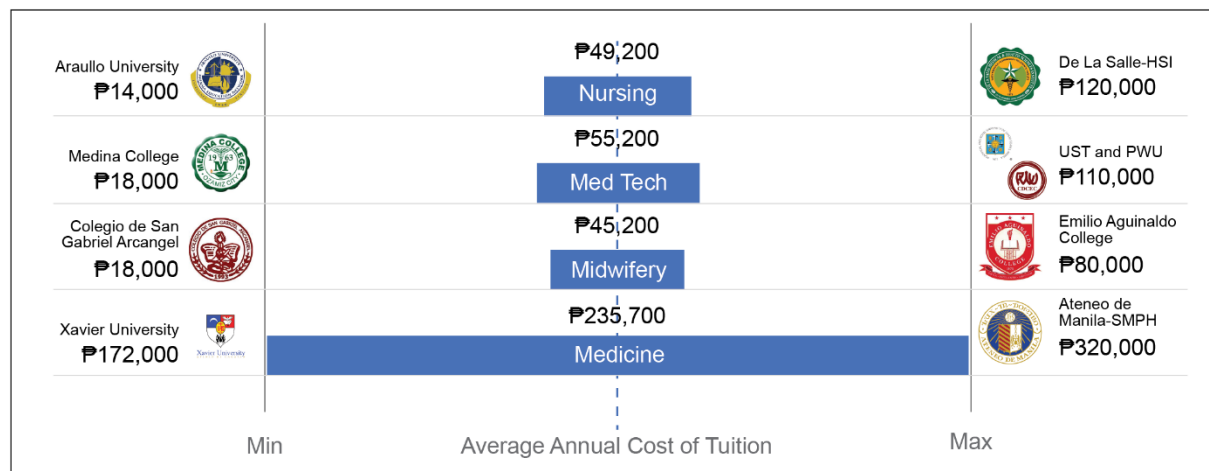
Source: FindUniversity

Barangay Health Worker Training and Education. In addition to the development of the professional health workforce, the government also trains and certifies community-based health workers, barangay health workers, at no cost through the Technical Skills Development Authority (TESDA). Presently, there are two programs related to community health that TESDA administers. These are the: a) Barangay Health Services and b) Health Care Services. The Barangay Health Services train workers in community health and preventive health care, including health education with their graduates becoming barangay health workers. However, it should be noted that this training is not mandatory and though this opportunity exists, many barangay health workers are not formally trained by TESDA and only receive orientation from the local health office. The Health Care Services training is to develop skills in assisting patients in health institutions, particularly hygiene and mobility. While data is limited and out of date, as of 2016, there were less than 600 certified Barangay Health Workers. (TESDA, 2016)

Labor Market Dynamics

Pool of qualified HWF
(licensed; CSC eligibility; entry-level)
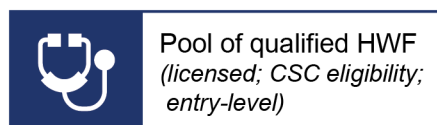
Pool of Qualified Health Workers. When examining the pool of qualified health workers for the four cadres in question in the analysis, data was utilized from the Professional Regulations Commission (PRC) as of March 2019. PRC collects data on those who passed the board examinations and have received their registration and those who have a valid license (either receipt of the license for the first time or renewing their license every three years). For the four cadres covered in the study, the total number of registered doctors, nurses, midwives and medical

technologists as of 2019 is 996,245, broken down in shares as follow: a) medical technologists, 6.8%; b) doctors, 8.0%, c) midwives, 10.8%, and d) nurses, 74.3%.

Those who have valid licenses total 720,651 or 72.3% of the registered workers are legally able to practice, making up the pool of qualified health workers (PRC, 2019). Those with invalid licenses are those that have not renewed their license in the last three years, possibly due to: retirement; deceased; migrated permanently; or have moved to other industries and are no longer practicing within the health sector. Overall though, it must be noted that though an individual might have an active license, it does not infer that the individual is actively providing health services to Filipinos in the Philippines.

Using the sex-disaggregated data on board exam passers as proxy for stock of HRH, the highest share of women among the HRH cadres is in the midwifery sector (85%). Although men are generally lesser in share compared to women in the four cadres identified, the highest share of men are doctors. This occupational segregation contributes to the gender pay gap, among women and men HRH workers, which will be discussed in the succeeding section.

FIGURE 16. STOCK OF HRH (2019)
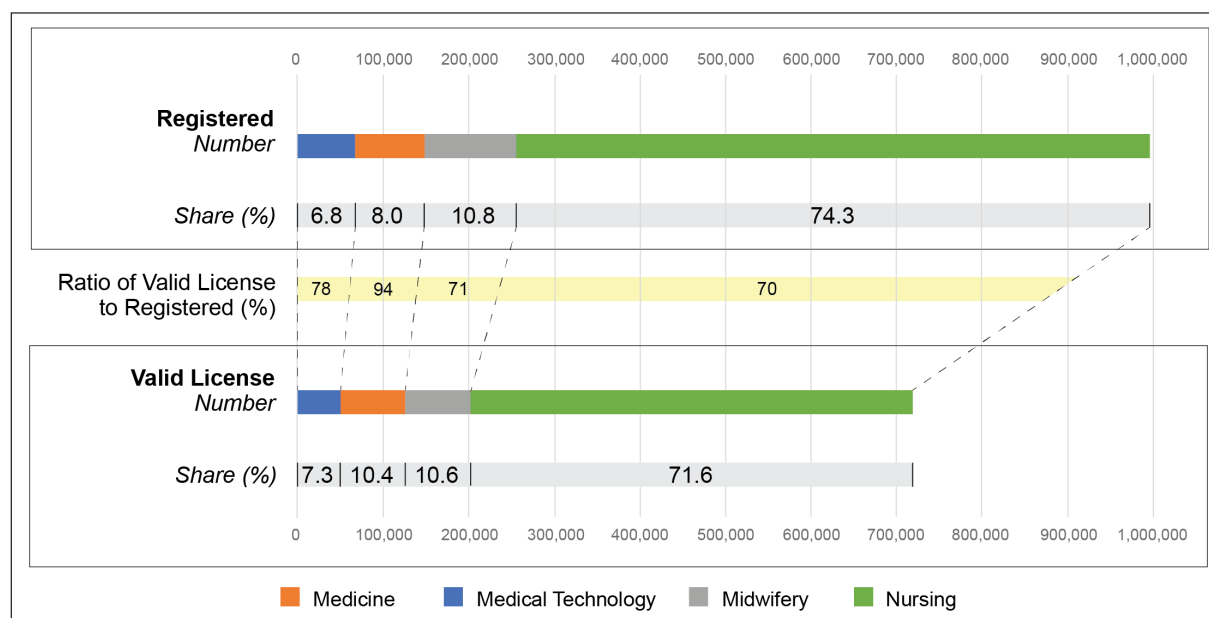
Source: PRC

Employment in the Primary Care Health Sector. The domestic employment of primary care HRH is primarily through government health institutions and private health facilities. Basic government health services are provided through the barangay health stations, rural health units, birthing homes and level 1 public hospitals The private sector counterparts are clinics, infirmaries, birthing homes and hospitals. Under UHC, these basic facilities will serve as the primary care focal points in different geographical settings of the country. As there are no accurate data for health workforce employment by public and private sector, the estimated number of health facilities in these sectors were used as proxy data to closely approximate public and private health worker employment.

As there is no unique data source for tracking the number of domestically employed primary care HRH, private clinic data was derived from the latest Cities and Municipalities Competitiveness Index (CMCI) wherein 95% of all local government units (LGUs) report administrative data, including health. Government health services data was derived from the National Facility Registry[9]. As of 2017, the number of private clinics[10] nationwide was 17,196 with 3,146 diagnostic centers. The DOH has updated data on the number of level 1 private hospitals numbering 449 in 2019 with level 1 government hospitals totaling 339 and rural health units' numbering 2,596 nationwide. Barangay Health Stations (BHS) number the most at 22,504. Using certain assumptions, the estimated number of health workers may be deduced. For example, if it is assumed that all RHUs would have an average of 10 staff employed, then HRH employed by RHUs around the country would be estimated to be around 26,000 with varying staff mix. But sometimes, the number of health facilities are not directly related to the number of staff. For instance, the large number of BHSs do not really translate to many health workers employed in this setting as BHS have rotating midwives shared across different BHS employed by the municipality.

FIGURE 17. PRIVATE HEALTH ESTABLISHMENTS BY REGION, 2017
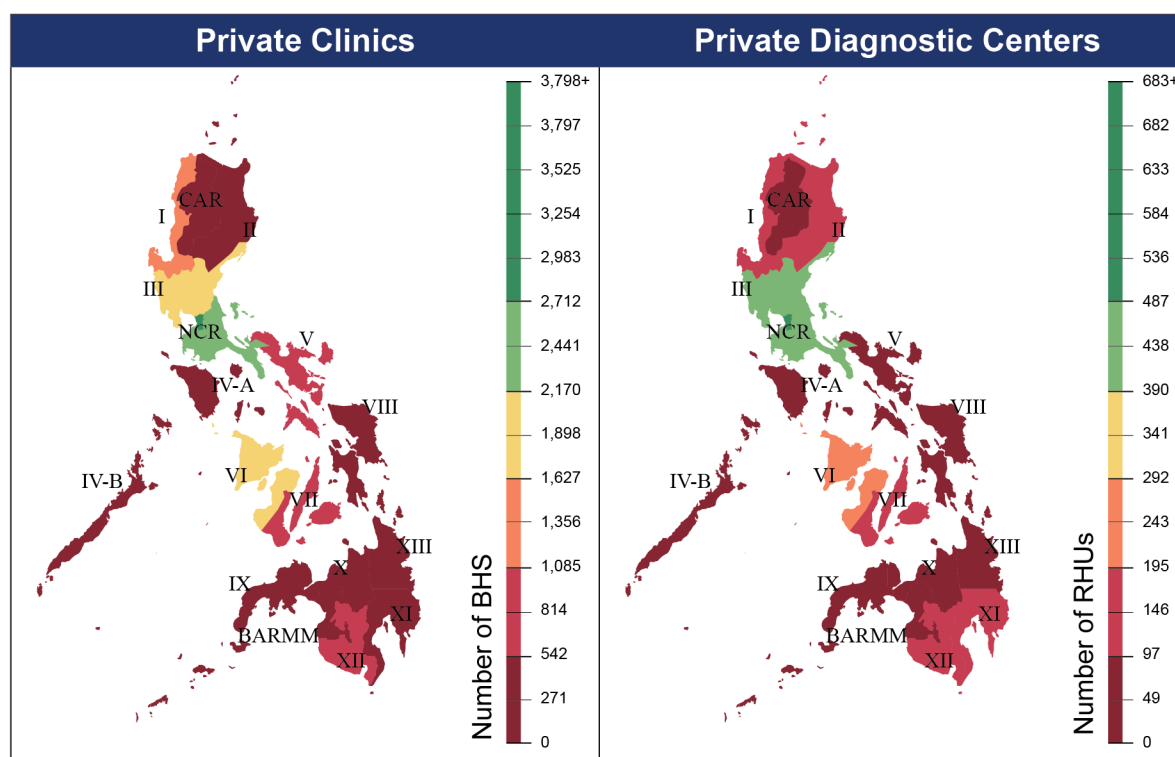
Source: CMCI

FIGURE 18. GOVERNMENT AND PRIVATE HEALTH ESTABLISHMENTS BY REGION, 2019

Source: National Health Facility Registry
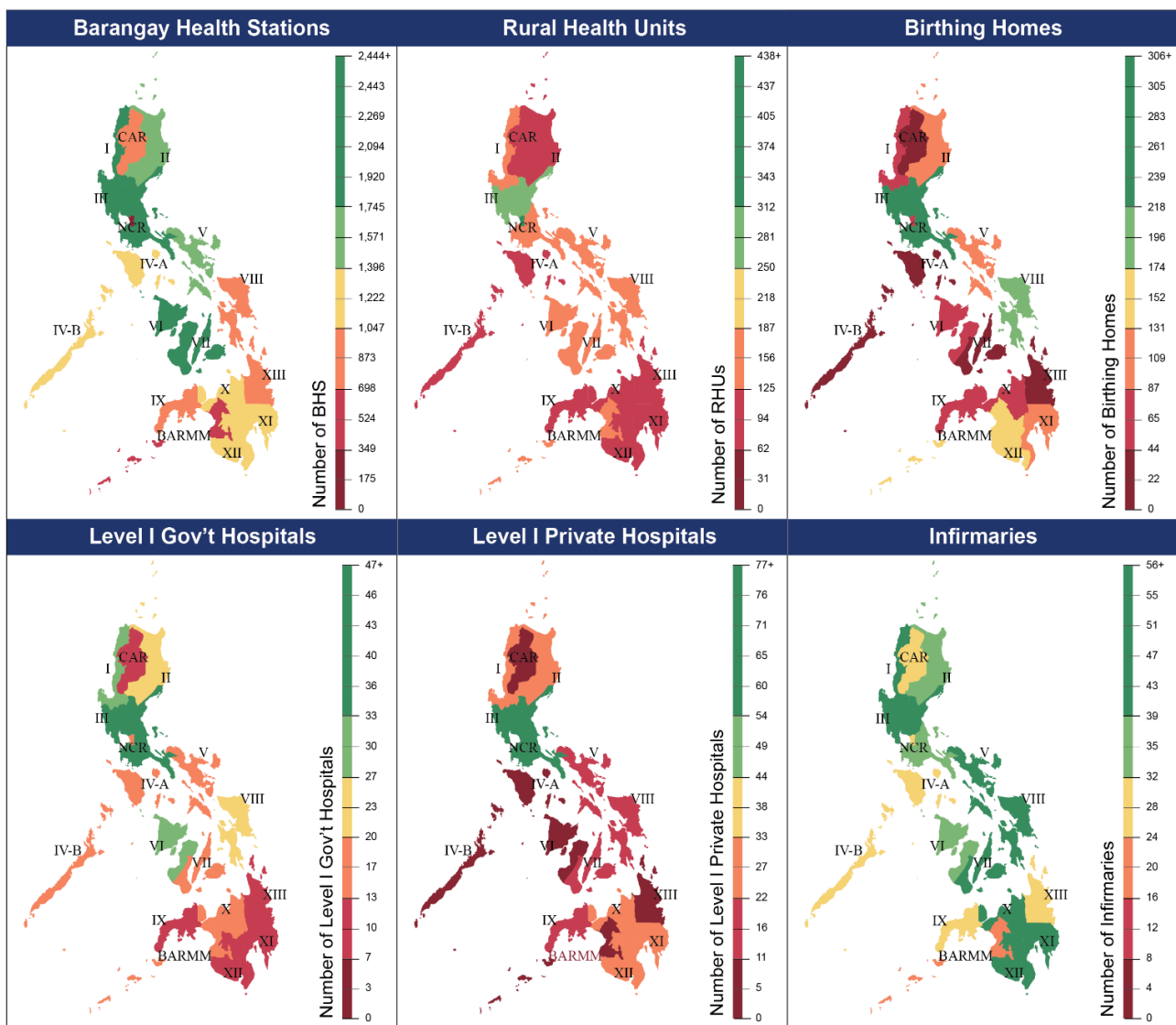
Health Worker Distribution

Distribution. In terms of health workforce distribution at of the end of 2018, about 110,357 health workers are currently employed in public hospitals, LGU-hired and deployed in rural health units (DOH HHRDB 2019). 61,001 are in public hospitals, 28,755 are LGU-hired HRH. In addition, the DOH has deployed a total of 20,601 HRH to rural health units to support LGUs. In terms of percentage, about 51% are nurses, 17% doctors, 25% midwives and 7% medical technologists. It is important to take note that the data on the public sector health workforce is generated by the National Database on Human Resources for Health Information Service (NDHRHIS), which is incomplete and not up to date[11].

Private sector data on HRH is not readily available, thus the labor force surveys (LFS) of the past two years were extracted to get the number of private health workers[12]. It is estimated that as of 2018, there are about 486,083 health workers in the private sector, including 59,306 HRH in private hospitals, with the balance HRH working at private clinics, including free standing health facilities (laboratories, dialysis centers, pharmacies), BPO sector, industry, and education (school clinics) . Adding this number to the 110,357 public health workers, the total number of currently employed HRH is approximately 596,440.

Public (Doctors, Nurses, Midwives, Med Techs)

61,000 HRH in public hospitals

28,755 LGU-hired HRH

20,061 Deployed HRH

110,357 Total HRH in Public Hospitals, LGU Hired and in RHU

Approximately 596,440 HRH active in the labor force

Private (All HRH)

59,306 Total HRH in Private Hospitals

426,777 Total HRH in Other Private Facilities

486,083 Total HRH in Private Sector
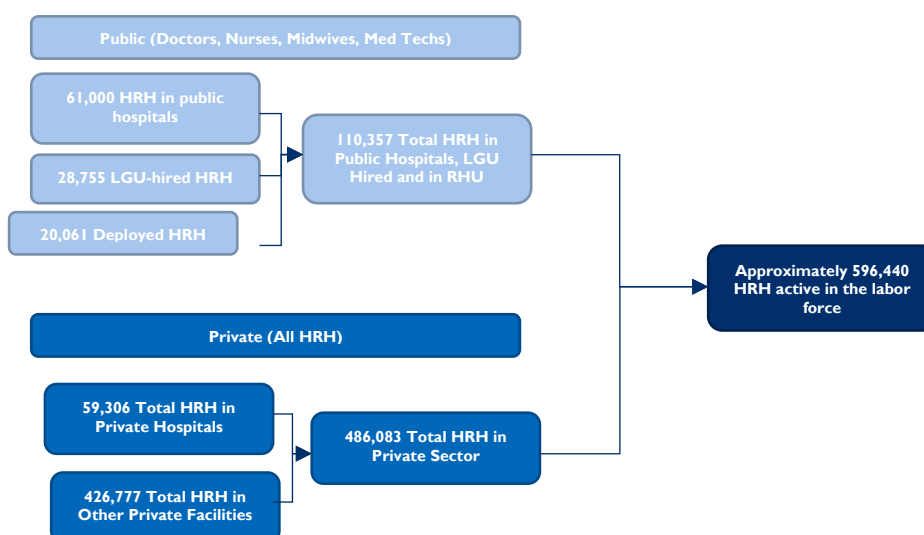
On a regional basis, the population ratio to HRH varies greatly and in different way. Those with lower regional population and more HRH such as Cordillera Administrative Region (CAR), Regions 1 and 2; and those with high population but with high concentration of HRH such as the National Capital Region (NCR) and Regions 7 where the highly urbanized center of Cebu is located. Regions with high poverty such as BARMM and Region IV-B have less population to HRH ratios (DOH 2018). Overall, the population ratio to HRH in the Philippines is 19.7, which is lower than the WHO estimate of countries on track to reach the SDGs at 44.5.

FIGURE 19. DISTRIBUTION AND POPULATION RATIO OF HEALTH WORKFORCE BY AREA OF PRACTICE (2018)
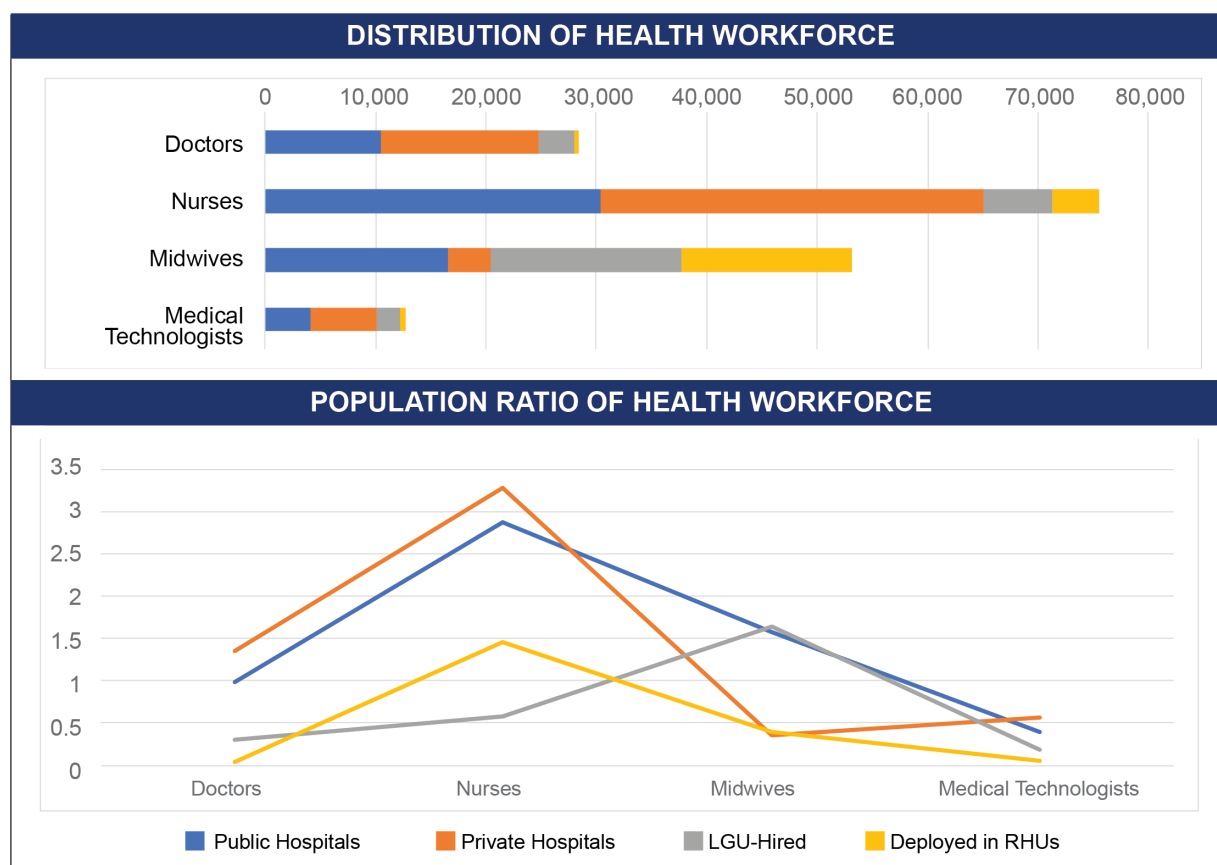
Source: DOH - HHRDB; ratio is per 10,000 population

Barangay Health Workers. The barangay health workers (BHWs) who are not health professionals but are trained by RHU staff, including the deployed HRH (nurses), are a critical complementary workforce that can assist the health professionals. However, they are volunteers and are not permanent staff of local governments. As of 2017, the total number of BHWs nationwide is 276,919 with around 600 BHS that are certified, providing preventive and promotive health services including first aid in the BHS (TESDA 2019).

Data shows that for every ten BHWs, only one is male. This average share, alongside fewer men in the total health workforce, has produced the gender imbalance especially in barangay health stations (BHS). Although there are many other factors for decreased male engagement in receiving health services, the gender imbalance has also reinforced a perception of health centers or primary care facilities as "women centers."[13] This is found to discourage male partners/men to receive health care services or to support women partners/women in FP/MCH services.

Vacancies and Remuneration. Latest data on unfilled plantilla positions in government hospitals as of 2018 total 8,240 with 73% of the vacancies for doctors and another 18% for nurses. It should be noted that these vacancies are positions unfilled as plantilla and that the vacancies may in fact be filled by job orders, yet still considered vacant. Job orders are generally less costly and thus LGUs are able to hire these positions more readily.

However, another factor contributing to vacancies is the relatively low pay for the health workforce overall, leading to exit of trained HRH from the workforce. To respond to this issue of low pay, salary standardization for government workers was implemented in January 2019. The entry level salary of the lowest grade cadre (midwife) is now 12% higher than the minimum wage in Metro Manila. Doctors being the highest paid cadre are now paid up to PhP 107,000 per month. The President announced in the 2019 State of the Nation Address (SONA) that another round of salary standardization will be implemented soon though no details have been released to date[14].

Within government itself, the salary standardization is differentiated between national and local governments. The data used for comparison in this report is based on the national salary ranges. For local governments, the rates are dependent on the income class of the province, city and municipality.[15] Thus, for the same salary grade 11 or the entry level for nurses, the salary currently ranges from PhP13,490 per month in 6th class municipalities to PhP20,754 in first class cities which is comparable to the national rates. At the local level, the capacity to hire health workers is dependent on the local budget. According to income classes, LGUs with city status and municipalities belonging to the 1st to 3rd income classes have varying capacities to provide for and hire health workers. Those at the 4th to 6th classes have difficulty as budgets are severely limited to fund varying programs devolved to LGUs. This has led LGUs to selectively fund positions according to their capacities and political objectives. Furthermore, the local government code stipulates a cap on personal services at 45% of the LGU budget. While the Local Government Code which generally rewards LGUs if the local chief executive (LCE) is developmental and has political will to implement critical local policies such as health care, LCE's still may not prioritize health.

TABLE 4. NATIONAL VERSUS LOCAL SALARY RATES (2019)

SALARY GRADE 11 (ENTRY LEVEL FOR NURSES) ACROSS TYPES OF LGUS, IN PHP			
Type	**Rate per Month**	**Type**	**Rate per Month**
National, 1st Class Province and City	20,754	5th Class Province, City and 3rd Class Municipality	16,603
2nd Class Province and City	19,716	6th Class Province, City and 4th Class Municipality	15,566
3rd Class Province, City and 1st Class Municipality	18,679	5th Class Municipality	14,528
4th Class Province, City and 2nd Class Municipality	17,641	6th Class Municipality	13,490

Source: DBM Local Budget Circular 118 s 2019

At current levels, the comparable entry level salary in government is higher than private sector counterparts. For medical technologists, the salary differences are roughly at 47%; for nurses 65% and 54% for midwives. Entry level salary for doctors is slightly higher in the private sector by 5%. These salary level differentials are further worsened if compared across regions. The Wage Rationalization Act in 1989 created Regional Wage Boards[16] which determine the minimum wage for the private sector in each region

according to the regional cost of living estimates. The current minimum wage as of July 2019 ranges from PhP 280/day or PhP 8,400 per month in BARMM to PhP 537/day or PhP 16,110 per month in NCR. (DOLE, 2019)

FIGURE 20. AVERAGE MONTHLY WAGES OF HEALTH WORKERS IN THE PRIVATE AND PUBLIC SECTOR

Wage Difference

₱20,754	₱14,115 Medical Technologist	47% ₱73,157
₱20,754	₱12,662 Nurse	65% ₱50,702
₱17,975	₱11,678 Midwife	54% ₱33,279
₱33,584	₱35,640 Medical Officer/ Physician	(5)% ₱106,493

Public Sector Monthly Wage (Minimum) — Private Sector Monthly Wage (Average) — Public Sector Monthly Wage (Maximum)
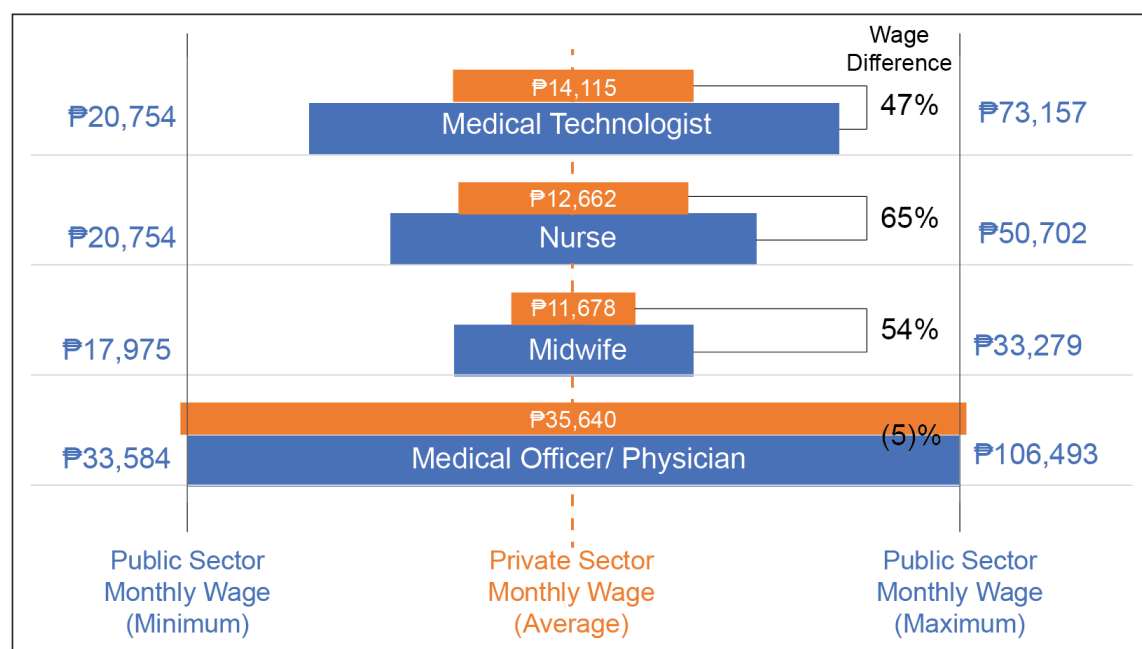
Source: DBM & OWS

Considering the wage differentials among health cadres and the occupational segregation by gender of HRH workers, the gender pay gap can be estimated. Analysis based on median salary grades of 2019 showed health workers face gender-related gaps in pay, with 8% of men health workers earning, on average, more than 8% of women (Figure 21). The pay gap is attributed to the occupational segregation of women and men in the health workforce. This is slightly lower than the global estimates of gender pay gap data which shows a 9.9% pay gap between women and men based on occupational segregation.[17] Since women are greater in numbers compared to men in the HRH cadres (Figure 13, proxy data), the 8% pay gap is even worse. Using proxy data in 2002-2016 from Figure 13, the 8% gender pay gap translates to 16,730 men earning more than 40,699 women in the health sector.[18]

FIGURE 21. GENDER PAY GAP AMONG HEALTH WORKERS AS A PERCENTAGE OF OCCUPATIONAL SEGREGATION19 VS. MEDIAN SALARY GRADE20
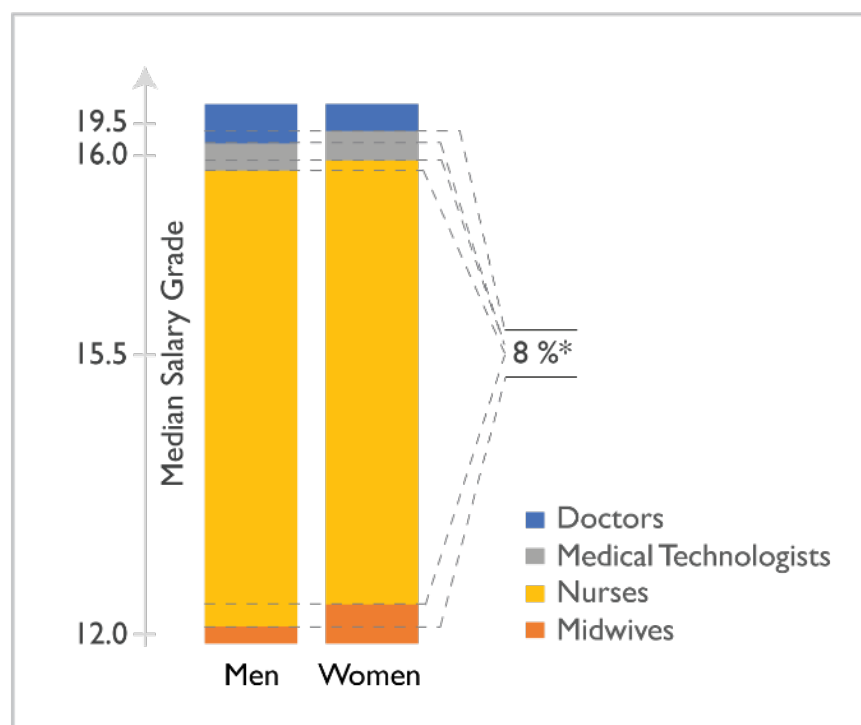
*8% of men health workers earn more than 8% of their women counterparts due to occupational segregation.
Source: CHED (2002-2016) and DBM (2019). Total bar stock is 100% per gender, absolute number is unequal for both genders.

However, this 8% gender pay gap does not account for the occupational segregation in the health workforce which considers BHWs/CHWs as health workers. With nine women vs. one man for every ten BHWs, the gender pay gap based on occupational segregation can increase. Although there are no official studies done on the factors affecting entry as BHWs, one primary reason why there are more women BHWs than men is because of the meager amount (between P1,150 – 2,750/month) that BHWs receive monthly compared to the daily minimum wage of P537 (Metro Manila rate) that men can possibly earn in non-BHW jobs.

TABLE 5. CURRENT REGIONAL DAILY MINIMUM WAGE RATES (2018-2019)

REGION	DATE OF EFFECTIVITY	NON-AGRICULTURE	AGRICULTURE	
			Plantation	Non-Plantation
NCR	November 22, 2018	P500.00 - 537.00	P500.00	P500
CAR	August 20, 2018	300.00 - 320.00	300.00 - 320.00	300.00 - 320.00
I	April 30, 2019	273.00 - 340.00	295.00	282.00
II	November 25, 2018	360.00	340.00	340.00
III	August 1, 2018	349.00 - 400.00	334.00 - 370.00	322.00 - 354.00
IV-A	April 28, 2018	317.00 - 400.00	303.00 - 370.00	303.00 - 356.00

REGION	DATE OF EFFECTIVITY	NON-AGRICULTURE	AGRICULTURE	
			Plantation	Non-Plantation
IV-B	November 27, 2018	294.00 - 320.00	294.00 - 320.00	294.00 - 320.00
V	September 21, 2018	310.00	310.00	310.00
VI	July 12, 2018	295.00 - 365.00	295.00	295.00
VII	August 3, 2018	318.00 - 386.00	313.00 - 368.00	313.00 - 368.00
VIII	June 25, 2018	305.00	275.00	275.00
IX	July 30, 2018	316.00	303.00	303.00
X	November 1, 2018	343.00 - 365.00	331.00 - 353.00	331.00 - 353.00
XI	August 16, 2018	396.00	391.00	391.00
XII	May 11, 2018	311.00	290.00	290.00
CARAGA	May 1, 2019	320.00	320.00	320.00
BARMM	June 15, 2018	280.00	270.00	270.00

Source: DOLE

Government workers salaries are governed by a common standard determined by the Department of Budget and Management (DBM) taking into consideration local government budget capacities, while private sector salaries, aside from minimum wage, are subject to market forces and local economic conditions. These are broader policy concerns that are beyond the health sector but a policy towards rationalizing wages should be seriously considered for the health sector as the conflicting policy mechanisms are further widening the gaps between workers within the public and with private health systems. Focus Group discussions revealed that the lower pay within the private sector has led to a movement of HRH towards the public sector, leading to a less available workforce and more work hours for those currently employed.

It has been observed that LGUs are not filling health professional plantilla positions, presumably due to the high salary. For instance, the position of a medical doctor can equivalently pay the salaries roughly 3 utility level workers. Based on the entry level salary of a medical doctor at salary grade 16, this is about PhP33,584 per month using the national rate which can pay approximately three salary grade 3 utility workers at PhP 12,466 per month. Applied at the 6th Class municipality level, salary grade 16 is PhP 21,830 and salary grade 3 is PhP 8,103 at the same ratio. Based on information gathered during the regional consultations, the LGU, forced by the salary cap for personnel under the Local Government Code (LGC), at times will forego the hiring medical personnel to provide roughly three jobs for others. Thus, even if there is a health personnel willing to work in the LGU, they may be unable to.

During regional consultations, it was found that beyond salaries, there is that perception that while pay in public sector health institutions are higher, the workload is greater, and the support mechanism is inadequate to fully provide health services. Focus group participants noted that the budgetary restrictions on medical supplies and the restrictive procurement procedures lead to delays and sometimes, substandard service, and have negative effects on HRH staying within the health workforce.

As positions in government are limited for reasons stated, the private sector continues to be deluged by applicants for HRH. The Integrated Survey on Labor and Employment (ISLE) estimates that there were

about 26,858 applicants for 12,152 vacancies in 2016. 87% of the applicants and vacancies are in nursing wherein there are 2.2 applicants for every vacancy.

Apart from the vacancies, the quarterly labor force surveys also provide insights into the demand for HRH. Using the estimates for underemployment,[21] the rate is much lower in the health sector compared to the national underemployment rate. The national rate has been falling from 23% in 2006 to its lowest level of 16.1% in 2017. The rate for the health workforce has lowered by 5% during the same periods falling to 9.3% in 2017. This means that less and less HRH are seeking out more hours of work and ultimately implies that employed HRH are working longer hours than their counterparts in other industries.

FIGURE 22. UNDEREMPLOYMENT RATES IN THE HEALTH AND SOCIAL ACTIVITIES SECTOR
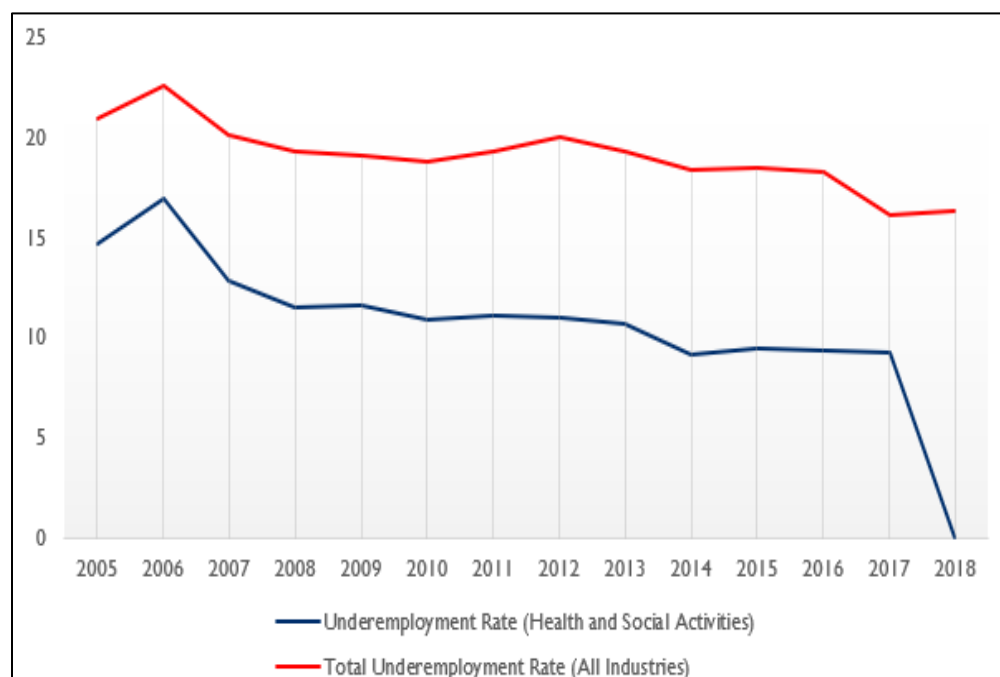
Source: LFS; Underemployed Persons is in thousands

Migration

International Migration. One of the key challenges of HRH in the Philippines is pull of international migration. Based on statistics from both the Commission on Filipinos Overseas (CFO) and the Philippine Overseas Employment Administration (POEA), a total of 350,361 doctors, nurses and midwives have left the country for overseas work from 1990 to 2017. About 84% of which are working abroad temporarily, while the remaining 16% have moved permanently abroad. Of this total, 95% are nurses, 3% doctors and 2% midwives.[22]

FIGURE 23. DEPLOYMENT OF TEMPORARY AND PERMANENT HEALTH WORKERS TO FOREIGN COUNTRIES (1990-2017)
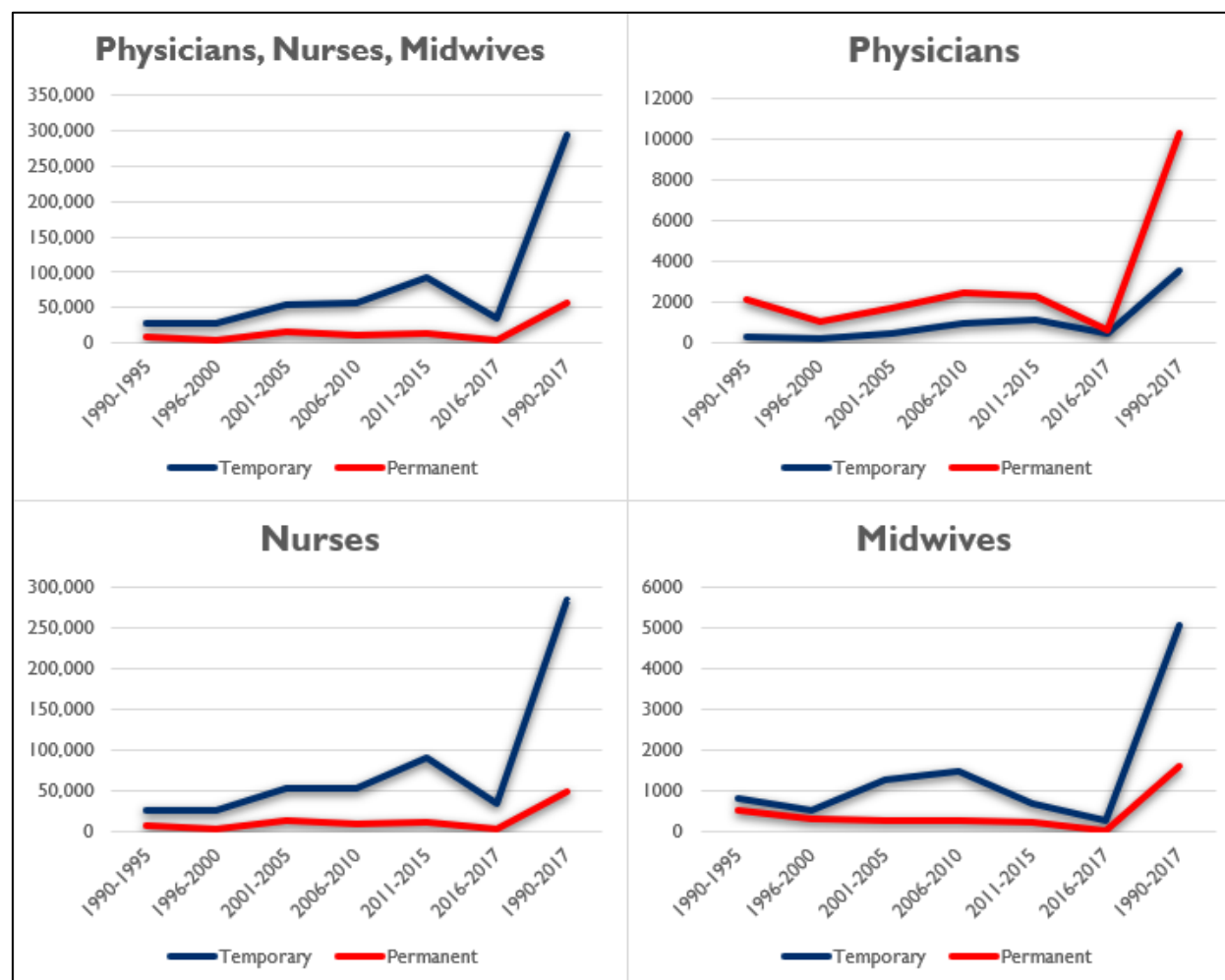
Source: CFO & POEA

From 2000 to 2010, there are generally more temporary HRH migrants (102,591 women and 16,097 men) compared to permanent HRH migrants (22,738 women and 6,247 men). Because of the already women-dominated health workforce in the country, there are also more women HRH migrants (both permanent and temporary) than their men counterparts. However, in terms of gender share, 10% more men are permanent migrants compared to their women counterparts (Figure 24).

It is important to note, however, that this gap is based on gender share and not absolute values of women and HRH migrants. This is also observed for trends from 2000 to 2010 with the highest number of migration coming from temporary HRH women migrants (Figure 24D). The gap between permanent and temporary migration for HRH between each gender can be observed strikingly; with a large difference between women permanent and temporary HRH migrants, compared to the very small difference between men permanent and temporary HRH migrants. This over-all gender share and trends are typical for the migration patterns for both nurses and midwives' cadres (Figures 25B and 25C). Doctors' migration patterns are quite different (Figure 25A). There are generally more permanent doctor migrants , slightly

with more men in the beginning but recently with more women from 2007 to 2010. For temporary doctor migrants, not much difference can be observed between genders.

FIGURE 24. DISTRIBUTION OF PERMANENT AND TEMPORARY HRH MIGRANTS BY GENDER, 2000-2010
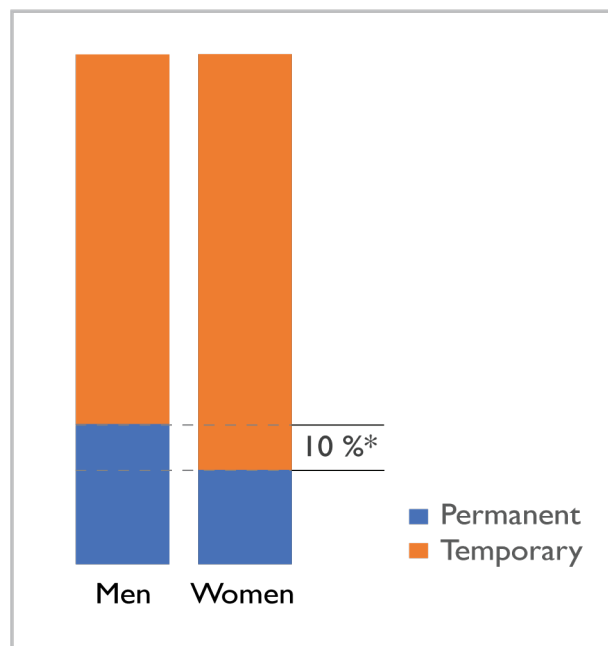
*10% more men are permanent HRH migrants compared to 10% of their women counterparts.
Source: POEA and CFO. Total bar stock is 100% per gender, absolute number is unequal for both genders.

FIGURE 25. TEMPORARY AND PERMANENT HRH MIGRANTS BY GENDER, 2000-2010
(A) Doctors; (B) Midwives; (C) Nurses; (D) Total
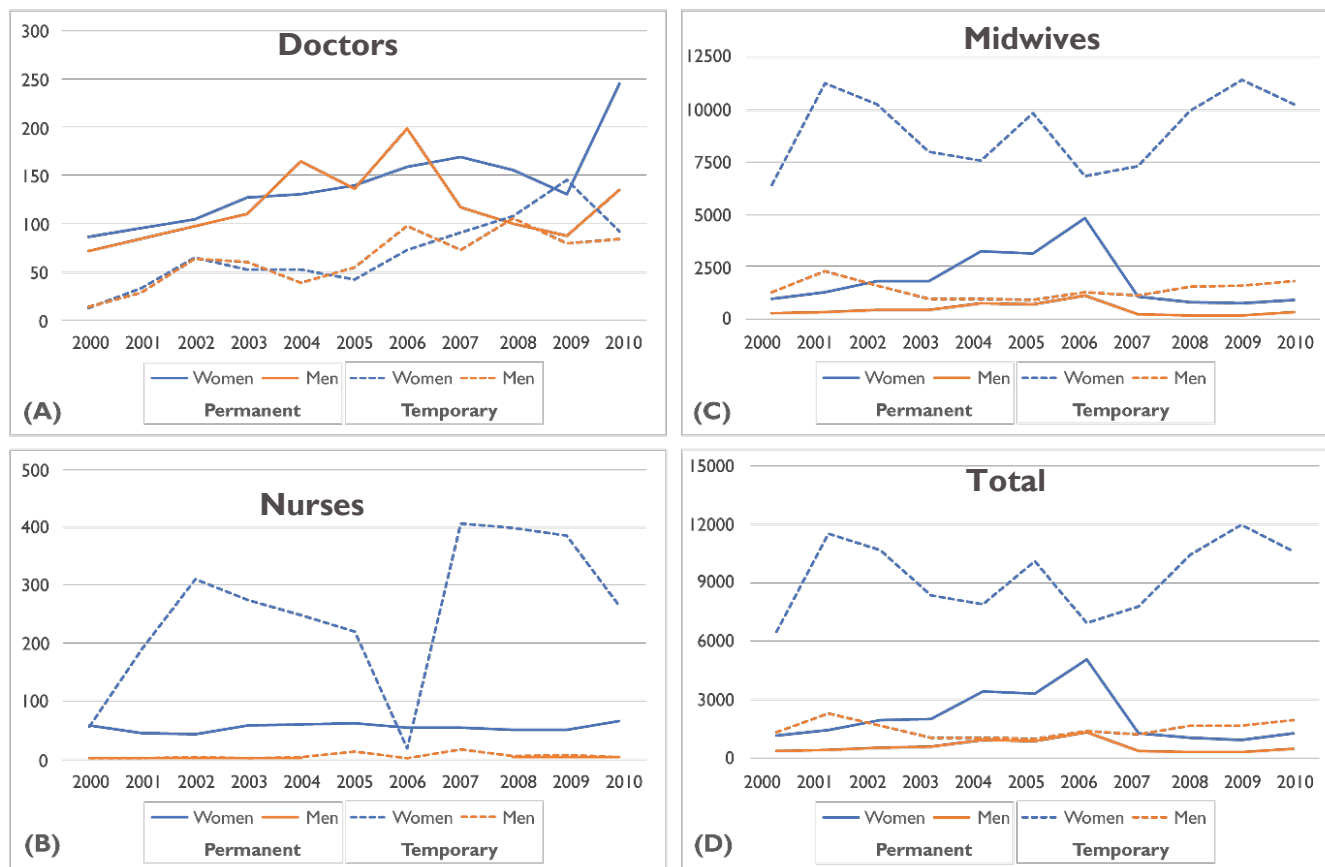
Source: POEA and CFO.

In terms of the trend of the migration, it generally follows the demand internationally. The bulk of temporary workers are in the Middle East, primarily Saudi Arabia, with some in the United Kingdom, Ireland and Singapore. Changing domestic policies within the Middle East have affected the demand for health workers particularly nurses such as increasing more locals than foreign workers (POEA, 2017).

It is important to note that the POEA counts contracts instead of individual health workers, though these trends were confirmed by discussions with recruitment agencies[23]. Likewise, there are several return temporary migrations happening annually. It is very likely that those who have ended their contract abroad will return. Furthermore, there is that possibility that those who entered as a temporary migrant worker in one country will possibly directly move to another country to continue as a migrant worker. For example, interviews with recruitment agencies have confirmed that some nurses working in the Middle East apply to other destinations usually the US and the UK. The current data capture system is not able to track these workers although the pattern has been observed by the recruitment agencies. Most HRH migrating abroad travel temporarily to the Middle East, permanent workers are mostly in the United States and Canada and have been employed mostly as nurses.

Thus, CFO data on permanent migrants is also incomplete in the sense that if permanent migration is not processed in the country, then those who have left through a second country cannot be tracked.

The pull factor mostly is the salary differential offered internationally. Using the latest salary standardization for government workers and international salaries through PayScale[24], the differentials are as follow: a) the highest paid government nurse will get about PhP 650,000 per annum as against the lowest entry level nurse in Saudi Arabia getting paid PhP720,000, b) The highest paid midwife is to get an annual pay of PhP 432,000 which is lower than the entry level midwife in Saudi Arabia who is paid PhP 510,000, and c) the highest paid doctor will get PhP 1.4 M which is lower than what Saudi Arabia can offer at PhP 1.6 Mn per annum.

FIGURE 26. PAY DIFFERENCE: INTERNATIONAL (2019)
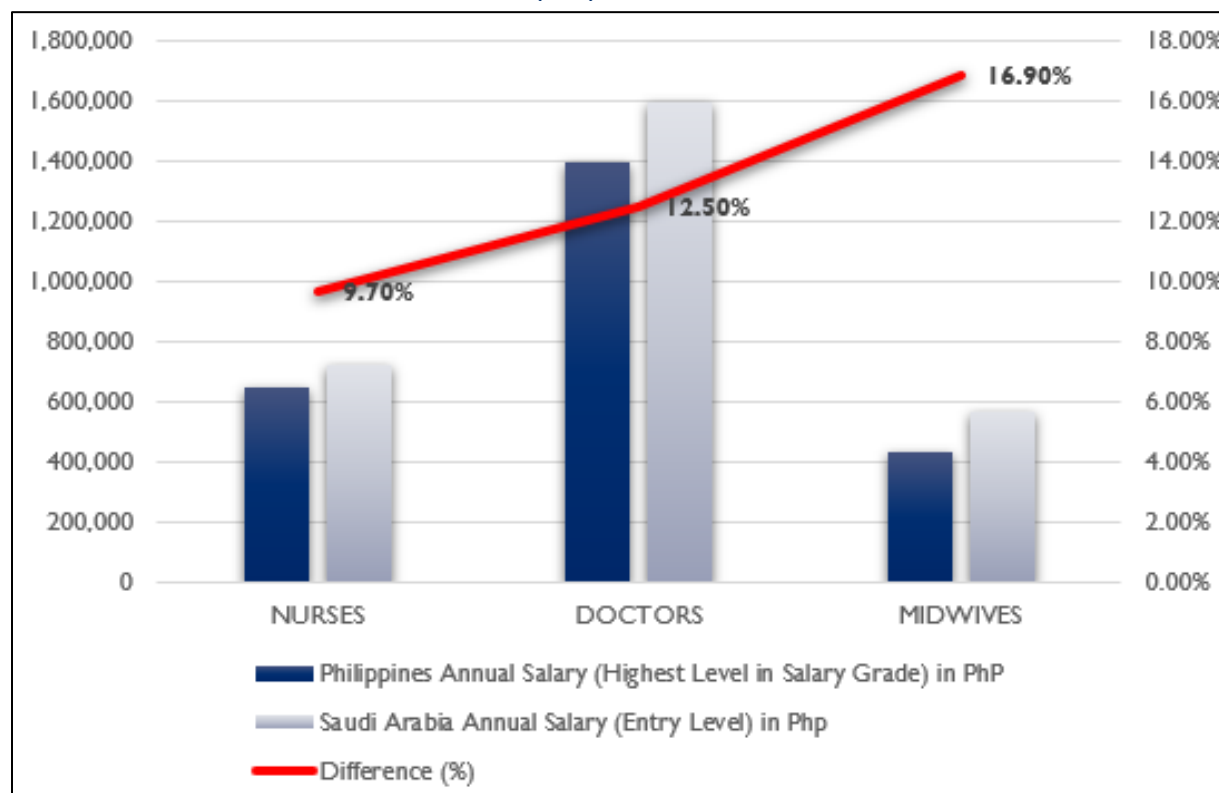
Source: PayScale

To convert the salary differential into cost of living differences, we consider the data generated under World Data.[25]   This dataset compiles data across countries using representative baskets of consumer goods. As it is difficult to come up with standards, e.g. size of apartments, importance of certain items due to culture, this comparison gives a general indication of what cost of living differences are between countries. Using collected data as of 2018 and making the US as the base country for comparison, we considered the top countries for health worker migration. The cost of living index of the Philippines is 44.3. This means that compared to the US, the cost of living in the Philippines is 55.7% cheaper. In fact, among the destination countries, the cost of living difference ranges from 63.4% in Australia to 17.9% in Saudi Arabia. This means that it is much less expensive to live in the Philippines. Filipino workers, however, migrate because of the low purchasing power of what is earned in the country. Using the US income as base comparator, the monthly income in the Philippines can only buy 14% of what the monthly income can buy in the US. The purchasing power difference is a key pull factor for working abroad.

TABLE 6. COMPARISONS OF COST OF LIVING AND PURCHASING POWER

	Cost of Living (COL)	Monthly Income	Purchasing Power	Difference of COL	Difference in Purchasing Power
Australia	107.7	4,280 USD	80.6	63.4	36.3
Ireland	107.3	4,448 USD	84.1	63.0	39.8
New Zealand	105.1	3,232 USD	62.4	60.8	18.1
US	100.0	4,930 USD	100.0	55.7	55.7
UK	99.6	3,383 USD	68.9	55.3	24.6
Canada	95.9	3,566 USD	75.4	51.6	31.1
Singapore	95.8	4,544 USD	96.2	51.5	51.9
UAE	77.9	3,261 USD	84.9	33.6	40.6
Saudi Arabia	62.2	1,674 USD	54.6	17.9	10.3
Philippines	44.3	305 USD	14.0	-	-

Source: World Data, 2018

Overall, there are is an average of 12,976 HRH composed of doctors, nurses and midwives who leave the country annually (CFO and POEA, 2017). This information is understated since this is only based on official government channels. There are many informal ways to leave the country's porous borders. For example, the ASEAN Free Trade area allows Filipinos to move freely without visa and many leave as tourists to popular destinations such as Hong Kong and Singapore, but eventually find their way to a third country to work.

A similar analysis was done to measure gender pay gaps among women and men permanent and temporary HRH migrants based on the average annual salaries in 2016 of five countries: the US, Canada, Australia, New Zealand and the UK in relation to the HRH migrants' occupational segregation. Such analysis revealed gender pay gaps, with 17% of men permanent HRH migrants earning more, on average, than 17% of women permanent HRH migrants; and, with 6% of men temporary HRH migrants earning more, on average, than 6% of women temporary HRH migrants (Figure 27). Again, this pay gap is attributed to the occupational segregation of women and men migrants in the health workforce. Using data in 2000-2010 from Figure 25, the 17% gender pay gap for permanent HRH migrants translates to 1,062 men earning more than 3,865 women among permanent HRH migrants.[26] In terms of the 6% gender pay gap for temporary HRH migrants translates to 966 men earning more than 6,155 women among temporary HRH migrants.[27] It is important to note, however, that this analysis does not consider any returning HRH migrants as there are no available sex-disaggregated data on this.

FIGURE 27. GENDER PAY GAP AMONG PERMANENT AND TEMPORARY HRH MIGRANTS AS A PERCENTAGE OF OCCUPATIONAL SEGREGATION VS. MEDIAN ANNUAL SALARY28
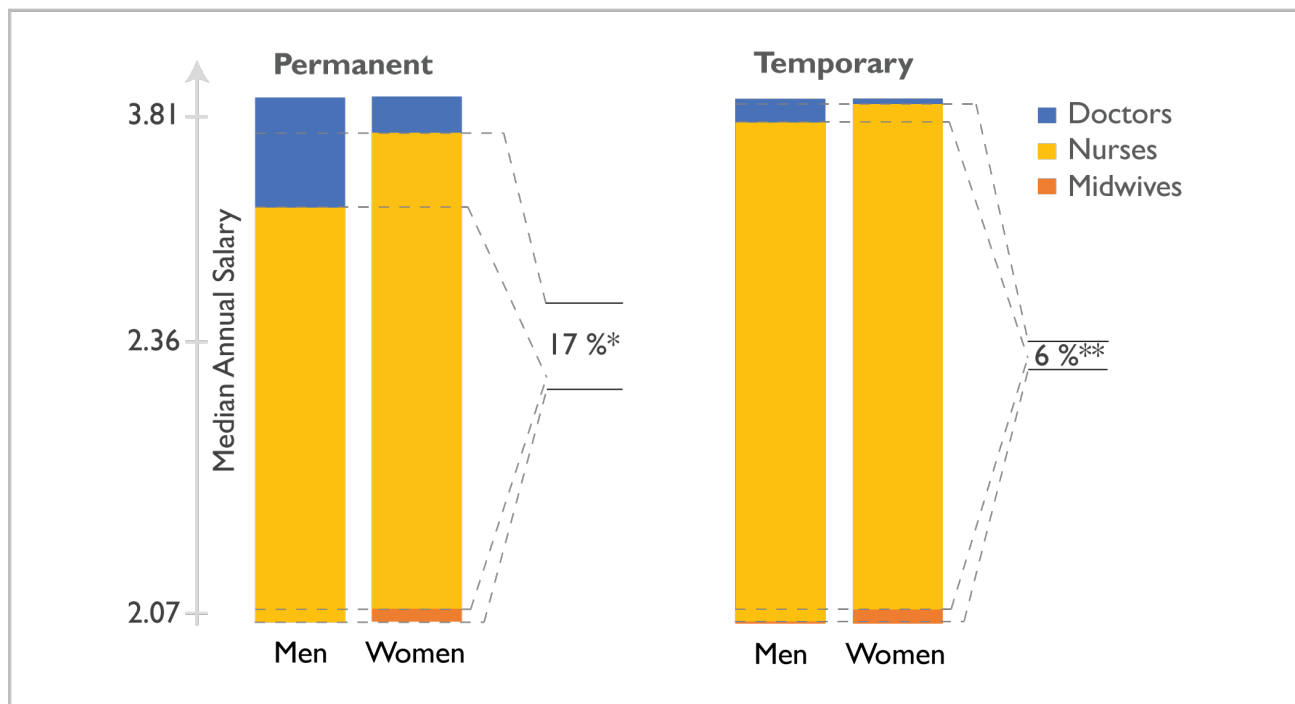
*17% of men permanent HRH migrants earn more than 17% of their women counterparts due to occupational segregation.

**6% of men temporary HRH migrants earn more than 6% of their women counterparts due to occupational segregation.

Source: POEA, CFO and PayScale. All data in 2000-2010.

Domestic Migration. Apart from international migration, a more recent outflow of HRH has been to Business Process Outsourcing (BPOs). The Philippines is one of the world's top provider of BPO services ranging from basic customer service, sales to the more sophisticated creative industries. Within the spectrum of services are health care related information management such as medical transcription, data management, medical coding and billing, revenue cycle management, and pharmaceutical benefits management, among others (IBPAP). As this kind of service requires basic knowledge of health care, the preferred workers are mostly those with health education and training. According to the Information Technology and Business Process Outsource Association (IBPAP), there are an estimated 118,200 workers in the health information management segment as of 2016.

This demand for Filipino health workers in the BPO industry is expected to grow to about 210,300 by 2022 according to the IBPAP estimates. This is primarily due to the aging demographics in the US and Europe and their digitalization of records. Filipinos are in demand because according to the IBPAP, the country has the largest pool of US-licensed nurses outside the US and that the education system is patterned after the US allowing for easier adjustments to US standards.

Findings

Putting together the different elements of the education and the health markets lead to the following:

1. On average, there is an annual entry of 50,674 qualified doctors, nurses, midwives and medical technologists into the health labor market.

2. The current stock of qualified HRH is 720,651 net of those who have not renewed their licenses due to death, retirement and movement to other industries which is estimated to be 275,594.

3. Based on official and available data, the average annual outflow of qualified doctors, nurses, midwives and medical technologists to migration is about 12,976.

4. The BPO sector started in the Philippines in the mid-2000s. Annualizing the latest estimate of 118,200 will lead to an annual average of 11,820 workers joining the BPO sector.

5. The health system has currently employed a total of 596,440 workers for both the public and private sectors (all cadres).

6. The estimated combined existing vacancies listed in the health sector is about 20,392 positions with 12,152 jobs in the private sector and 8,240 jobs in public hospitals.

FIGURE 28. SUMMARY OF THE PHILIPPINE HEALTH LABOR MARKET

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

Improving equitable access to health workers is a systemic challenge. Based on the data gathered for the different components of the health labor market, it requires adjustments and calibrations in corollary markets and sectors. Hence, it should be seen as a longer-term perspective with short-term strategies to respond to the needs of UHC. When responding to this question, the below aspects of the market should be taken under consideration.

Economic, Population Health and Political Considerations. The buoyancy of the economy will naturally increase incomes of people as already observed. Combined with the institutionalization of the 4Ps, free college education and lower income taxes, it is expected that the average Filipino household will have spare resources to increase health care expenditures in the near term. As observed in countries who have gone past this stage in economic transition, such transition is typically accompanied by the triple burden of diseases that could further increase future demand for health.

Though rising income and health expenditures, the country continues to lag in some primary health outcomes, notably maternal and child health and preventable diseases such as TB, due to economic reasons. This is suggesting that inequality in income remains pervasive and that the most affected are those who are poor and in geographically disadvantaged areas. For instance, data from the NDHS 2017 reveals that poor and disadvantaged regions such as ARMM, Region IV-B and Region 12 in Mindanao have the least access to assistance in birth delivery. The regional income disparity and geographical distance is also affected by the peace and order situation as poverty and lack of basic government services, including health, have been further compounded by armed conflicts in pocket areas of these regions. The passage of the BARMM law is expected to address this unrest in Mindanao. Region IV-B, meanwhile, is a challenge mostly of it being composed by island provinces leading to difficulty in service delivery and coordination. Provision of more infrastructure are currently underway which could improve connectivity in the future. With relatively few regional centers of economic growth across the country, the economic congregation has mostly been in Luzon primarily Metro Manila and its peripheral regions, Region IV-A and Region III. These three regions combined for approximately 62% of the country's economic output.

Production. This has naturally attracted the pattern of education and the health market. Consider the data on the number of schools, the aforementioned three regions also combine for 37.3% of all schools offering health science course. Consequently, these three regions also produce 47% of all health sciences education graduates. Nonetheless, in terms of courses offered, the imbalances are somehow softened with schools offering midwifery almost equally distributed across the regions. Schools offering nursing are also somehow fairly distributed although a larger share is still observed with the three regions. Schools for medical technologists follow the regional domination of the top three economic regions, but medical schools are specialized in Metro Manila and Region VII (Cebu).

Distribution. With the production of health workforce largely concentrated in the top three economic regions, it also naturally follows that health facilities and work available are largely present and available in these regions. Consider the number of level 1 hospitals, out of the total 1,576, 66% are in these regions. Similarly, based on data of the Professional Regulations Commission (PRC), 46% of all HRH registered are from the same regions. This is quite close to the share of private health workers of which 47% are working in these regions. Though there is a regional imbalance for Rural Health Unit and Hospital Level

facilities, it can be said that barangay health stations (BHS) are more equitably distributed throughout the country. The combined percentage of BHS for these three regions is much lower at 26%. Likewise, their relative share to the total number of Barangay Health Workers (BHW) is only 18% of the total. In addition to regional imbalance, there is also a gender imbalance observed in the HRH stock with more women than men in HRH stock.

Overall Considerations for Development. The national equity balancing for professional health workers will need a longer time frame and more political will to implement adjustments. The economic force driving the health and education markets is much bigger than what health policy can do in the short-term. The Medium-Term Plan 2017-2022, of the Philippines Development Plan (NEDA) already calls for a regional spatial strategy identifying different urban and growth centers in every region in the country which will support equitable distribution. However, it will take time to realize this strategy as the country is just beginning to invest in infrastructure and connectivity.

Role of Barangay Health Worker. One consideration to improve equitable access to the health workforce to advance UHC is to identify appropriate mechanisms by which to maximize the existing BHS and BHW systems already set in place across the country. In terms of policy, there is already a law Republic Act 7883 giving incentives to BHWs. Although they are considered community volunteers, the law gives them the right to become permanent government employees if they have continuously worked for five years. The main impediment, however, in making this work is that BHWs are under the jurisdiction of the local governments. As health is a devolved function to the local governments, it is up to the LGUs to appoint and assign BHWs to work in their areas. Based on regional consultations, most BHWs do not become regular employees of LGUs since they are mostly appointed by the new Local Chief Executives (LCEs) after the elections. Since the term of LCEs is fixed at 3 years, the chances of becoming permanent is uncertain. Besides, it provides leeway for the LCEs to replace BHWs as a means of repaying those who supported them during the election campaign. Thus, it is expected that every new local administration will appoint new sets of BHWs. This situation disrupts and derails any headways in health improvements in the communities, especially in the disadvantaged and poor regions as the new workers needed to be trained again.

Wage Considerations for Equity. Another aspect of equity that needs to be addressed for HRH is the wage disparity within the public and between the private health workers. As mentioned previously, the entry level premium is roughly about 50% and that is incentive enough for those HRH looking for a job to remain unemployed and wait it out for a position in the public sector. Based on findings of the regional consultations, many are resigning from the private sector and applying for public sector work even if the position is not permanent such as those in the nurse deployment program. Private hospital representatives have said that since they are unable to hire nurses, they simply close wards within the hospitals to limit their operating capacities. This is highly inefficient and further compound the issue. With less revenue opportunities, private hospitals will continue to be unable to offer higher pay, as they struggle to hire workers to more services.

From the perspective of the doctors and nurses' professional associations, the challenge of equitable manpower for UHC is not just wages. For doctors, it is important not only to be paid well (considering the huge cost of educational investments they have made), but also to be provided the equipment and supplies that they need in order to perform their services better. Most are shying away from the public sector because of weak support mechanisms such as availability of proper tools, equipment and even

medicines. In addition, doctors noted during focus group discussions that they are overworked in the public sector because of the lack of these support mechanisms. Considering the large private sector presence in the health industry, the government should carefully consider contracting some elements of primary care to the private sector.

The nurses' association recognized the wage disparity issue between the public and private sectors. They also confirmed that due to the lack of nurse applicants, many hospitals are closing.   This is because nurses are recognized as critical element in the provision of health services from the basic to the critical care so even a primary level 1 hospital cannot operate without a full complement of nurses. According to them, the estimates of PhP 12,600 entry level pay for nurses in private hospitals is high. Some hospitals are only paying PhP 8,000 according to their members. Previously, a law has already been passed to increase the entry grade of nurses in the public sector from grade 11 to 15. However, this law was overtaken by the different salary standardization laws that have been passed through the years.

Nonetheless, the President in the 2019 State of the Nation Address (SONA) asked Congress to give priority to increasing the pay of nurses and teachers. The implication of this increasing wage difference in public and private can have two results: one, that nurses will be willing to be unemployed while applying for the public sector position; and two, they will accept a BPO job or possibly accept a lower pay in the private sector to get the experience necessary to work abroad. In the latter cases, the health worker may be permanently lost for local health work. All stakeholders should recognize that the reason for the "scramble" for higher pay is because the production of health workers is financed personally by the individual and therefore a personal "return of investment" is necessary.

International Demand. It is also important to consider the perception that among Filipino nurses are in demand abroad for their skills, competence and personalized care. This is validated by an IBPAP study which observes that 40% of foreign educated nurses in the US are Filipinos. Thus, working out of the local health system is always an open option.

Private Sector Inside and Outside of Health Sector. Furthermore, the low entry level pay in the private sector will only attract fresh graduates who in turn will use it as steppingstone to increase experience for eventual work abroad. If this is the case, the nurses' association is concerned that our health system including primary health will be vulnerable because it will be run by fresh and inexperienced HRH. While thinking of a standardized salary scale is critical the crux of the matter is, improving the salary scale alone may not be enough. The overall being of the health worker must be carefully considered.

In regard to exit out of the health sector, one of the outlets of experienced nurses is to work in BPOs. In fact, according to the association, it is the BPOs that are contacting them to help them recruit nurses to employ at their centers. The entry level pays for BPOs in health information management ranges from PhP 30,000 to PhP 50,000 a month excluding benefits. This is more than double the pay in private hospitals and higher by PhP 10,000 for entry level nurses in government. Many nurses are opting for these types of jobs as the working conditions are much better and the load is lighter compared to health facilities. One of the perks offered by some BPOs is the assistance in the processing of the US Nursing Board examinations which are needed in their BPO jobs. There are some nurses in BPOs who are willing to return to health practice, but they have difficulty since they have not practiced for some time. Many of them continue to update their local license and thus are certified as part of the qualified pool, though they are not providing health services to Filipinos in the Philippines.

Gender Considerations. As stated above there are certainly more women than men in HRH stock, however, women continue to be disadvantaged in terms of pay due to occupational segregation. The share (not absolute number) of women HRH stock is greatest in the midwifery cadre which is also the least paid among the health workers; while, the share (not absolute number) of men HRH stock is greatest in the physician cadre which on the other hand is the highest paid among the health workers. This gender pay gap is not well observed because there is a misunderstanding that pay gap analysis is only done between women and men within a cadre. For instance, there is an assumption that a man and a woman nurse are both paid equally if they are in the same positions (although we don't have person-level data to validate this, as of now). But in terms of occupational segregation, considering the share of women and men across the cadres, this report found an 8% gender pay gap, favoring men.

These views were validated during the regional consultations. Many of the regional participants were trained health professionals but are currently working in administrative duties such as human resources, school administration, labor officer, among others. To address the inequity in wage for public and private health professions, the overwhelming recommendation was to come up with a standardized pay scale for both public and private sector. This is, however, challenging and unrealistic considering the different forces affecting the markets for health education and health services.

What are the cost implications (fiscal space and investment costs) and fund sources of the HRH component in the UHC?

Investing in health workers to improve health outcomes is not a new concept in the country. Even before the devolution, there was fiscal space provided for allocated HRH investments, particularly for rural health workers, to strengthen health service delivery.[29] Since then, there were several laws passed that provided direction and guidance to increase the fiscal space[30] by aligning investments to current population needs[31] , creating decent health sector jobs,[32] investing in education, continuous professional development, employment and retention, and mobilizing resources for HRH. [33]

In response to these directives, further guidance on implementing the HRH investments directed by these laws particularly for health workers in the public sector have been released by government offices. The CSC established the Local Scholarship Program for public sector workers to provide opportunities for continuous professional education. This scholarship is available to all health workers working in the public sector; however, it was indicated in the guideline that this is in a "first come, first serve" basis. The DOH also issued guidelines and sub-allotments covering the health workforce in public service to support pre-service education for aspiring health workers that will eventually enter the local health workforce.[34]

General appropriations allotted to the personal services of the DOH and its attached agencies has been generally increasing. However, personal services allocation data available in the General Appropriations Act for the last five years does not identify the personal services allotment for the local health systems which are now in charge of health care delivery.[35]

Investments to increase supply of health workers in the local health system have been placed by DOH since 1997[36] and have been maintained through the succeeding issuances supporting deployment of health workers[37] such as doctors, nurses, midwives, dentists and other types of health workers to augment LGU-hired health workers and address the changing local health system needs. On the other hand, measures for boosting market demand for these health workers have been articulated in government issuances and republic acts supportive of specific health programs such as Republic Act 10767 for tuberculosis, DOH Administrative Order 12 s. 2017 for adolescent and youth health and Republic Act 10354 for family planning. However, most of these government issuances only cover the

public sector and are usually driven by vertical programs. Even with these policies in place that ensure investments for HRH, working conditions did not improve enough to retain HRH in the country.

The cost implications of the HRH requirements of UHC range from the training and education of health workers, to considerations of remuneration and strategic leveraging of the private sector to achieve UHC. The discussion on costing is examined from two angles: the Education Sector and the Labor Sector.

Education Sector. Based on current education policies, government has already identified the provision of health sciences education as a public good. However, with 80% of the education sector delivered under the private sector, this could lead to quality issues in the future as the public education system will be deluged by more applicants. It could also lead to a potential situation wherein the private education system will lose enrollment and face future closure. The salary standardization policy of government also extends to the education sector and the increasing salary differential have already led to many private school teachers moving to the public sector.

Philippine culture puts a lot of premium on the college diploma. Parents consider graduating their children from college as part of their parental responsibility. Even if the government cannot absorb their children in public universities and colleges, parents will pay for private education. It is considered as an "investment." Therefore, many fresh graduates are enticed to take on low pay in the private sector as part of their experience building for a higher future return on investment by working abroad. For example, for those wanting immediate return on investment, the BPO sector is an easy option.

It is therefore imperative that government treats health sciences education as not only a public good, but as an investment as well. In this context, making it public means that it will ensure limited "wastage" or that the dropouts from enrollees will be minimal and that those who will graduate will pass the licensure examination and will work in the public or private health system. This should be the clear basis of the return service agreement (RSA) which also looks at supplying health professionals to the private sector. The investment could be estimated in terms of improvements in the quality and years of life of the population, efficiency in addressing the burden of diseases and overall welfare improvement of the population.

In terms of training, the TESDA provides full scholarships for all its auxiliary health certification programs. The government already provides free tuition and waiver of all fees for state universities and colleges (SUCs). The setting up and creation of more public health positions for the deployment programs will also incur costs.

Health Labor Market. In regard to the health labor market, costs should consider several issues such as remuneration, but also costs of provision of services and the impact of the disequilibrium of these services between the private and the public sector. To begin, there are several issues with salaries related to equity in remuneration between the private and public health workforce which is impacting the ability of the private sector to function in a manner that ultimately benefits the public sector. As is noted above, public sector salaries are higher, and continue to grow, while private sector salaries stay stagnant. This is leading to trained health workers leaving the private sector, seeking higher wages in the public sector and impacting the ability of the private sector to provide services. As mentioned above, it was found during consultations that hospitals, at times, close units in their facilities due to lack of staff. This trend means that the private sector is unable to "fulfill its role" in the health system and thus could cause the public sector to "fill this gap", leading to greater cost considerations. To achieve UHC, a well-functioning private sector is needed to allow for contracting of certain services and if the private sector

is not able to supply these services, the costs will continue to fall on the public sector. When looking inside of the public sector, the cost structures of the LGUs must also be considered. As is referenced above, the LGUs PS cap and role of the BHW does have an impact on staffing of the health workforce and thus should be included in any considerations of costing for UHC.

Overall Gender Considerations. In addition to the migration issue, the report also found that a bigger share of men HRH workers are permanent migrants. Since there are more women HRH workers in general, there is another misconception that the number of men HRH migrants can be ignored. However, considering the former finding, this worsens the already existing gender imbalance within the HRH stock in the country. Men's decision of leaving the country and perhaps staying as permanent migrants may be attributed to the existing gender pay gap of 17% (more than twice as high of the country's HRH gender pay gap), favoring men.

Overall, a major challenge in costing is estimating these costs and juxtaposing them to government capacities to raise revenues and identify funding sources. And even before these can even be decided upon, there should be a recognition that the health labor market in the country is severely imbalanced and is far from the ideal market determined by supply and demand of human resources. The domination of the market in both the supply and demand of HRH necessitates that government takes a clear position on what it considers as public good in the health care system. In fact, government should treat all the resources it is pouring to health and UHC in particular as investments, leading to improvements of UHC outcomes. Government, therefore, must put the proper valuation of its investments in health. This is a gap that needs to be established by a broader analysis of revenues and investments and their impact to society.

What is a sustainable international migration policy for the Philippines?

As is evidenced above, stakeholder observations are that health workers are moving from the private sector, to the public sector, to positions abroad due to the remuneration and other opportunities for their dependents. While this is a broad question that cannot be addressed solely by the health sector, this HLMA will provide information on the market that is inherently driving migration and offer insight on what factors need to be considered to lessen the negative impact of the same.

Supply & Demand. In the case of health, the proliferation of nursing schools and the high enrollments in the early 2000s was mainly a response to the international market demand for Filipino nurses. As international demand has inconsistently gone up and down, the local education system has produced more nurses who are not being absorbed by the local health systems[38]. According to recruitment agencies involved in health care, demand has recently slowed down especially for high quality hospitals abroad. This may be a reflection on the quality of health sciences education or as in the case of the Middle East[39], changing policies particularly of the Saudi Government has affected in the inflows of Filipino nurses and midwives. For instance, in the mid-2000s, migration of midwives decreased significantly because the Saudi Government adjusted their health systems to align to global standards. They raised the qualification standards which increased the demand for nurses instead of midwives assisting in the birth delivery. When speaking to recruiters it was noted that much of the increase in nurse production in the country was due to a misunderstanding of the international market. Although, the decision makers were correct in focusing

on the aging population of the West, bulk of the demand for nurses came from the Middle East which eventually slowed down during the Arab Spring. By then, the "hype" had increased the number of schools and graduates of nursing in the country. Nonetheless, many go to work as nurses in Saudi Arabia because of the Joint Commission International (JCI)[40] certification that hospitals there have which is limited in the Philippines. Most Western health care facilities require experience from JCI facilities, hence, many of those who are in Saudi Arabia are there use these experiences as steppingstones for eventual move to the United States, Canada or Great Britain.

Strict requirements, including language, is affecting international migration because many health workers are not able to pass the International English Language Testing System (IELTS) where the passing rate currently is only 13%. On the other hand, the recruiters also noted that the competitive salaries being offered by BPO health care in the country has slowed many international recruitments. Some are using this avenue to further hone their skills and eventually try the IELTS again. Likewise, as was noted above, some BPOs help their employees pass the National Council Licensure Examination (NCLEX) and also assist them in acquiring a Social Security Number (SSN) which is a requirement in the NCLEX. As to the returning health workers, many of them prefer to go back to work abroad as the packages offered locally are low or if they stay, they enter other jobs that pay higher.

International migration is a given in a globalized economic environment but understanding the "why" is critical to making strategic decisions around the management of immigration. Addressing the issues of misalignment of production as per changing trends in domestic and international demand, as well as factors compounding retention domestically should be taken into consideration.

Recommendations

While there are many possible solutions for overall advancement of UHC, the below recommendations have been grouped in alignment with the HLM framework.

Education Sector. Overall, the HLMA highlighted the need for collaborative planning for HRH production. The creation of a Tripartite HRH planning sub-group under the HRH Network composed of academe, industry and government who will oversee the signal response mechanism of the health education system is imperative. In addition, there is a need to set a regulation on the number of health sciences school per region with priorities accorded to regions lacking health workers with State Universities offering health sciences education distributed across the country. Pre-service and in-service targeting strategies (e.g. scholarships, training opportunities) should be in place to attract particularly disadvantaged genders in relation to the cadre. Priorities can be accorded for instance to remove barriers to education and training and support career advancement for women as physicians and other highly-skilled health occupations; as well as, men as midwives, BHWs or primary health care workers. Finally, a counterpart and compulsory National Health Service for private sector health sciences graduate like the National Health Service of Singapore could be developed.

Labor Market. The HLMA noted not only maldistribution of HRH geographically, but between the private and public sector, and even within the public sector. To begin with the maldistribution between the private and public sector, the government should examine the use of Health Care Provider Networks to contract certain provisions of primary care to the private sector[41]. A careful analysis of what packages can and

should be subcontracted to the private sector should be conducted. With the huge disparity in wages between public and private sectors, subcontracting can help retain HRH in the private sector at a higher wage package and at the same time allowing the private health facilities to efficiently use their physical resources and help prevent future closures due to lack of HRH. This practice has been done in education through the Expanded Governance Assistance to Students and Teachers in Private Education (GASTPE) Act (2013), where the government pays private schools to accept students and teachers where public schools are deficient or inadequate in places. Also, regarding remuneration, occupational segregation can explain most of the gender pay gap within the country and abroad. Strategies of increasing participation of women in highly paid occupations is important; but also, increasing participation of men in midwifery, BHW and primary care facility workforce must be explored in order to address both the gender pay gap as well as the gender imbalance in the HRH stock. For addressing gender pay gap, building on gender considerations to recommendations in the education sector can help address the gendered occupational segregation which is the primary reason for the pay gap in the health sector. However, person-level data within the cadres should also be made available to assess whether there are gender pay gaps within the cadres that could be related to full-time/part-time employment status, working hours, etc.

Identifying how to maximize the management of HRH by LGUs should be examined closely as the current devolved set-up of health is not properly being leveraged. It must be understood that the Local Government Code is unlikely to be changed for health unless there is a total overhaul of the Law. In addition, LGUs are being cascaded with several laws to implement without the necessary capacity and fund augmentation. Even the UHC Law requires LGUs to organize local health systems and integrate them into the different layers. Hence, what is critical to consider is how to maximize current structures and following the examples of other devolved agencies.   Identifying motivations and barriers for LGUs to better manage and optimize the health workforce, including BHWs will be important as the HLMA demonstrates well the issues LGUs are having in prioritizing fiscal space for the health workforce. This could be in terms of advocacy for use of planning tools to determine staffing needs, demonstrating to the LGU the potential on return on investment or finding other mechanisms to require adherence to staffing standards that are not in violation of the Local Government Code. In terms of following examples from devolved agencies, the Department of Agriculture's use of subsidies to pay allowances of LGU Agricultural Workers in GIDAs proved successful. This increase in the allowance can also perhaps attract men applicants for BHWs easing the gender imbalance among health workers. At the same time, this addresses the fact that much of the work in health done by women (as BHWs) is unpaid work. Investments such as additional allowances can support the recognition of informal work into formal sector employment. Furthermore, the 4Ps which is now institutionalized into a law through the Department of Social Welfare and Development have a network of workers at the municipal levels called the Municipal Link. The Municipal Link can be tapped by the LGUs as coordinator of HRH in the locality if there are none.

To address issues related to remuneration, for the salary differentials between public and private sectors, to settle the imbalance is to find the appropriate value of the health worker in the health system. In addition, salary differentials outside of the health sector of the Philippines or the health sector in general, should also be taken into consideration (in particular, for trained health workers who are joining BPOs as a means by which to travel abroad). A valuation study can be jointly implemented by the professional associations and the association of health institutions.

Finally, for governance and budget coordination, a unique health outcomes based awards system twinned with health human resource grant system can be established through the Department of Health (DOH). This can be an upgrade of the Kalusugan Pangkalahatan Awards (Health for All) targeting LGUs. The grant should be for the development or addition of health human resource.

Overall, taking a health labor market approach to addressing issues with the health sector and for planning and policy making is critical, as the various perspectives involved in such approach allow for a balanced response that will promote the development of strong market for the health workforce that responds to the supply and demand needs of the country.

Conclusions

As is evidenced by this report, conducting a HLMA allows policy makers and decision makers to understand the dynamics in both the education sector and labor market which can be used to respond to specific policy questions and overall provide an insight into what factors are facilitating or impeding health workforce goals under UHC.

The health labor market is currently facing a serious imbalance. It is responding to various price signals that are not market determined such as government set salaries; to international salaries; to higher pay in the BPO sector. The larger segment of the local health labor market is private sector led but is being out demanded by these three outlets. This imbalance is a product of various policies in the past in education, governance and financing. It is difficult to undo many of these policies as they will have wide-ranging implications in other sectors. The policy of allowing the market to open more schools had led to the proliferation of institutions with quality becoming a challenge. The result is a highly skewed production focused for the international market. Now that supply has increased, demand has softened, and the system has produced many workers with nowhere to go. This is further compounded by the realities at the LGU level, where health is not often prioritized in hiring decisions. As well, the recent implementation of salary standardization is good for those currently in government, but it also increases the gap between the public and the private sector and potentially between various LGUs due to different regional salary scales.

The issues challenging the health labor market are beyond what one stakeholder can manage and require governance discussions and a broader policy perspective. Contextually, governance is also linked to the budget systems. These actions and inactions of government are sending signals to the private sector on how to respond. Since they are motivated by profit, they consider health science education and health in general as private goods and therefore with a price. Unfortunately, with conflicting signals being picked up by the private sector, the health labor market will remain weak and this will affect the ability of the market to deliver services needed accordingly.

Now that the Philippines is equipped with the information there is a need to better understand what policies and actions need to be developed, and what stakeholders need to be leveraged to ensure that a fit for purpose, fit for practice health workforce is being produced and absorbed in a manner that responds to population health needs.

References

Commission on Filipinos Overseas. 2017. Database on the Deployment of Permanent Overseas Filipino Workers. Manila.

Dayrit MM, Lagrada LP, Picaso OF, Pons MC, Villaverde MC. 2018. The Philippines Health System Review Vol 8 No 2. New Delhi: WHO Regional Office for Southeast Asia

Department of Budget and Management. 2019. Local Budget Circular No. 118. Retrieved from https://www.dbm.gov.ph/wp-content/uploads/Issuances/2019/Local-Budget-Circular/LOCAL_BUDGET_
CIRCULAR_NO._118.pdf

Department of Health. 2008. Vaccine Preventable Diseases Monthly Surveillance Report No.3. Retrieved from
https://www.doh.gov.ph/sites/default/files/statistics/VPD_MARCH_MONTHLY%20SURVEILL ACE%20REPORT%20.pdf

Department of Health. 2019. Knowledge Management and Information Technology Service National Health Facility Registry Database. Manila.

Department of Health. 2018. National Database of Selected Human Resources for Health. Manila.

Department of Health. 2017. Field Health Service Information System 2000-2017. Manila.

Department of Health. 2017. National Tuberculosis Prevalence Survey 2016. Manila.

Department of Labor and Employment. 2019. Summary of Current Regional Daily Minimum Wage Rates. Retrieved from http://www.nwpc.dole.gov.ph/stats/summary-of-current-regional-daily-minimum-wage-rates-by-region-non-agriculture-and-agriculture/.

Department of Labor and Employment. 2003. Supply and Demand Situationer For Nurses. *Labstat Updates, 7(13)*. Manila.

Department of Trade and Industry. 2017. Cities & Municipalities Competitiveness Index. Makati.

Find University. 2019. Higher Education Institutions Database. Retrieved from https://www.finduniversity.ph/

International Labour Organization. 2017. Improving Employment and Working Conditions in Health Services. Geneva.

International Labour Organization. 2018. Global wage report 2018/19: What lies behind gender pay gaps. Geneva.

Law S, Poling A, Tangcalagan K. 2019. Validation of HRH2030 Gender Competencies Framework for Family Planning Providers in the Philippines June-July 2019. Manila.

IT & Business Process Association Philippines. 2018. Accelerate PH: Future-Ready Roadmap 2022. Accessed from http://boi.gov.ph/wp-content/uploads/2018/03/Executive-Summary-Accelerate-PH-Future-Ready-Roadmap-2022_with-corrections.pdf

LBS Recruitment Solutions Corporation. 2019. Personal Interview with Loreto Soriano. Manila.

GHR Healthcare Recruitment Incorporated. 2019. Personal Interview with Marlon Solis. Manila.

Lorenzo, F. 2008. The Philippine HRH Master Plan. A presentation GHWA Conference, Uganda March 2008.

Pay Scale. 2019. Average Annual Pay of Registered Nurses, Midwives, and Doctors. Retrieved from http://payscale.com/

Philippine Hospitals Association. 2019. Personal Interview with Pearl Samonte. Quezon City.

Philippine Medical Association. 2019. Personal Interview with Jose Santiago Jr., MD. Quezon City.

Philippine Nurses Association. 2019. Personal Interview with Maria Liza Peraren. Manila.

Philippine Overseas Employment Administration. 2010. Deployment per Skill per Country per Sex. Retrieved from http://www.poea.gov.ph/ofwstat/ofwstat.html.

Philippine Overseas Employment Administration. 2017. Generated Database on OFW Deployment Counts. Mandaluyong.

Philippine Regulations Commission. 2019. Generated Database on Counts of Registered Doctors, Medical Technologists, Midwives, and Nurses. Manila.

Philippine Statistics Authority. 2019. Annual Survey of Philippine Business and Industry on Health and Social Work 2010-2017. Retrieved from https://psa.gov.ph/statistics/survey/business-and-industry/index-by-industry/Health%20and%20Social%20Work

Philippine Statistics Authority. 2016. Family Income and Expenditure Survey 2003, 2006, 2009, 2012 & 2015. Quezon City.

Philippine Statistics Authority. 2016. Integrated Survey on Labor and Employment 2014 & 2016. Quezon City.

Philippine Statistics Authority. 2018. Labor Force Survey 2001-2017. Quezon City.

Philippine Statistics Authority. 2017. National Demographic and Health Survey 1998, 2003, 2008, 2013, & 2017. Quezon City.

Philippine Statistics Authority. 2018. Philippine National Health Accounts Database. Retrieved from https://psa.gov.ph/pnha-press-release/data

Philippine Statistics Authority. 2006. Philippine National Health Accounts 1993-2004. Quezon City.

Philippine Statistics Authority. 2013. Philippine National Health Accounts 2005-2011. Quezon City.

Philippine Statistics Authority. 2016. Occupational Wages Survey 2014 & 2016. Quezon City.

Philippine Statistics Authority. 2018. Philippine Statistical Yearbook 2018. Quezon City.

Population Pyramid. 2019. Population Pyramid Database. Retrieved from https://www.populationpyramid.net/philippines/2019/

OECD. 2016. Health Workforce Policies in OECD Countries: Right Jobs, Right Skills, and Right Places. Paris: OECD Publishing.

OECD. 2015. International Migration Outlook. Paris: OECD Publishing.

Republic of the Philippines, Senate, House of Representatives. *Republic Act 10354: The Responsible Parenthood and Reproductive Health Act of 2012.* Official Gazette, 2012. 15th Congress, 3rd regular session, Senate Bill 2865 and House Bill 4244.

Republic of the Philippines, Senate, House of Representatives. *Republic Act 10931: Universal Access to Quality Tertiary Education Act.* Official Gazette, 2017. 17th Congress, 1st regular session, Senate Bill 1304 and House Bill 5633.

Republic of the Philippines, Senate, House of Representatives. *Republic Act 11223: Universal Health Care Act.* Official Gazette, 2019. 17th Congress, 3rd regular session, Senate Bill 1896 and House Bill 5784.

Scheffler, R. Herbst, C., Lemiere, C., and Campbell, J. 2016. Health Labor Market Analyses in Low- and Middle-Income Countries. Washington, DC: The World Bank.

Scheffler, R., and Soucat, A. 2013. The Labor Market for Health Workers in Africa: A New Look at the Crisis. Washington, DC: The World Bank.

Sousa, A., Scheffler, R., Nyoni, J., and Boerma, T. 2013. A Comprehensive Health Labour Market Framework for Universal Health Coverage. *Bulletin of the World Health Organization,* (91):892-894.

WHO. 2016. WHO Guideline on the Use of Safety-engineered Syringes for Intramuscular, Intradermal and Subcutaneous Infections in Healthcare Settings. Geneva.

World Bank. World Development Indicators Database. Retrieved from http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world development-indicators

Zuellig Family Foundation (2018). Strengthening Local Health Systems through Health Leadership and Governance Interventions. Retrieved from https://zuelligfoundation.org/wp-content/uploads/2018/04/PB_032018_Strengthening-Local-Health-Systems.pdf.

Zurn, P., Dal Poz, M., Stilwell, B., and Adams, O. 2004. Imbalance in the Health Workforce. *Human Resources for Health*, (2):1-12.

Annex A. Research Protocol & Health Labor Market Framework Analysis

DETAILED PROTOCOL TO OPERATIONALIZE
HEALTH LABOR MARKET ANALYSIS (HLMA) IN THE PHILIPPINES

1. Introduction

The Philippines passed into law the Universal Health Care (UHC) Act last February 2019. This major piece of legislation is envisioned to provide an "integrated and comprehensive approach to ensure that all Filipinos are health literate, provided with healthy living conditions and protected from hazards and risks that could affect their health." One of the general objectives of the law is to "progressively realize universal health care through a systematic approach and clear delineation of roles of key agencies and stakeholders towards better performance in the health systems." This game changing act covers all citizens through the National Health Insurance Program (NHIP). The law demands a significant level of capacity to deliver health services for both population-based and individual-based services. This requires a strong primary care provider network system staffed through a National Health Human Resource Master Plan (NHHRMP). The NHHRMP is expected to provide policies and strategies to come up with the appropriate production, recruitment, training, regulation, retention and reassessment of health workforce based on population need.

Following this Act, this protocol will provide the framework on how to operationalize the goal of the Department of Health (DOH) for the country's health human resources and consistent with the requirements of the NHHRMP that is "adequate in number at all levels with competence to deliver universal health care through the continuum of preventive, promotive, curative and rehabilitative health interventions." Specifically, the DOH will be assisted by the HRH2030/Philippines Project through capacity building to strengthen the deployment, training, and management of a fit-for-purpose and practice health workforce[42] to improve access to quality of family planning (FP), maternal and child health (MCH), and tuberculosis (TB) services for vulnerable populations. This goal will be realized through the attainment of three main objectives:

1. Bolster effective skill mix, competency, and distribution of the health workforce at the primary level
2. Strengthen human resources for health leadership, governance, and performance management
3. Improve the use of data for human resource for health decision making at central and regional levels

In order to achieve the above goal and objectives, the HRH2030/Philippines Project will conduct a Health Labor Market Analysis (HLMA) in the country corresponding to three (3) critical policy questions that were developed in consultations with the DOH and the WHO. Given the critical importance of primary health care (PHC) to the achievement of UHC, the focus of the HLMA will be on PHC services, and especially the areas of MCH, FP, and TB as they make up a large portion of the PHC needs in the Philippines. The original three policy questions were:

- What is a comprehensive baseline of the number and distribution of Human Resources for Health in the Philippines providing primary health care (PHC) services, particularly in TB, FP, and MCH?
- What is a realistic projection of HRH to meet the obligations under the UHC Law that correspond to PHC and particularly to TB, FP, and MCH services?

- What are the financial projections of achieving projected HRH needs to meet the obligations under the UHC Law, especially as they relate to PHC services, such as TB, FP, and MCH?

These were later improved and updated in June 2019 following the different consultations for the Implementing Rules and Regulations (IRR) of the Universal Health Care Act. The policy questions as revised are as follow:

- How do we improve equitable access to health workers to advance UHC?
- What are the cost implications (investment cost) and fund sources of the HRH component in the UHC?
- What is a sustainable international migration policy for the Philippines?

To address these policy questions, this HLMA will provide the baseline data of the current state of health labor workforce development based on the needs of the population, demand for healthcare and supply for primary health care. The data will be used to assess the HRH impact and requirements of the UHC law related to the workforce delivering primary care and specifically TB, FP and MCH, which make up a large portion of primary care services.

The generated baseline data will be analyzed and recommendations will be provided to help the Department of Health (DOH) and HRH network of stakeholders to forecast future needs, identify gaps and policy responses to steer health workforce planning to a more productive, efficient, responsive and needs based approach. The information from the HLMA can be used also for the development of a National Health Workforce Registry as envisioned in the UHC Law. Critically, the HLMA should provide cost estimates of health education, salaries and benefits of health workers and the non-utilization of health workers for health purposes which can help in responding to the development of financial models in achieving HRH needs based on the UHC Law. The HLMA provides the backdrop on why the Philippines is having difficulty developing and sustaining HRH. The information will clarify how public and private sector institutions involved in migration can steer the demand for international HRH in the context of local needs without sacrificing individual choices.

2. Proposed approach in data generation

There are many frameworks to assess and implement a health labor market analysis. We have reviewed several them and found that the one of Sousa et al in WHO (2013) most appropriate for the Philippine country context. This framework was used mainly in identifying the data required for the analysis because it provides a comprehensive approach in analyzing health labor market within a country and globally to respond to universal health care needs. It recognizes the importance of the dynamics of the health labor market as the driving force behind meeting both the needs and the demand for health services within the country. Needs based approach is seen to be inadequate in addressing health manpower supply and demand gap as it is not linked directly to the factors of the health labor market. Thus, it is beyond health education and population health needs. The health labor market is influenced by the health needs of the population, the demand for health services and the supply and governance of health workers. Altogether these factors determine "workers' wages and allowances, the number of health workers employed, the number of hours they work, their geographical distribution, their employment settings, and their productivity and performance." Specifically, the supply of health workforce is determined by: a) the products of the health education system which is based on number of health education institutions, scholarships available, incentives for health teaching staff, policies that align population health needs with health education curriculum, among others, b) available supply of qualified health workers is determined by wages, working conditions, safety and career opportunities, c) supply of health workers is undermined by migration outside the country or to urban areas and attrition due to death and retirements. Demand

for health workforce is determined by needs of population and demand for health services. This is shown by the willingness of government, private sector, to pay for health workforce to staff clinic, hospitals and other health care facilities. There is inherent competition among the health service providers to give the best wage, budget, incentives, human resource policies and regulations to attract the best and encourage more health workers and their education. Health worker productivity and performance must also be addressed to retain and attract workers in the future.
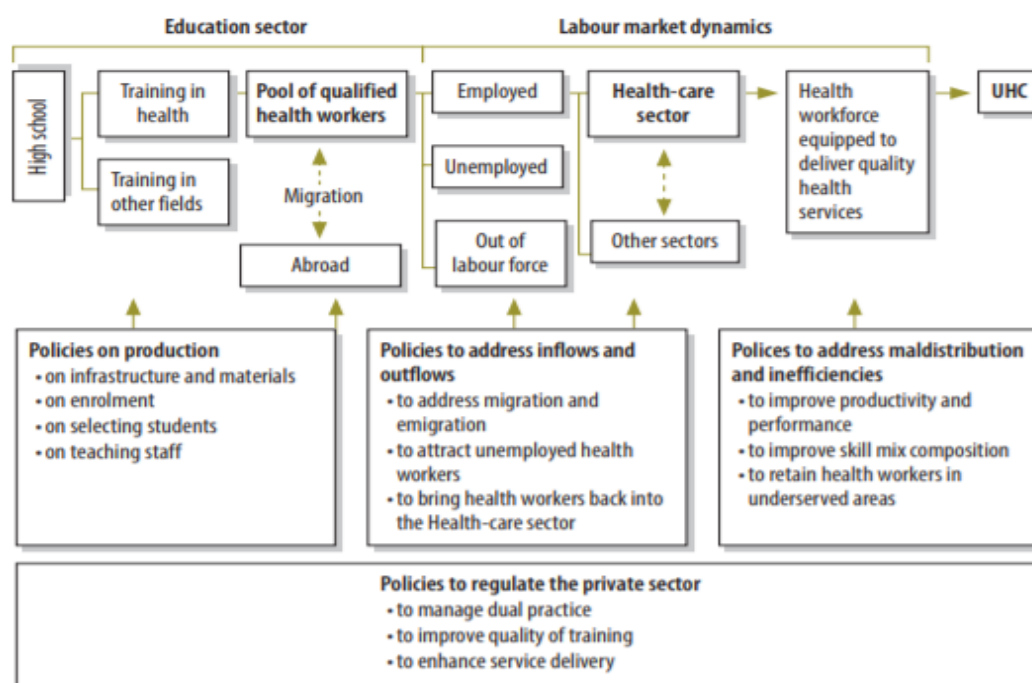

Figure 1. Souza et al in WHO (2013)

3. Framework for Philippines HLMA

The DOH expanded this framework and contextualized it for the Philippines and the UHC law as seen in Figure 2. To explain our approach further, we have broken down further the framework into two markets, ie the market for supply of health workforce and the market for health services. The market for the supply of health workforce or the health education market is a critical input to the production of health services. The production of health services is in turn responding to the demand for health services. For a country to achieve universal health care coverage, it must not limit itself into estimating a needs-based approach in determining demand, but it has to look into the dynamic and broader demand for health services which can compete for the needs-based demand. This is because demand for health services is affected largely by government policies and budget, private sector and health care industry, economic growth or rise in per capita income, personal health expenditures, demography and the morbidity structure of a country.

To estimate the current state of health labor market in the Philippines, we therefore will need to gather two levels of market information, one for the market for health education (supply) and the market for health services.

Figure 2. Proposed Flow[43]
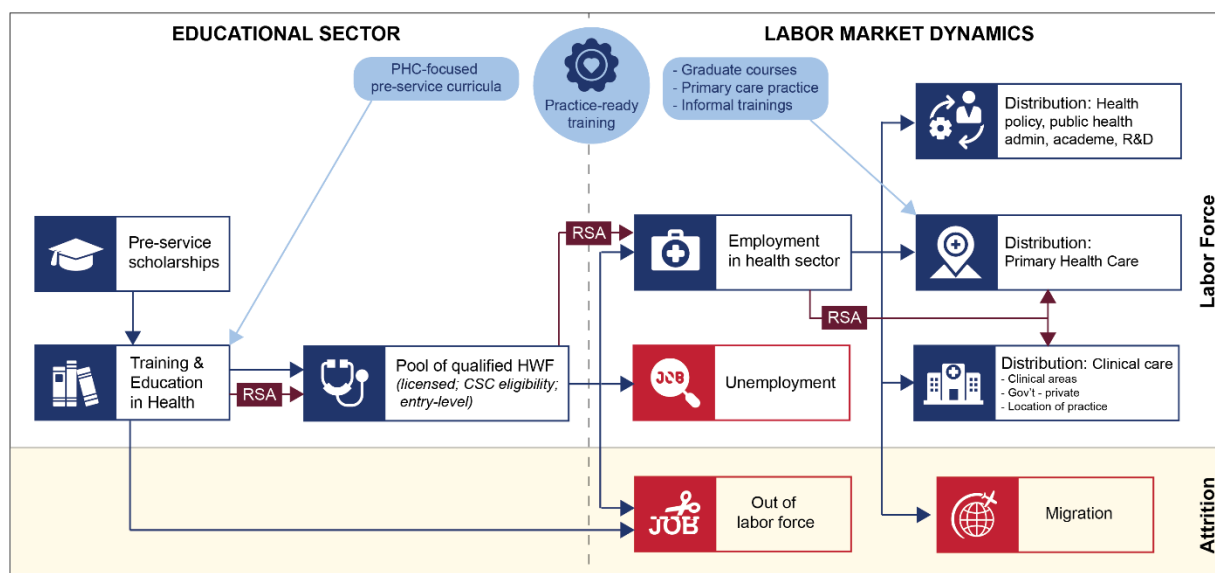
To illustrate their interactions, this protocol will gather data that will provide us a baseline of the current state of the market for Health Education and the market for Health Services, the reasons of the current state and propose measures to improve them. The focus of the data gathering will be on primary health care needs and will gather data on physicians, nurses, medical technologists and midwives[44], covering to the extent possible up to local government levels across the country. A database stretching back to at least twenty (20) years (when possible) will be generated in order to provide trends and provide forecasting capacities:

Market for Health Education[45] in PHC, particularly for cadres involved in TB, FP, and MCH service provision:

1. Number of educational institutions offering health profession courses at the tertiary and post-secondary level
2. Number of applicants per health profession course and training at tertiary and post-secondary level
3. Average cost of tuition per health profession course at tertiary and post-secondary level
4. Number of scholarships available for health profession courses at tertiary and post-secondary level
5. Number of slots per health profession course per year level/training
6. Number of graduates per health profession course and training at tertiary and post-secondary level by age and gender
7. Number of accredited professional board examination review centers per health profession
8. Number of Professional Board Examination passers per health profession by age and gender (Professional Regulations Commission)
9. Number of Certified health providers by age and gender (TESDA)

These data will provide us information on the entry of health graduates into the supply of health workforce. Essentially, they provide the NEW ENTRANTS into the health labor market system. The new entrants are flow into the stock of health manpower over the years. They represent the POOL OF QUALIFIED HEALTH WORK FORCE[46] (licensed through passing of professional licensure board examination; Civil Service eligible for government). The new entrants, however, can enter both into the domestic health labor market or to the international health labor market so there is a migration pull

factor. Hence, the local health labor market competes with the international labor market. The following data provides us with a perspective on how international migration affect the domestic health labor market:

1. Number of international placement agencies for health manpower
2. Number of official job vacancies in international health markets as advertised in the Philippine Overseas Employment Administration (POEA)
3. Number of processed health workforce contracts (POEA)
4. Number of health workforce per profession and countries of work per POEA, Philippine Statistics Authority (PSA), Commission on Filipinos Overseas (CFO)
5. Number of health workforce per profession leaving per month (Bureau of Immigration/POEA)
6. Number of returning health workforce availing reintegration program (National Reintegration Center)
7. Average wage/salaries of health professionals per profession in key destination countries

The net inflow of new health workforce as a result of professional education and training adds to the domestic stock/supply of health workforce. The net domestic supply of health manpower is left to respond to the demand for health workforce in the country. The domestic direct service supply of health workforce for PHC, particularly for cadres involved in TB, FP, and MCH service provision can be estimated as follows:

1. Number of plantilla positions for health workers in the public sector
2. Number of health workers position in the private sector
3. Number of health infrastructure in the public sector, i.e. clinics, hospitals
4. Number of health infrastructure in the private sector, i.e. clinics, hospitals, diagnostic centers
5. Number of registered health professionals in the PRC and TESDA
6. Number of employed health professionals in the public sector (Department of Budget and Management, PSA)
7. Number of employed health professionals in the private sector (Association of Hospitals, PSA)
8. Number of unfilled health professional positions in the public sector (DBM)
9. Number of unfilled health professional positions in the private sector (PSA)
10. Average age of health workforce per profession (PSA)
11. Number of unemployed qualified health workforce (PSA)
12. Number of qualified health workforce out of the labor force (PSA)
13. Average wage/salary per health profession (public and private)

These data will be able to provide the current state of supply, vacancies and established demand for health workers. We, therefore, extend the data to include the macro external factors that will explain the need for more health workers. Overall demand for health services can be explained by the following indicators:

1. Demographic details of the population – age-group, gender and growth rates, current age structure, age-dependency ratios (PSA)
2. Morbidity and mortality rates of the population per province (DOH)
3. per capita income growth per region (FIES)
4. Income quintiles per region (FIES)
5. Out of pocket expenditures on health care (Family Income and Expenditure Survey)
6. National Government budget for health care as a percent of GDP (PSA)
7. PhilHealth disbursements (PhilHealth)
8. Top 10 morbidity cases in PhilHealth and private health insurance providers
9. Number of Private health insurance providers
10. WHO standards to meet universal health care

These latter set of indicators will help estimate/provide the demand for health services and the need-based imperatives following the standards set by the WHO to meet universal health care.

In addition to all these indicators, policies on health education, migration, employment and social protection, health worker productivity and performance and dispersing health workers across disadvantaged areas will be compiled.

All the indicators identified herewith may or may not have data. On a best effort basis, the indicators will be compiled to the latest available.

4. Data Collection

The first phase will be data gathering using secondary sources. The main secondary data source will be the quarterly LFS conducted by the Philippine Statistics Authority (PSA). In this survey, we will be able to find out the current state of employed health workforce of 4 major health professionals, i.e., doctors, nurses, midwives and medical technologists – employment status, quality of employment, among others. The Department of Health (DOH) plantilla and health related government agencies will be the source of national government health workforce. The Department of Interior and Local Government (DILG) can assist in acquiring local government data on local level health workforce. In regard to overseas employment, another related survey is the Survey on Overseas Filipinos (SOF). Demand for health workforce will be derived from data from another major survey by the PSA called the ISLE. This survey provides us with the hard to fill jobs, reasons for difficulty and time to fill up vacancies. The Philippine Overseas Employment Administration (POEA) can also provide us with data in the above health related jobs overseas and the Commission on Filipinos Overseas (CFO) on those who have permanently moved to other countries. The third source of data will be the Department of Education (DepEd) for those enrolled in the Senior High School program, Technical Education and Skills Development Authority (TESDA) for Post-secondary and the Commission on Higher Education (CHED) for those enrolled in the above health related courses at the tertiary level. The Professional Regulations Commissions (PRC) will be the source of data for the qualified workforce through renewal of licenses and board examination passers and this will be complemented by data from Professional Societies. The finalized database will be submitted for consideration and validation to DOH and the HRH Network through a national
and regional workshops with the different stakeholders especially in consideration of its implementing rules and regulations (IRR).

5. Report
The Protocol will generate a report that will follow this outline:
A. **Introduction and Background**
   a. Overall importance of UHC/HRH
   b. Background on HLMA
   c. Why HLMA is critical for HRH/UHC in the Philippines
   d. Objectives of the Analysis
   e. End Users of the Analysis

B. **Methodology**
   a. Approach
   b. Data collection methods, tools and procedures
   c. Data analysis procedures
   d. Limitations

C. **Desk Review Discussion**[47]

a. Economic Situation
   i. This section will provide a perspective on the current state of the Philippine economy with emphasis on income and labor force
b. Health stationer
   i. This section provides the current state of the basic health sector aligned with the Primary Health Care agenda.
   ii. It looks at the PHC priorities under WHO and under the Universal Health Care Act.
c. Education of HRH
   i. Focusing on the 4 cadres of doctors, nurses, midwives and medical technologists, this section looks at the system that produces them.
d. Migration of HRH
   i. Understanding the push and pull of international migration on our health workforce
e. Demand and Supply of Health Workforce
   i. Provide data on health institutions and their current capacities to absorb health workforce at the national and regional levels.

D. Findings *(should include reference to the data found in the desk review and the FDGs)*
   a. How do we improve equitable access to health workers to advance UHC?
      i. Discussion on the findings of the key data points (Economic, health, education,
      ii. Discussion on how these data points (and findings) insect and relate to each other
      iii. Findings based on this analysis
   b. What are the cost implications (investment cost) and fund sources of the HRH component in the UHC?
      i. Discussion on the findings of the key data points
      ii. Discussion on how these data points (and findings) insect and relate to each other
      iii. Findings based on this analysis
   c. What is a sustainable international migration policy for the Philippines?
      i. Disclaimer: HLMA cannot answer this question but it can document specific trends that could serve as inputs to this policy
      ii. Discussion on the findings of the key data points
      iii. Discussion on how these data points (and findings) insect and relate to each other
      iv. Findings based on this analysis

E. Recommendations and Next Steps
   a. How do we improve equitable access to health workers to advance UHC?
   b. What are the cost implications (investment cost) and fund sources of the HRH component in the UHC?
   c. What is a sustainable international migration policy for the Philippines?

Annex B. Focus Group Discussion Tools

Objectives:

The Objectives of the FGD Consultations are as follow:

1. Present the highlights of the data per segment and the key observations
2. Solicit comments on the data focused on how to make the health workforce equitable in the region to respond to the UHC Law
3. Identify which data is needed and helpful for projecting health workforce demand and supply
4. Gather suggestions on other sources of data and availability
5. Other recommendations

Audience:

Each consultation was organized as a group discussion which was attended by about 10 to 12 participants including local/regional DOH representatives, health education providers, relevant government agencies involved in health program implementation and policy development, representatives of public and private health service providers such as hospitals and clinics as key stakeholders.

These Consultations brought together different stakeholders in the development, provision and requirements of health workforce at the regional level. Using the format of a focused group discussion, the participants were expected to provide responses on selected questions.

Questions:

1. Are the data collected consistent with the regional picture of the current health workforce condition in your region?
2. What aspect/s of health workforce were lacking or needs more in-depth data?
3. What are 3 critical issues that we need to address to ensure that the region has enough health workforce to respond to the UHC law?

Annex C. Report on Cebu Regional Consultation

Date of Consultation: 11 July 2019

Venue of Consultation: Quest Hotel, Cebu City

Participants: Please refer to the Sign-in Sheets

Background
The consultations are to help validate the outputs generated for the Health Labor Market Analysis (HLMA) component of the HRH2030 project. The HLMA is a project that seeks to answer 3 policy questions related to the development and sustainability of health workforce in the country with a focus on physicians, nurses, midwives and medical technologists. The end-focus of this project is to be able to contribute to the These policy questions focus on (a) current status of health workforce in the country, (b) sustainable migration policy in the country, and (c) financial requirements of the health requirements of the universal health care act. The project at present has completed a database that covers the following: (a) supply and demand of health education, (b) international temporary and permanent migration, (c) certified health professionals, (d) public sector and private sector demand for health workforce, (e) present and future demand for health services by Filipinos, (f) present laws and regulations that can affect supply and demand for health workforce.

Objectives
The Objectives of the Consultations are as follow:

1. Present the highlights of the data per segment and the key observations
2. Solicit comments on the data focused on how to make the health workforce equitable in the region to respond to the UHC Law
3. Identify which data is needed and helpful for projecting health workforce demand and supply
4. Gather suggestions on other sources of data and availability
5. Other recommendations

AGENDA	DISCUSSION POINTS	COMMENTS/SUGGESTIONS
Presentation of Generated Database for HLMA		• The Consultant presented the results of data gathering for about 30 minutes
Open Forum		• Instead of asking questions, participants were volunteering more information about what is happening in the region. In particular, the DOH participant cited the heavy workload for both public and private hospitals. The higher salary in public health systems is attracting more private sector health worker • DSWD participant cited the challenge of many nurses not having security of tenure leading to fast turnover

		• CHED participant warn about the potential impact of K-12 to the development of health workforce
HLMA Focused Group Discussion Questions	• Are the data presented consistent with the health human resources situation in the country? Why?	• The reply of the participants mostly focused on how their programs contribute to the development of HRH. In general, they agree with the data presented. • Some agencies added some possible elements that can be added such as the training programs of TESDA for health workers, the Public Employment Service Office (PESO) data from LGUs, OWWA's request for reintegration program specific for health workers.
	• What are the missing elements that need to be included?	• The Cebu City Health Officer cited that the data is not able to capture the political element of health in the LGUs. • Others also agree that politics play a role in the local generation of health workers • There is a possibility that the changing nature of work in the future might also affect HRH demand.
HLMA Discussion Questions	• What are your perspectives on the implications of the data on HRH for your region?	• In general, the group proposed interventions that will address the perceived shortage of health workers. Among these are the provision of free refresher course for non-passers, standardization of salaries for public and private sectors, conduct of more job fairs and industry linkages. DSWD participant was suggesting that LGUs must pay for the salaries of health workers to attract them to work in their localities.
Synthesis		• The Consultant took note of the replies and suggestions. He gave them the timelines of the succeeding activities of the project and assured the participants that their inputs will be integrated for the HRH network meeting in

		Manila and for eventual referencing in the final report writing.
		• The key takeaways are as follow:
		1. Data is consistent with what is being experienced in the regions, i.e.,
		2. HRH moving from private to public, from LGU to DOH
		3. Remaining in private to be able to qualify for abroad
		4. Some drop out of HRH to work in BPOs
		5. Data can be enriched if disaggregated by gender, age, number of applicants to public positions and if possible, to get second degree of HRH
		6. It seems that the trends are generally due to compensation and recovery of investment for HRH development
		7. Politics play a role in LGU HRH appointments
		8. Public hospitals may have higher pay but the more workload, thus pushing others to join BPOs
		9. Current situation of vacancies in nursing in private hospitals has caused under capacity/non-operation
		10. Common suggestion is a standardized pay ranges for both public and private HRH
		11. Revisit the curriculum to make health service a vocation because most fresh graduates are not emotionally prepared

Annex D. Report on Davao Regional Consultation

Date of Consultation: 12 July 2019
Venue of Consultation: Seda Hotel, Davao City
Participants: Please refer to the Sign-in Sheets

Background
The consultations are to help validate the outputs generated for the Health Labor Market Analysis (HLMA) component of the HRH2030 project. The HLMA is a project that seeks to answer 3 policy questions related to the development and sustainability of health workforce in the country with a focus on physicians, nurses, midwives and medical technologists. The end-focus of this project is to be able to contribute to the These policy questions focus on (a) current status of health workforce in the country, (b) sustainable migration policy in the country, and (c) financial requirements of the health requirements of the universal health care act. The project at present has completed a database that covers the following: (a) supply and demand of health education, (b) international temporary and permanent migration, (c) certified health professionals, (d) public sector and private sector demand for health workforce, (e) present and future demand for health services by Filipinos, (f) present laws and regulations that can affect supply and demand for health workforce.

Objectives
The Objectives of the Consultations are as follow:
1. Present the highlights of the data per segment and the key observations
2. Solicit comments on the data focused on how to make the health workforce equitable in the region to respond to the UHC Law
3. Identify which data is needed and helpful for projecting health workforce demand and supply
4. Gather suggestions on other sources of data and availability
5. Other recommendations

AGENDA	DISCUSSION POINTS	COMMENTS/SUGGESTIONS
Presentation of Generated Database for HLMA		• The Consultant presented the results of data gathering for about 30 minutes
Open Forum		• Like the Cebu consultation, the participants were volunteering more information about what is happening in the region. Most of those involved in the academe raised the need for health sciences education to be realigned again as a vocation and not as a profession only. Representative of private hospital observed that beyond compensation, some would not want to work in hospitals because their leaves as limited. They are all in agreement that the LGC is putting a lot of pressure on personnel limitations for health workers.

HLMA Focused Group Discussion Questions	• Are the data presented consistent with the health human resources situation in the country? Why?	• They agree with the data presented. • Some participants are concerned that the data may not be able to capture behavior of health workers related to quality. Since most recent graduates simply want to have a job that is flexible. • Agreement that data will not be able to capture behavior in relation to job.
	• What are the missing elements that need to be included?	• The missing element cited is the gender disaggregation and the possibility of second courses. • The data may also be showing that LGUs are being helped by the national deployment but may not be showing what is happening about some private hospitals limiting their operations due to lack of workers. • To the extent possible to provide data on age-group disaggregation. • Consider possible impact of ASEAN Mutual Recognition Agreement in the future.
HLMA Discussion Questions	• What are your perspectives on the implications of the data on HRH for your region?	• The group suggested the following: • Schools to improve on its immersion programs • There should be pre-service scholarships to create love for public service • Career pathing must be established in the schools • Schools must make students be emotionally prepared for health care work • Implement Magna Carta for Public Health
Synthesis		• The Consultant noted that the Davao consultation is pointing mostly to a change in mindset about health science education. He gave them the timelines of the succeeding activities of the project and assured the participants that their inputs will be integrated for the HRH network meeting in

		Manila and for eventual referencing in the final report writing.
		• The key takeaways are as follow:
		12. Data is consistent with what is being experienced in the regions, i.e.,
		13. HRH moving from private to public, from LGU to DOH
		14. Remaining in private to be able to qualify for abroad
		15. Some drop out of HRH to work in BPOs
		16. Data can be enriched if disaggregated by gender, age, number of applicants to public positions and if possible, to get second degree of HRH
		17. It seems that the trends are generally due to compensation and recovery of investment for HRH development
		18. Politics play a role in LGU HRH appointments
		19. Public hospitals may have higher pay but the more workload, thus pushing others to join BPOs
		20. Current situation of vacancies in nursing in private hospitals has caused under capacity/non-operation
		21. Common suggestion is a standardized pay ranges for both public and private HRH
		22. Revisit the curriculum to make health service a vocation because most fresh graduates are not emotionally prepared

Annex E. Data Dictionary

The Data Dictionary provides the source and description as a key reference for data collection and analysis of this report.

HLMA Data Dictionary

HLMA Data
Dictionary.xlsx

End Notes

[1] Distribution of board exam passers by gender used as proxy for sex-disaggregated occupational segregation.

[2] Median salary grade based on Salary Grade (2019) per cadre.

[3] Median annual salary based in 2016 annual salaries for US, Canada, Australia, New Zealand and the UK; expressed in million PHP.

[4] Demographic dividend refers to the growth in an economy that is the result of a change in the age structure of a country's population.

[5] Samantha Law, Andrea Poling & Kent Tangcalagan. Validation of HRH2030 Gender Competencies Framework for FP Providers in the Philippines June-July 2019. Manila: USAID HRH2030 Philippines.

[6] The total of those who took the professional board examination is larger than the number of those who graduated because there were graduates prior to school year 2005-06 who took the examinations, including those repeat takers and those who are taking a second license.

[7] In the 2018 list of top performing nursing schools with first time 100 examinees, 6 state universities are in the top 12 schools.

[8] FindUniversity.ph is website that contains a directory of colleges, universities and academic programs offered in the Philippines. We have utilized the information in this website in previous researches and we find it accurate and providing the most thorough, useful and unbiased information regarding tuition fees and the best schools in the Philippines.

[9] https://nhfr.doh.gov.ph/

[10] The CMCI does not define clearly what is a clinic. But in general terms, it can be any entity offering health services that are registered in and given permit to operate by the local government

[11] As estimated by the HHRDB, the NDHRHIS includes about 90% of Level 3 hospitals, only 60% of Level 1 hospitals thus the data presented in this analysis is limited in scope.

[12] This includes all health workers and is not limited to the four cadres

[13] Law, Poling and Tangcalagan (n 5)

[14] The Department of Finance (DOF) is already preparing the financial requirements of the next Salary Standardization and the fastest it can be implemented will likely be in 2021 as the budget for 2020 is already for submission by end July 2019.

[15] Local Budget Circular 118. DBM, January 2019

[16] Republic Act No. 6727: An Act to Rationalize Wage Policy Determination by Establishing the Mechanism and Proper Standards, Article 99 establishes Regional Tripartite Wages and Productivy Boards

[17] ILO. Global wage report 2018/19: what lies behind gender pay gaps. Geneva: International Labour Organization; 2018.

[18] Women who passed board exam rates (2002-2016): 508,739; Men who passed board exam rates (2002-2016): 209,129. 8% of 508,739 = 40,699; 8% of 209,129 = 16,730.

[19] Distribution of board exam passers by gender used as proxy for sex-disaggregated occupational segregation.

[20] Median salary grade based on Salary Grade (2019) per cadre.

[21] The Philippine Statistics Authority (PSA) classifies someone as underemployed if an employed person is expressing the desire for more hours of work beyond what has currently offered them, or those looking for additional jobs or new jobs with longer hours

[22] This number does not include medical technologists as their data is included under veterinary scientists.

[23] Recruitment agencies are a critical source of migration data as health care services cannot be processed directly by employers abroad without passing through regulatory mechanisms. This limits the number of direct hires.

[24] Payscale is a compensation research and job matching website - https://www.payscale.com/

[25] WorldData compiles different country information and provides comparisons based on the most available common information - https://www.worlddata.info/cost-of-living.php

[26] Women permanent HRH migrants (2002-2010): 22,738; Men permanent HRH migrants (2002-2010): 6,247. 17% of 22,738 = 3,865; 17% of 6,247 = 1,062.

[27] Women temporary HRH migrants (2002-2010): 102,591; Men temporary HRH migrants (2002-2010): 16,097. 6% of 102,591 = 6,155; 6% of 16,097 = 966.

[28] Median annual salary based in 2016 annual salaries for US, Canada, Australia, New Zealand and the UK; expressed in million PHP.

[29] Republic Act 1082 of 1954 (An Act Strengthening Health and Dental Services in the Rural Areas, and providing funds therefor) and Republic Act 1891 of 1957 (Amendment to Republic Act 1082) are laws that provides guidance in staffing and providing compensation for rural health staff

[30] Republic Act 10351 that restructured the excise tax on tobacco products and alcohol was identified as fund source for health programs and Republic Act 10606 established the national health insurance program of the Philippines

[31] Congress enacted Republic Act 7305 (Magna Carta for Public Health Workers) in 1992 to be more responsive the public health needs. The Department of Health issued Administrative Order 34 s. 2007 setting the policy and operational framework for Province-Wide Investment Plan for Health (PIPH) to provide for guidance on local investment mechanisms.

[32] Republic Act 9710 (Magna Carta of Women) and Republic Act 10354 (Responsible Parenthood and Reproductive Health Act) has provisions on creating decent work conditions

[33] Congress enacted laws with specific provisions ensuring education, continuous professional development for health workers, particularly in public sector such as Republic Act 10912 (Continuing Professional Development Act of 2016), Republic Act 10767 (Comprehensive Tuberculosis Elimination Plan Act), Republic Act 7883 (The Barangay Health Workers' Benefits and Incentives Act of 1995), Republic Act 7305 (Magna Carta for Public Health Workers)

[34] Various government issuances are in place that promotes support for pre-service education of aspiring health workers, which includes Republic Act 10612 (Fast-Tracked S&T Scholarship Act of 2013); DOH issuances like Administrative Order 14 s. 2006 (Implementing Guidelines on Local Scholarships for Training and Development), Administrative Order 22 s. 2018 (Guidelines on the implementation of the Department of Health's pre-service scholarship program for priority allied health courses), Department Memorandum 144 s. 2018 (Acceptance of scholars and partner schools for the Department of Health pre-service scholarship program for medical and midwifery courses), among others

[35] Observations from DOH budget information reflected in Republic Act 10717 or the General Appropriations Act of 2019.

[36] Through issuance of DOH AO 1997-22B

[37] HRH deployment programs include Doctors to the Barrios (Administrative Order 181A s. 2001), Rural Health Team Placement Program (Administrative Order 200-B s. 2002), DOH human resource for health (HRH) deployment program (Department Memorandum 38 s. 2017), Dentist Deployment Project (Department Circular 0458 s. 2014), Public Health Assistants Deployment Program (Administrative Order 26 s. 2014)

[38] While there are vacancies, the private sector is often not pursued by health workers due to depressed wages. In the public sector, plantilla positions are being "filled" by job orders and thus in an essence false vacancy as is the case in many LGUs.

[39] Applicants prefer to apply for health positions in Europe or the United States over the Middle East and Asia.

[40] JCI accreditation is the gold standard in health care systems https://www.jointcommissioninternational.org/about/

[41] Based on Chapter 4 of the UHC Law, population health service delivery can be contracted for province and city-wide health systems, through Health Care Provider Networks.

[42] Health Workforce here represents the physicians, nurses, medical technologists and midwives

[43] From the presentation of Dr Kenneth Ronquillo on HRH Conceptual Framework for UHC Law

[44] There is a proposal by DOH to include all health workers. It is up to USAID, HRH2030 to decide on this matter

[45] This health education market is focused on Physicians, Nurses, Medical Technologists and Midwives

[46] Focus for emphasis for the four cadres

[47] This is the overview to set the scene and not the answers to the questions

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, D.C. 20523
Tel: (202) 712-0000
Fax: (202) 216-3524
www.usaid.gov