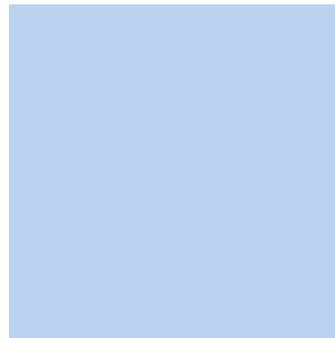




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Human Resources for Health Masterplan: Situational Analysis

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Cover photo: Dr. Redentor Rabino, one of the first doctors to the barrios in Bongao, Tawi-tawi, conducts the Snellen's test to one of his patients. (Credit: Blue Motus, USAID HRH2030/Philippines)

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Acronyms

AQRF	ASEAN Qualifications Reference Framework
ARMM	Autonomous Region in Muslim Mindanao
BARMM	Bangsamoro Autonomous Region in Muslim Mindanao
BHS	Barangay health stations
BHW	Barangay health workers
BNS	Barangay nutrition scholars
BI	Bureau of Immigration
CHED	Commission on Higher Education
CFO	Commission on Filipinos Overseas
CHO	City health office
CMSS	Coaching, Mentoring, and Supportive Supervision
CSC	Civil Service Commission
DBM	Department of Budget and Management
DILG	Department of the Interior and Local Government
DOF	Department of Finance
DFA	Department of Foreign Affairs
DOH	Department of Health
DOLE	Department of Labor and Employment
DOST-SEI	Department of Science and Technology – Science Education Institute
EO	Executive Order
EPI	Expanded Program for Immunization
FHSIS	Field Health Service Information System
FP	Family planning
GIDA	Geographically isolated and disadvantaged areas
HEI	Higher education institutions
HHRDB	Health Human Resources Development Bureau
HFDB	Health Facility Development Plan
HFDP	Health Facility Development Bureau
HLMA	Health labor market analysis
HRH	Human Resources for Health
HRIS	Human Resource Information System
IBPAP	Information Technology & Business Process Association
IDHRHIS	Integrated Database Human Resources for Health Information System
IMR	Infant mortality rate
IRA	Internal Revenue Allocation
ISLE	Integrated Survey on Labor and Employment
IT-BPM	Information Technology & Business Process Management

KMITS	Knowledge Management and Information Technology Service
LCE	Local chief executives
LDI	Learning and development interventions
LGU	Local government units
LUCs	Local universities and colleges
MDGs	Millennium Development Goals
MHO	Municipal health officer
MMR	Maternal mortality rate
MOOE	Maintenance and Other Operating Expenses
NCR	National Capital Region
NDHS	National Demographic and Health Survey
NEDA	National Economic and Development Authority
NDHRHIS	National Database on Human Resources for Health Information System
NHWA	National Health Workforce Accounts
NMAT	National Medical Admission Test
NOH	National Objectives for Health
OWWA	Overseas Workers Welfare Administration
PAASCU	Philippine Accrediting Association of Schools, Colleges and Universities
PDP	Philippine Development Plan
PESFA	Private Education Student Financial Assistance
PQF	Philippine Qualifications Framework
POEA	Philippine Overseas Employment Administration
PRC	Professional Regulation Commission
PRIME-HRM	Program to Institutionalize Meritocracy and Excellence in Human Resource Management
PSA	Philippine Statistics Authority
PSLINK	Public Services Labor Independent Confederation
RHU	Rural health unit
RSA	Return service agreements
SUC	State universities and colleges
SDGs	Sustainable Development Goals
SDN	Service delivery networks
TESDA	Technical Education and Skills Development Authority
TVET	Technical and vocational education and training
UHC	Universal Health Coverage/Care
USAID	United States Agency for International Development
WHO	World Health Organization
WISN	Workload indicators of staffing needs

Executive Summary

Human resources for health (HRH) are the cornerstone of the Philippine health delivery system. Improving the country's health outcomes and achieving universal health care (UHC) is unlikely unless there is a sufficient number of 'appropriately skilled and motivated, equitably distributed and well supported' health workers in the system (World Health Report 2006, 2010).

The 2020-2040 HRH Masterplan will serve as an overarching document that guides the whole of society and the whole of government to meet the HRH component of UHC goals, other national policies and goals, and international commitments. Also, the Masterplan will inform the preparation of the local investment plans of Local Government Units (LGUs), a major implementer of healthcare services and programs.

This situation analysis aims to analyze the situation facing the HRH sector in the Philippines and determine the key issues that must be addressed in order to provide policies and strategies for the appropriate generation, recruitment, retraining, regulation, retention, and reassessment of the health workforce based on population health needs.

As a starting point in the development of the situation analysis, the 2005-2030 Masterplan and the 2014-2030 Masterplan were reviewed in terms of their goals, objectives, the process, and accomplishments. Additionally, the following were accomplished: document and literature review; secondary analysis of the data; and, consultations and meetings with selected key stakeholders. New methods of analyzing the HRH situation in the country were utilized, primarily the World Health Organization's (WHO) workload indicators of staffing needs (WISN) and the health labor market analysis (HLMA). Additionally, a policy scoping review has been carried out to assess the relevance and influence of current HRH policies on the health sector, identify barriers to effective HRH policy implementation, and identify critical information systems for decision making.

Health outcomes and facilities

Consistent with the emphasis of the UHC law on primary health care, the country's health outcomes are examined, which also provides an indication to the country's commitments to the Millennium Development Goals (MDG). Overall, the health outcomes of the Philippines are improving although the slow decline of maternal mortality rate and infant mortality rate remains a challenge. Many Filipinos still suffer from preventable and treatable diseases with cost-effective interventions such as Human Immunodeficiency Virus (HIV), Tuberculosis, Dengue, and vaccine-preventable diseases such as Measles and Diphtheria.

In terms of basic infrastructure, the Philippines seemed to have them across the country. In general, barangay health stations (BHS) and private clinics dominate the primary health care (PHC) facilities. By 2022, the Health Facility Development Bureau (HFDB) is aiming to establish one barangay health station in each of the 42,045 barangays in the Philippines, and 5,250 RHUs. At present, HFDB has completed a little under 50% of its goal. The challenge remains on how to provide facilities in geographically, culturally and peace-order challenged communities.

Private hospitals dominate in health care provision with about two private hospitals for every government hospital from 1995 up to the present according to data from Philippine Statistics Authority (PSA) and the Knowledge Management and Information Technology Service (KMITS). The greatest number of hospitals are in Region IV-A (CALABARZON), III (Central Luzon), and National Capital Region (NCR), the three most important economic regions in the country.

HRH entry in the workforce

Data from Commission on Higher Education (CHED) indicate that by type of higher education institutions (HEIs), schools with nursing courses abound in comparison to HEIs with medical technology and medical schools. Regardless of type, the NCR holds the highest number of schools. The private sector has a strong presence in health sciences education. For instance, 82% of HEIs offering health-related courses are private while the remaining 18% are public. Across cadres, female students outnumber males, accounting for nearly eight in ten.

While the number of enrollees in health sciences education, especially in nursing, are huge, the completion rates are low. For instance, only 9% and 45% of students who enrolled in medical technology and midwifery students in public schools from 2005 to 2017, respectively have graduated/completed the course. In nursing, one in four students successfully graduated. Regardless of the program, the cost of health sciences education is high. Coupled with low completion rates, the high cost of health sciences education translates to a huge loss in investments in the formation of human capital. Using the average tuition fee in private schools and the total number

of enrollees and graduates from 2005-2017, PhP169 billion in total or PhP14 billion per year have been lost. Adding other education-related expenses such as school supplies and other fees and charges would make the annual loss in investment in health sciences education even bigger.

Graduates in medical technology and medicine have been continually improving as evinced by average passing rates of 77% and 79% from 2014 to 2018, respectively. Nurses and midwives, on the other hand, have had consistently low passing rates, averaging 48% and 44%, respectively from 2002 to 2018. The proliferation of nursing schools without enough base and affiliation hospitals result in poor quality of education. Quality variance is high from excellent world class schools to those that have less than 30% passing rates. There is also a huge disparity in the number of graduates between the NCR and the regions, signaling the need to redistribute quality health sciences education institutions across regional centers. The reallocation of HEIs will substantially help in the development of regional health workforce.

A major issue prior to the entry of HRH into the workforce is a *lack of collaborative planning in the production of HRH*, an effect of the disjoint between the education and health sectors. Responding to demand from wealthy countries with a growing elderly population and minimum production of health workers, private schools act on information provided by destination countries that, upon graduation of their students, may be outdated and no longer actionable. Nevertheless, the number of private schools have dramatically increased usually setting up in urban areas and with weak quality checks on curricular implementation. The effects are multiple: young people, drawn by the prospect of working abroad with all the perceived benefits, enroll in great numbers especially in nursing schools. On average three quarters (75%) of nursing students do not complete the course. Among those who graduate, two thirds (67%) are able to pass the board exams although the passing marks are not remarkable. Because of the overall high attrition, not enough 'new' health workers join the workforce.

HRH in the workforce

HRH in the Philippines experience *inadequate remuneration and poor working conditions*. Health workers, especially women, receive low wages in comparison to similar jobs in different industries, receive low pay when they are hired by LGUs as opposed to the DOH deployed staff, when they work for the private sector compared to workers in the public sector, and when compared to workers recruited to other countries. In addition to the poor pay, there is a small chance of career progression, many experience job insecurity for extended periods of time, work in poor health infrastructure, use outdated healthcare technologies, encounter inconsistencies in practice, and face institutional politics. Location-wise, rural and remote areas are considered unattractive working places compared to big cities because of shortages in medical supplies, and limited training opportunities. The isolation, lack of potential employment for family members, limited education facilities for children, and the absence of tertiary care facilities hinder health workers taking up posts in remote areas (ThinkWell, 2018).

In 2018, there were 869,974 ever registered health workers with the Philippine Regulatory Commission (PRC), 61% of whom are nurses. Of this total, 22% of 204,437 or 189,787 are in the health sector while nearly eight in ten (78%) have unspecified practice as of 2018. Over a quarter of those in the health sector (27%) are in primary health care (NDHRHS 2017, FHSIS 2016, DOH Deployment Program 2017). However, the number of *health workers in the health sector remains inadequate* (Done et al 2017, NDHS 2017, DOH 2018, WHO 2016). This is caused in part by fewer number graduates in the health sciences due to high attrition rates, the limited number of decent jobs in the health sector; the unclear career paths of health workers; the inadequate support for health workers' health, safety, and well-being; and the increasing demand for Filipino health workers in overseas destination countries. For health workers who decide to work abroad, some of the pull factors include higher salaries, the prospect of better social, economic, and professional opportunities abroad, and the presence of relatives in the destination country. Factors that facilitate the move to other countries are also present. For instance, some receiving countries have visa provisions that allow family members to join the migrating health worker. The effect of temporary and permanent health worker migrants has been on the quality and quantity of workers left in the country. A growing phenomenon is for health workers, particularly nurses, to work in non-health sectors. To mitigate the insufficiency of health workers especially in LGUs, the HRH sector is exploring the expansion of RSAs. In this arrangement, students who receive financial support under the Universal Higher Education law are required to participate in return service programs as a way of giving back to the country for their education.

Inequitable distribution of HRH across the Philippines has been well documented (NOH 2017-2022, WHO 2018, WISN 2018, Joint Mission on HLMA 2018, HLMA paper 2019). The DOH's deployment program has addressed this to a certain extent. Despite these programs, HRH remains concentrated in urban centers while other areas have an average of 4% of the total HRH in health facilities. The BARMM, in particular, has <1% of the total human resources in the country (Deployment report HRH2030, 2019). Factors

affecting the maldistribution of health workers include the inadequate remuneration in low income class municipalities; disparities in salary between private and public, national and local; and the inability of some LGUs to absorb health workers such as those who are deployed. In addition, local conditions such as peace and order situation and security of health workers e.g. doctors bring a gun and are trained to shoot, and are ready for security emergencies, affect retention of deployed health workers (Castro-Palaganas et al 2017). These conditions can include the limited employment and educational opportunities and hospital facilities for family members, and the relative isolation of the place of assignment. Many health workers study in urban areas, creating a bias in terms of place of employment. The WISN study conducted by the HRH2030/Philippines of the United States Agency for International Development (USAID), which catalogued staffing requirement and levels of workload pressures in nine regions of the country, found varying degrees of surpluses, shortages and normal workloads at various levels of care and cadres.

HRH exit out of the workforce

Overall, the number of HRH migrants have steadily increased since 1990 until 2017. Among the four health cadres, the demand abroad for nurses has been highest. This is particularly critical for countries with a growing elderly population and producing a small number of health workers.

Individuals are pushed to migrate due pull factors including the prospect of better social, economic, and professional opportunities abroad and by the presence of relatives in the destination country. The economic pull factor is even stronger for men. For instance, data from payscale, an American online database that provides information on salaries, benefits, and compensations worldwide, shows that a nurse's entry-level salary per month in Saudi Arabia is PhP10,000 higher compared to the highest monthly salary of PhP50,702 in the Philippines. Additionally, poor health infrastructure, job insecurity, inconsistencies in practice, outdated or inappropriate curricula, institutional politics, and inadequate opportunities for specialty training influence migration decisions. Finally, the policy and institutional support currently in place facilitate the migration of HRH. For instance, the destination countries' visa provisions allow family members to join the migrating health worker (Castro-Palaganas et al 2017, WHO 2018). A recent phenomenon has seen the migration of health workers to other industries such as to the business process outsourcing (BPO) sector in the Philippines. Besides working abroad, nurses are now moving out of the health sector into the Business Process Management industry.

HRH systems and stakeholders

Tracking HRH across the spectrum that spans pre-service to exit from the local health workforce, there are many players that impact on their production e.g. Education and training - Commission on Higher Education (CHED and Technical Education and Skills Development Authority (TESDA), specialty societies and specialty boards, private sector; recruitment - the private sector, DOH and LGUs; management, regulation - Profesional Regulation Commission (PRC); domestic employment and deployment - Department of Labor and Employment (DOLE), Civil Service Commission (CSC), Department of Budget and Management (DBM), Department of the Interior and Local Government (DILG), Department of Finance (DOF), Department of Health (DOH), and the National Economic and Development Authority (NEDA); and overseas deployment - Commission on Filipinos Overseas (CFO), Department of Foreign Affairs (DFA), Philippine Overseas Employment Administration (POEA), Overseas Workers Welfare Administration (OWWA), and the Bureau of Immigration.

A large amount of information is available in different government agencies, including LGUs, and from the private sector. Data collected on nine health professional categories are housed in the National Database on Human Resources for Health Information System (NDHRHIS) of the DOH. LGUs submit HR data through the Human Resource Information System (HRIS), which are consolidated at the provincial and regional levels prior to submission to the HHRDB. The HRH Network, an alliance of agencies and organizations that play a role in the management and development of HRH, established the Integrated Database Human Resources for Health Information System (IDHRHIS) in 2014. The IDHRHIS is an integrated system solution intended to 'capture, process, store, and report vital information on HRH encompassing production, utilization, and deployment up to migration, re-entry and retirement at the national level.'

The core problem that underlies HRH in the Philippines is the lack of a fully functional integrated HRH systems including information systems, production planning, professional development, attractive compensation packages, management and regulation, and sustainable deployment of health workers whether locally or to other countries. This is caused by the lack of accurate and up to date information, the presence of many stakeholders that are involved in the HRH sector including players outside of the country, fragmented governance, and policy related issues. The effects of the core problem have been attenuated to a certain extent (e.g. establishment of the HRH Network as a mechanism for discussing issues and decision making, data sharing agreement). However, it is

necessary to further harmonize similar or overlapping functions of stakeholders so that they can effectively collaborate and appropriately address their roles in the achievement of UHC goals and at the same time participate in the global HRH market without unintentionally creating adverse effects on the provision of health care and services locally. The following are the key causes of the core problem that the HRH Master Plan needs to address.

- *Lack of accurate HRH information to guide planning and policy.* The currently available data on the number of health workers in the country is not up to date and comes from multiple sources and does not accurately reflect the actual numbers. The estimate of the total number of health workers for instance, is based on a proxy indicator i.e. the number of health workers renewing their PRC licenses. There are disparate information systems so that the number of workers in the health sector comes from the NDHRHIS, an information system operated by the DOH. Other HRH-related data such as on production and migration are housed by other agencies. There is no data on out of the workers or unemployed health workers. There is no single source of HRH related data and information. There is a lack of support and structure for HRH information management.
- *Multiple interlinked HRH systems that are not fully functional and many HRH stakeholders that operate independently.* Agencies that are in the different parts of the HRH system operate independently according to their mandate, disregarding the impacts that their programs and policies may have on other parts of the system. This is evident in the disjoint between the education and labor sectors. There are too many schools in urban areas which is a business response to external demand without regard to the quality of the graduates being produced. There is no information coming from the health sector to inform the production of health workers for the country. Representatives from the education sector value the remittance from health workers working abroad, which while important, disregards the population health needs of the country, particularly in rural areas. There is weak regulatory capacity, and limited accountability and responsiveness of the education sector's accreditation system to health priorities.
- *The overall health governance system became fragmented* with the passage of the 1991 Local Government Code, due to the devolution of the provision of health care services to the LGUs. Particular to HRH, the DOH is responsible for the recruitment of health workers at the national level, the Deployment program, and for DOH retained hospitals. On the other hand, LGUs are responsible for staffing field health facilities. A frequently mentioned observation in the regional consultations is the political and bureaucratic interference in HRH processes and management. Health workers that are locally recruited are not always adequately compensated, provided benefits or given security of tenure, which can be traced to the personnel services cap mandated in the Local Government Code (LGC), and the income of municipalities and provinces. Local Chief Executives (LCEs) may not prioritize health during their tenure to the detriment of health workers and health care provision in the locality. The private sector, while guided by the policies, standards, and programs established by the DOH, operates independently. Temporarily or permanently migrating HRH are governed by a different set of agencies and policies. HRH governance consists of complex interactions and further illustrates the lack of coordination among stakeholders.
- *HRH policy issues.* At present, there is variable implementation of policies. There are several policy gaps and issues, most prominent of which are the lack of policies on competency standards and skill mix, effective deployment of HRH, strengthening health leadership and performance management systems, and innovative approaches to coaching, mentoring, supportive supervision, and training. Additionally, there are policy gaps in setting data standards and strengthening data sharing. There is no policy to identify a central custodian for Human Resource for Health information. Human resource management and development (HRMD) standards, roles, and functions are also not promoted among national and local governance structures. The implementation of HRH policies showed some weaknesses due to fragmented HRH systems and use of ineffective guidelines. There is a lack of consistency and strategic coherence in linking critical policies between the education, labor, and other sectors. Policies emanating from non-health sectors also impact the HRH sector.

Conclusions

Overall, the HRH sector is better organized since the first HRH Masterplan was crafted in 2005. As a result of the 2005-2030 HRH Masterplan and with the leadership of the DOH, the HRH Network has been established and regularly meets to discuss and decide on HRH related concerns. Databases such as the NDHRHIS and IDHRHIS are in place and being used. There are new tools and methods such as WISN, HLMA, and the policy scoping review. Nevertheless, progress has been incremental. The issues identified in the situation analysis of the first HRH Masterplan are essentially the same issues e.g. inequitable HRH distribution, HRH migration, poor working conditions etc. that are being dealt with at present.

Going forward, it is necessary to address issues that will lead to systemic changes i.e. the causes of the core problem as identified in the problem tree, as opposed to focusing on its effects, which will likely offer short-term solutions.

Introduction

Human resources for health (HRH) are the cornerstone of the Philippine health delivery system. Improving the country's health outcomes and achieving universal health care (UHC) is unlikely unless there is a sufficient number of 'appropriately skilled and motivated, equitably distributed and well supported' health workers in the system (World Health Report 2006, 2010). HRH are strategic resources that directly bear on access, quality, and costs of health care. They are pivotal to the effective delivery of interventions for improved health outcomes, a critical element in implementing the UHC Act and directly contribute to the accomplishment of commitments such as the Sustainable Development Goals (SDG). Using the 2005-2030 HRH Masterplan and the 2014-2030 HRH Masterplan as a starting point, a masterplan covering the period from 2020 to 2040 will be developed for the strategic direction and operationalization of the UHC Act's HRH-related sections.

As stated in the UHC Law, the national 2020-2040 HRH Masterplan will provide policies and strategies for the appropriate generation, recruitment, retraining, regulation, retention, and reassessment of the health workforce based on population health needs. The 2020-2040 Masterplan aims to prepare a:

- Short-term plan consisting of annual plans spanning 4 years (2020-2022),
- Medium-term planning over 6 years (2023-2028), and
- Long-term plan over 10 years (2029-2040).

The 2020-2040 HRH Masterplan will serve as an overarching document that guides the whole of society and whole of government to meet the HRH component of UHC goals, other national policies and goals, and international commitments. Also, the Masterplan will inform the preparation of the local investment plans of local government units (LGUs), the major implementer of healthcare services and programs in the country.

To understand the changing context of HRH in the country, a situation analysis has been carried out. This will be a direct input to the 2020-2040 HRH Masterplan that will address the challenges HRH are facing and incorporate innovative interventions for sustainability.

Objectives of the situation analysis

The objectives of the situation analysis are to:

- Analyze the situation of the HRH sector in the Philippines,
- Determine HRH-related key issues that must be addressed in the Masterplan,
- Identify the gaps in the current HRH sector in the Philippines, and
- Determine broad strategies that will address the identified key issues.

Approach and methodology

As a starting point in the development of the 2020-2040 HRH Masterplan, the past master plans were reviewed in terms of the goals, objectives, and the process by which the Masterplans were prepared. A key difference between the first two Masterplans was the availability of HRH-related data. During the formulation of the first Masterplan in 2004, data on HRH was not readily available nor accessible. There was little awareness that agencies involved in the planning, production, management, and deployment of HRH should collaborate and pool their HRH-related data to help inform their decision making.

Table I. Goals, project objectives, and processes of previous masterplans

2005-2030 HRH Masterplan	2014-2030 HRH Masterplan
<i>Goal</i>	<i>Goal</i>
Ensure that the Philippine health services have an effective and well-motivated workforce and are appropriately managed	Provide up-to-date, strategic and practical directions for the health sector in the planning, development, management and

2005-2030 HRH Masterplan	2014-2030 HRH Masterplan
	utilization of its most important resource – human resources for health
Project Objectives	Project Objectives
<ul style="list-style-type: none"> ▪ Analyze existing national interrelated HRH management and development systems in the public and private sectors ▪ Develop a Human Resource Master Plan for the Health Sector ▪ Conduct regular consultative/coordinative meetings ▪ Provide opportunities for skills transfer to Health Human Resources Development Bureau (HHRDB) staff 	
Process	Process
<ul style="list-style-type: none"> ▪ Team mobilized within the Institute of Health Policy Studies ▪ Methods used included stakeholder analysis, situational analysis, process and outcome evaluation, scenario building and forecasting, and consensus building on the Masterplan through round table discussions ▪ Primary data collected through focus group discussions and regional consultations in Visayas and Mindanao ▪ Literature review ▪ Quantitative and qualitative analysis of available information set to key result areas and strategic thrusts for defined periods ▪ Forecasting used a World Health Organization (WHO) commissioned workforce planning software ▪ Workshops and consultations to devise strategies <p>Initiatives and other related considerations were integrated into the Master Plan included the current health program initiatives such as devolution, Health Sector Reform Agenda (HSRA) and establishment of inter-local health zones; health needs, socio-demographic trends; and regulatory standards.</p>	<ul style="list-style-type: none"> ▪ Desk review of Books 1-3 of the HRHMP for 2005-2030, PDP 2012-2016, health sector policies and related regulations, WHO reports and other relevant documents ▪ Assessment of Phase I implementation through: <ul style="list-style-type: none"> - Meetings and focus group discussion with members of the HRH Network secretariat - Individual interviews and focus group discussion with HHRDB division chiefs - Interviews with representatives of HRH Network members - Regional consultation workshops - Review of relevant policies and secondary data ▪ Comprehensive analysis of findings <ul style="list-style-type: none"> - Update the situation analysis of Philippine HRH - Assessing the current system for policy development and HRH planning, entry processes, workforce management and development (pre-service and in-service training and competency development), movement, exit and re-entry processes - Rapid review of capacity of institutions engaged in HRH education and development - Examine relationships among health development partners and stakeholders specifically the HRH Network - Identify HRH issues indicating unmet concerns or emerging issues - Evaluate changes emanating from new policies, technological advancements, environmental concerns, gender issues, community health needs, and health care trends ▪ Utilization of the WHO Human Resources for Health Action Framework as the planning structure

2005-2030 HRH Masterplan	2014-2030 HRH Masterplan
	<ul style="list-style-type: none"> ▪ Development of monitoring and evaluation tools ▪ Constant consultative meetings with HHRDB counterpart planning team
Accomplishments	Accomplishments
<ul style="list-style-type: none"> ▪ The 2005-2030 HRH Masterplan prompted the establishment of the HRH Network Philippines, an alliance of government agencies, non-government organizations, professional associations, and private sector members working on HRH concerns and problems. ▪ Initiated and led by DOH, the HRH Network has successfully convened policy fora, produced six policy briefs, and collaborated on programs aimed to use available HRH efficiently through geographical distribution, proper matching of skills with work requirements, and the utilization of multi-skilled personnel. ▪ Other gains of the first Masterplan are in the harmonization of HRH policies, and working on the full development of an HRH Information System. 	<ul style="list-style-type: none"> ▪ Following the HRH Master Plan 2014–2030 and with the HRH Network as a catalyst to develop and manage sectoral HRH, the achievements reported were the development of an evidence-based rural health workforce retention plan, scaled-up career paths for nurses, transition of midwifery education from a 2-year diploma to a 4-year Bachelor of Science in Midwifery curriculum, deployment of allied health professionals to complement the rural health workforce, scaling up of HRH information systems and databases, amendment of outdated professional acts ,and institutionalization of government mechanisms to mandate continuing professional development. ▪ A National Database on Human Resources for Health Information System (NDHRHIS), and online platform that captures basic information about nine health occupational categories, is now in place. In 2015, hospitals were required to submit NDHRHIS updates as a requirement for licensing. Nevertheless, the data remain limited to health workers in healthcare institutions. ▪ In 2017, five national government agencies involved in the production, management, and migration of HRH rolled out the Integrated Database System for HRH Information System. The database houses multisectoral aggregate data on HRH and organized according to WHO’s Lifespan Strategies (Philippine Health Systems Review, WHO 2018).

Source: Final Project Report on the Philippine HRH Masterplan 2005-2030, Reformulation of the Human Resources for Health Masterplan (HRHMP) HRH Strategy for the Philippines: 2014-2030

Similar to the past Masterplans, the following were undertaken to present an updated situation analysis of HRH in the Philippines: a document and literature review, analysis of secondary data, consultations, and meetings with HHRDB and members of the HRH Network.

- Document and literature review including:
 - Legislations that deal directly with or impact on HRH such as the UHC Law and the Local Government Code (LGC) of 1991;
 - Policy documents from National Economic and Development Authority (NEDA), Department of Health (DOH), WHO, Association of South East Asian Nation (ASEAN), United Nations (UN) Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs);
 - Published studies such as on migration, the social impact of the competency-based and community-based curriculum of the University of the Philippines (UP) School of Health Sciences, and the Global Code of Practice on International Recruitment of Health Personnel; and the

- Unpublished papers supported by USAID-HRH2030 such as the policy scoping review, a review of the DOH Deployment Program, and application of the WHO's workload indicators of staffing needs (WISN) and health labor market analysis (HLMA).
- Secondary data analysis, specifically on:
 - Number of health infrastructure from Knowledge Management Information Technology System (KMITIS), Philippine Statistics Authority (PSA), Field Health Service Information System (FHSIS)
 - Number of health workers from HHRDB, Professional Regulation Commission (PRC), PSA, FHSIS
 - Vacancies of health workers from the integrated survey on labor and employment (ISLE)
 - Wages of health workers from the Department of Budget and Management (DBM), Occupational Wage Survey
 - Demand for health services from National Demographic and Health Survey (NDHS), Philippine National Health Accounts (PNHA), Family Income and Expenditure Survey (FIES), PSA
 - Health sciences education from Commission on Higher Education (CHED), Technical Education and Skills Development Authority (TESDA), PRC, finduniversity
 - Migration of health workers: Commission on Filipinos Overseas (CFO), Philippine Overseas Employment Administration (POEA), payscale
 - Data in the National Objectives for Health (NOH) 2017-2022
- Results of the initial consultations with CHED, Department of Labor and Employment (DOLE), NEDA, DBM, and Civil Service Commission (CSC) spearheaded by HHRDB have been incorporated in the situation analysis. Inputs from members of the HRH Network and other stakeholders during the validation workshop of the situation analysis last July 17, 2019 in Manila were also included.

USAID's HRH2030/Philippines supported the conduct of workload indicator for staffing needs (WISN) and the health labor market analysis (HLMA). Results of both methods of analyzing the HRH situation in the country were incorporated in the situation analysis. Developed by the WHO, WISN is a tool that estimates the 'number of staff of a specific category a health facility requires based on the actual workload for that facility'. WISN provides a systematic way for health managers to analyze and determine staffing needs based on actual workloads. On the other hand, the analysis of the health labor market determines the root causes of imbalances in availability, accessibility, acceptability, and quality of a health workforce.

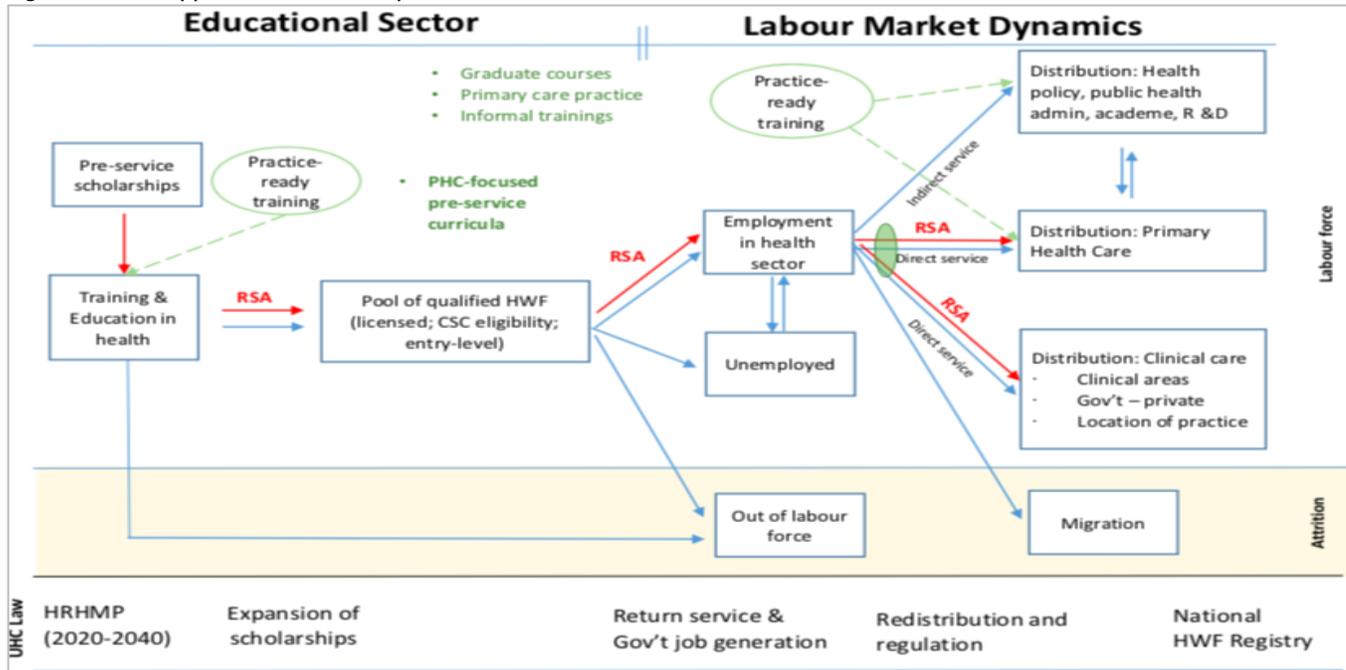
Additionally, the Masterplan will be informed by the results of a policy scoping review carried out by USAID's HRH2030/Philippines project to assess the relevance and influence of current HRH policies on the health sector, determine important stakeholders to lead HRH interventions, identify barriers to effective HRH policy implementation, and identify critical information systems for decision making. Seventy-five HRH-related legislations and policies, mostly issued by DOH, were collected and reviewed. Twenty-four of these policies were related to skill mix, HRH competencies and distribution; 23 were related to leadership, governance and performance management concerns; 20 were related to data use and decision-making; and eight (8) were related to organizational development.

Thematic analysis was employed for the qualitative data while descriptive statistics, trends and ratios were generated for quantitative data. As the situation analysis for the 2020-2040 HRH Masterplan is an update of the situation analysis of the 2014-2030 HRH Masterplan, the analysis of qualitative and quantitative analyses identified gaps and HRH key issues previously unidentified and determined to what extent the past issues hold true at present. The collected data and information were mapped to the needs of the situation analysis (Appendix I).

The situation analysis was guided by the HRH approach to UHC implementation (*Figure 1*). This approach is based on the HLMA framework incorporating key elements of the UHC law.

A limitation of the situation analysis was that most of the quantitative data covered only four cadres: physicians, nurses, midwives, and medical technologists. Data on all the cadres of health workers was only available for the year 2018. For non-professional health workers, only barangay health workers (BHW) and barangay nutrition scholars (BNS) were included. However, the data for BNS is limited to the annual totals from 2017 to 2019 and further disaggregation is not possible.

Figure 1. HRH approach to UHC implementation



Source: DOH-HHRDB 2019

Policy context

National and global events drive policy changes. For the 2020-2040 HRH Masterplan, it is necessary to identify the policies that serve as its broad parameters. These policies also help clarify the purpose of the Masterplan i.e. what strategies, activities and targets should the Masterplan contain to contribute to the achievement of national and international policies and long-term goals? As a signatory to the MDGs and its successor, the SDGs, the Philippines is committed to certain health outcomes by 2030. Also, part of SDG 3 on health is the HRH-related goal of substantially increasing the health financing and the recruitment, development, training and retention of the health workforce. This is echoed in the goal of the WHO Global Workforce Strategy, which the Philippines adopted as well. On the national front, there are time-bound policies and legislations.

The Masterplan must respond to the vision of Filipinos having long and healthy lives by 2040 as stated in AmBisyon Natin 2040. The NOH 2017-2022 has the same goals that is to have Filipinos among the healthiest in Southeast Asia by 2022 and the healthiest among Asians by 2040. Medium-term plans such as the Philippine Development Plan (PDP) 2017-2022 and the Health Facility Development Plan (HFDP) of the DOH have HRH components which the 2020-2040 Masterplan should speak to. Legislations that guide the crafting of the Masterplan include the UHC Act signed in 2019 and the LGC of 1991.

Following are the relevant national and international policies and legislations that impacts on the development of the 2020-2040 HRH Masterplan.

AmBisyon Natin 2040

By 2040, Filipinos want to 'live long and healthy lives' that allow them 'to realize their full potential', 'borne out of healthy lifestyle choices' and have a work-life balance that reduce the strain on their health. In case of illness, Filipinos 'must have access to affordable and good quality healthcare' and '...ensuring the quality of health care... is the responsibility of government' (AmBisyon Natin, NEDA 2017).

Philippine Development Plan

In articulating the process by which human capital development will be accelerated, the PDP 2017-2022 states that Filipinos will have 'better access to health care services' by 2022 (NEDA 2017). The government will 'work to improve nutrition and health for all' to:

- Guarantee care at all life stages by providing quality nutrition and health care interventions, and improving health seeking behavior of citizens, especially the most vulnerable.
- Ensure access through functional service delivery by guaranteeing functional and efficient networks of health care providers, upgrading and equipping health facilities, and improving human resources for health.
- Sustain health financing by expanding health insurance coverage and improving benefit packages.
- Invest in eHealth and data collection mechanisms for decision making to address data gaps.
- Elicit multisector, multi-stakeholder support for nutrition and health.

National Objectives for Health 2017-2022

The Secretary of the DOH has set the DOH's targets in the National Objectives for Health (NOH) 2017-2022. Anchored on the PDP 2017-2022 and aligning closely to the thrusts of UHC law, the NOH 2017-2022 identifies better health outcomes, a more responsive health system, and more equitable healthcare financing as its strategic goals. The DOH will accomplish these goals through the reforms and interventions in five pillars:

- Financing: securing sustainable investments to improve health outcomes and ensure efficient and equitable use of resources;
- Service delivery: ensuring the accessibility of essential quality health services at appropriate levels of care;
- Regulation: ensuring high quality and affordable health products, facilities, and services;
- Governance: strengthening leadership and management capacities, coordination, and support mechanisms necessary to ensure functional, people-centered and participatory health systems; and
- Performance accountability: use management systems to drive better execution of policies and programs in the DOH while ensuring responsibility to all stakeholders

As one of the objectives of the service delivery pillar, the NOH 2017-2022 guarantees the equitable distribution of HRH. It will address the alignment of HRH requirements with population needs and health facilities expansion and the adequate production of quality HRH. The DOH aims to have Filipinos among the healthiest people in Southeast Asia by 2022, and Asia by 2040.

Health Facility Development Plan

The Health Facility Development Bureau (HFDB) of the DOH has also developed a HFDP 2017-2022 that will serve as a guide for upgrading all the health facilities throughout the Philippines. It is designed to address the gaps and needs for the upgrading of barangay health stations (BHS), rural health units (RHUs), polyclinics, hospitals, and other health facilities to ensure the availability of health services including specialty care. The Plan intends to have one BHS per barangay, one RHU per 20,000 population, one hospital bed per 800 population, and convert selected infirmaries to polyclinics serving 100,000 population. A polyclinic will provide intermediate care between primary care facilities and hospitals (HFDB, DOH, 2017).

Universal Health Care Law

The clearest and most specific articulation to achieve the vision of Filipinos having long and healthy lives lie in the UHC law. Enacted in 2019, it aims to ensure that all Filipinos are guaranteed to have equitable access to quality and affordable health care goods and services, and protected against financial risk. Its key provisions include:

- Universal health coverage, requiring every Filipino to be covered through the National Health Insurance Program (NHIP), and be provided access to all health services;
- As members of NHIP, every Filipino is a direct or indirect contributor with eligibility to health benefit packages;
- Health services will be delivered through a population- and individual-based approach;
- Organization of local health systems by integrating local health systems into province wide and city-wide health systems; and

- Formulation and implementation of a National HRH Masterplan including a national health workforce support system, scholarships and training programs, and return service agreements.

On the HRH component of the UHC law, it guarantees the permanent employment and competitive salaries of health workers, requires a national health workforce support system and the expansion of existing and new allied and health-related degree and training programs and scholarships, mandates the setting up of a registry of medical and allied health professionals, and re-orient health sciences education to include competencies in providing primary care services.

Local Government Code

With the passage of the Local Government Code in 1991, the provision and management of health services such as public health programs, promotive and preventive health care, and primary and secondary general hospital services were transferred to LGUs. The provincial government, headed by the governor, manages the provincial health system (i.e. the provincial health office, and the provincial and district hospitals). The city government, specifically in highly urbanized and independent cities, manages city hospitals, medical centers, rural health centers (RHUs) and barangay health stations (BHS). The municipal government, headed by the mayor, manages the municipal health system, composed of RHUs and BHS. The DOH is represented in all local health boards through the DOH representatives. A health board is present in every province, city, municipality and serves as an advisory body to the local chief executive (LCE) and legislative council on health-related matters.

Millennium Development Goals and the Sustainable Development Goals

The Philippines is also committed to international health agreements, notable of which are the MDGs and the SDGs. Emanating from the Millennium Summit of the United Nations in 2000, eight international development goals for 2015 were established. While three goals speak directly to health such as reduce child mortality, improve maternal health, and combat HIV/AIDS, malaria and other diseases, other goals touch on risk factors for health: extreme poverty and hunger, education, gender equality and environmental sustainability.

Following the expiry of the MDGs, the 2030 Agenda for Sustainable Development was adopted by all the members of the United Nations in 2015. Embedded in the 2030 Agenda are 17 SDGs, which are an urgent call for action by all countries in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.¹ Goal 3, which is to ensure healthy lives and promote well-being for all at all ages, aims to continue the three health goals of the MDGs as well as introducing goals on non-communicable diseases (NCDs), substance abuse, road traffic accidents, access to sexual and reproductive health care, universal health coverage, and deaths and illnesses arising from pollution. Moreover, the SDGs aim to strengthen tobacco control, support research and development of vaccines and medicines, and strengthen the capacity of all countries for early warning, risk reduction and management of national and global health risks. Of note is the goal to ‘substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries.

WHO Global Workforce Strategy

In 2014, Member States requested for the development of a new global strategy for HRH for consideration by the Sixty-ninth World Health Assembly. Launched in 2016, the Global Workforce Strategy is targeted towards planners and policy-makers of Member States, but it is of equal value to all relevant stakeholders including public and private sector employers, professional associations, education and training institutions, labor unions, bilateral and multi-lateral development partners, international organizations, and civil society. Its overarching goal is to “improve health, social and economic development outcomes by ensuring universal availability, accessibility, acceptability, coverage and quality of the health workforce through adequate investments to strengthen health systems, and the implementation of effective policies at national, regional and global levels”.

¹ <https://sustainabledevelopment.un.org/sdg3#targets> accessed 13 June 2019

WHO Global Code of Practice on the International Recruitment of Health Personnel

In May 2004, the World Health Assembly (WHA) requested the WHO to develop a code of practice on the international recruitment of health personnel as a global framework for dialogue and cooperation on matters concerning health personnel migration and health systems strengthening. In 2010 the Code was adopted by the WHO Member States, providing a guide to international cooperation and facilitated a platform for continuing dialogue on the critical problem of health worker migration. Soon after, the Philippines has started to implement the Code by raising awareness about it through multi-sectoral involvement in accomplishing the National Reporting Instrument of the Code and consultative meetings convened by DOH-Bureau of International Health Cooperation (BIHC) on the Philippine Migrant Health Program. The Philippines is considered a source country for migrant health professionals.

ASEAN Mutual Recognition Agreements

The Philippines, a signatory to the 1995 ASEAN Framework Agreement on Services, supports the Mutual Recognition Agreements (MRA) between members of the ASEAN. The MRAs facilitates trade in services by mutual recognition among member countries for professional authorization, licensing or certification by the respective authorities within the framework of the MRA. MRAs have been signed on nursing services in 2008, and dental and medical practitioners in 2009. However, these arrangements have not been implemented because of provisions in certain laws of the Philippines e.g. health professions can be practiced only by Filipinos according to the 1987 Philippine Constitution and the access to the local labor market is covered by strict provisions of the Labor Code of the Philippines and the PRC Modernization Act of 2000.

Summary

Setting out the broad policies of the Philippines and the DOH in particular allows a better understanding of the overarching goals that the health sector should aim for, the environment that facilitates and may unintentionally produce constraints to the performance of the health sector, and the effects of these policies on HRH planning, production, management, retention, and deployment.

The awareness of the strong interdependence among countries has resulted in shared blueprints (e.g. SDGs) and agreements that respond to countries internal needs as well as external pressure (e.g. MRAs and code of practice on international recruitment). In-country, multiple consultations with Filipinos have produced a resounding vision on which the Philippines has anchored its development plans as well as health objectives over the short and medium term.

A common stance towards shared global and national goals will likely ensure the alignment of resources and efforts, and address pressing issues such as inequities in the access of health goods and services, fragmented health care delivery, and inadequate and maldistributed HRH. The 2020-2040 HRH Masterplan should include strategies, activities, and targets that addresses and assists the achievement of the HRH components of national and international policies and contributes to better health outcomes of Filipinos.

Health situation

Emanating from AmBisyon 2040 where Filipinos categorically expressed a vision of long and healthy lives for themselves and consistent with the UHC law, primary health care (PHC) and the role of HRH continues to be of paramount importance to bring about these desired outcomes. Selected health outcomes discussed in the succeeding sections present the challenges that HRH contend with and indicate if the strategies and interventions towards improving the health and well-being of Filipinos have led to positive outcomes. These outcomes provide a partial picture of the essential elements that WHO has defined as part of PHC (Figure 2).

Primary health care approach

The Philippines adopted a PHC approach in 1983 following the Alma Ata Declaration. WHO defines PHC as “a whole-of-society approach to health that aims to ensure the highest possible level of health and well-being and their equitable distribution by focusing on people’s needs and preferences (as individuals, families, and communities) as early as possible along the continuum from health promotion and disease prevention to treatment, rehabilitation and palliative care, and as close as feasible to people’s everyday environment.” To succeed, WHO states that the following are necessary: leadership and policy, funding for preventive and promotive

interventions, human resources that have a wide range of skills across the health systems and able to collaborate across different sectors, and quality of care that is equitable and accountable to the needs of the community (USAID-HRH2030 HLMA Report, 2019).

Figure 2. Eight essentials of primary health care, WHO

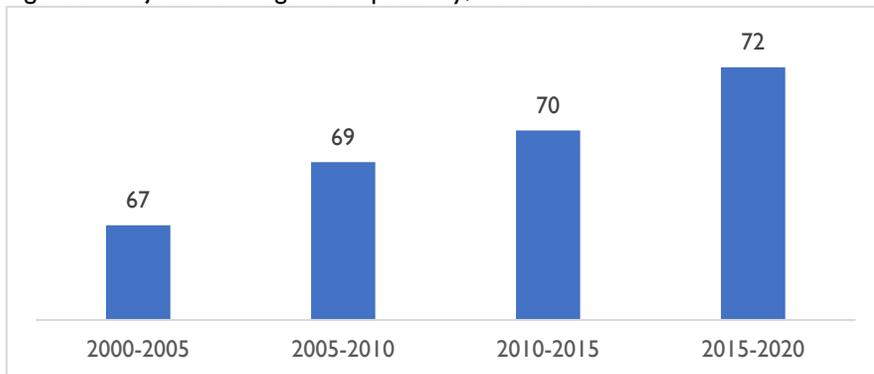


Source: USAID-HRH2030 HLMA Report, 2019

Life expectancy

Using data from the Philippine Statistics Yearbook, the average life expectancy of Filipinos has increased from 67 years between 2000-2005 to a projected 72 years by 2020 (Figure 3). Life expectancy reflects the combined effect of the quality of life of the Filipinos and how well the health system has helped protect and heal the Filipinos from illnesses.

Figure 3. Projected average life expectancy, 2000-2020



Source: NOH 2017-2022, DOH

Leading causes of mortality and morbidity

In 2017, eight of the ten leading causes of death in the Philippines comprised of non-communicable diseases (NCDs), like ischemic heart disease, neoplasms or cancer, cerebrovascular disease or stroke, hypertensive diseases, diabetes, other heart diseases, lower respiratory tract infections, and remainder of diseases of the genitourinary system (Table 2). The remaining causes of mortality in the Philippines are communicable diseases, specifically pneumonia and respiratory tuberculosis.

NCDs originate from lifestyle-related risk factors: cigarette smoking, hypertension, hyperglycemia, dyslipidemia, obesity, physical inactivity, and poor nutrition (Asena et al, 2015 as cited in NOH 2017-2022). Collectively they accounted for 82% of deaths from the top 10 leading causes of mortality in the country. For instance, the mortality rate for cardiovascular disease rose from 109.5 deaths per 100,000 population in 2010 to 133 in 2014 using data from the Philippine Health Statistics. Cancer, the second leading cause of death in 2016, had an average mortality rate of 53.7 deaths per 100,000 population from 2010 to 2014. The Philippines topped 197 countries with the highest number of cases of breast cancer in 2016. Mortality for diabetes has been increasing, rapidly rising from 23.8 to 30.7 deaths per 100,000 population over a two-year period (2012-2014). Uncontrolled diabetes leads to serious complications such as stroke, heart attack, end-stage kidney disease, and diabetic retinopathy, among others (NOH 2017-2022).

Table 2. Ten leading causes of mortality, 2017

Disease	Number of deaths	Rate per 100,000 population
Ischemic heart disease	84,120	80.2
Neoplasms	64,125	61.1
Cerebrovascular diseases	59,774	57.0
Pneumonia	57,210	54.5
Diabetes Mellitus	30,932	29.5
Hypertensive diseases	26,471	25.2
Chronic lower respiratory tract infections	24,818	23.7
Respiratory Tuberculosis	22,523	21.5
Other heart diseases	22,134	21.1
Remainder diseases of the genitourinary system	15,717	15.0

Source: Philippine Statistics Authority, 2017

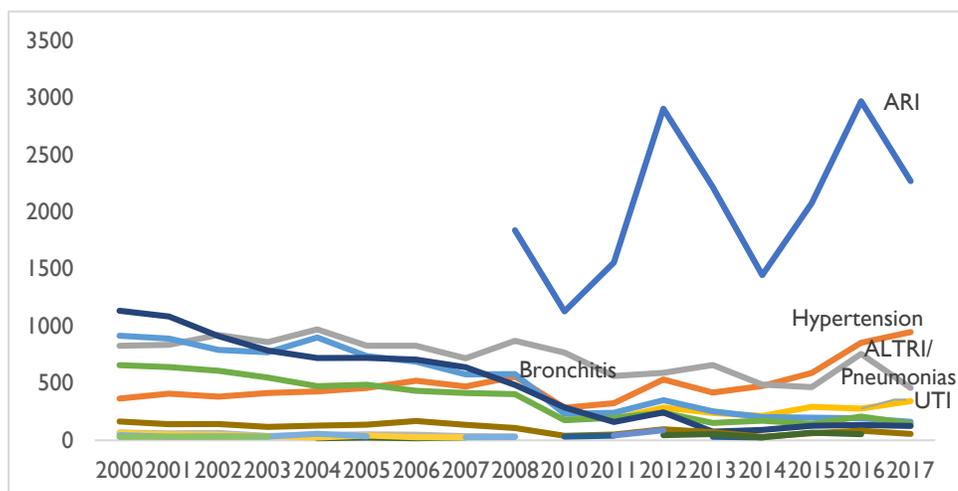
On the other hand, the top three causes of morbidity in 2017 were acute respiratory infection (ARI), hypertension, and acute lower respiratory tract infection (.). The ten leading causes of morbidity have shown a marked shift from heart diseases, malaria, chicken pox, and measles between 2000 and 2006 to acute respiratory infection and urinary tract infection from 2007 to 2017. Hypertension, which was fifth in 2000 with 366 cases per 100,000 population has become the second leading cause of morbidity with 948 cases per 100,000 in 2017 suggesting lifestyle change. Acute lower respiratory tract infection & pneumonia, bronchitis, influenza, and diarrhea remain among the top 5 causes from 2000 to 2017, with rates far higher compared to other causes of morbidity.

Table 3. Ten leading causes of morbidity, 2017

Disease	Number of cases	Rate per 100,000 population
Acute Upper Respiratory Infection	2,382,122	2,270.38
Hypertension	994,707	948.05
Acute Lower Respiratory Tract Infections and Pneumonia	481,561	458.97
Urinary Tract Infection	360,938	344.01
Bronchitis	170,085	162.11
Influenza	154,672	147.42
Acute Watery Diarrhea	132,783	126.55
Asthma All Forms	72,520	69.12
Respiratory Tuberculosis	59,277	56.50
Acute Febrile Illness	55,652	53.04

Source: DOH Field Health Service Information System (FHSIS) Report, 2017

Figure 4. Ten leading causes of morbidity per 100,000 population, 2000-2017



Source: DOH FHSIS

Immunization

The Philippines has an Expanded Program for Immunization (EPI) since 1976. It is a fully funded government initiative highlighting strong commitment to child health. There is a schedule of vaccination for all children and for special population groups. While the budget has increased ten-fold since 2006, recent data on Fully-Immunized Child (FIC) shows there is a declining trend of immunization coverage (74% in 2014 – 71% in 2015 – 69% in 2016), which is way below the 95% coverage target. For instance, coverage in most LGUs fell below the national average. This is not unusual in difficult to reach island provinces, mountainous areas, and areas of armed conflict. (NOH 2017-2022 p65) Low coverage means that the public is vulnerable to outbreaks of vaccine-preventable diseases as was experienced in the measles outbreak in 2018 and polio outbreak in 2019. One of the key challenges of the immunization program is the inadequacy of health providers especially at the local levels.

Maternal, child health and family planning

Achievements of the country's international health commitments via its MDGs set for 2015 show mixed results to date (Table 4). Modest gains have been made in maternal and child health although the decline has been slow (NOH 2017-2022). Maternal mortality ratio (MMR) dropped from 126 per 100,000 live births in 2012 to 114 in 2015. The infant mortality ratio (IMR) went down from 34 per 1,000 live births in 1993 to 23 in 2013 while the under-5 mortality rate declined from 54 in 1993 to 31 in 2013. The country has met the target for under-5 mortality rate but has yet to achieve the targets for MMR and IMR.

In family planning, results have been mixed as well. The National Demographic and Health Survey (NDHS) in 2017 showed that 87% of women make four or more ANC visits and more than 3 in 4 births (78%) are delivered in a health facility (primarily in public sector facilities) where 84% of births are assisted by a skilled provider (majority by doctors). Fifty-four percent of married women use a method of family planning, and 40% use modern method of family planning. However, 17% of currently married women have unmet needs for family planning.

Table 4. Millennium development goals in health

	Baseline (1990)	In 2013	Target (2015)
Reduce child mortality – reduce by two thirds the under-5 mortality rate			
Under 5 mortality rate per 1,000 live births	34.0 ^{1/}	23.0 ^{1/}	27.0
Infant mortality rate per 1,000 live births	57.0	31.0 ^{1/}	19.0

	Baseline (1990)	In 2013	Target (2015)
Proportion of 1-year-old children immunized against measles	77.9	91.0	100.0
Improve maternal health – reduce by three-quarters the maternal mortality ratio			
Maternal mortality ratio	209.0	114.0 ^{2/}	52.0
Proportion of births attended by skilled health personnel	58.8	87.0	100.0
Achieve universal access to reproductive health			
Contraceptive prevalence rate	40.0	55.1	100.0
Adolescent birth rate	50.0	57.0	0.0
Antenatal care coverage (at least 1 visit)	91.2	96.1	Increasing
Antenatal care coverage (at least 4 visits)	52.1	84.3	Increasing
Unmet need for family planning	26.1	17.5	Decreasing
Combat HIV/AIDS, malaria and other diseases – have halted and begun to reverse the incidence of malaria and other major diseases			
Prevalence associated with malaria	118.7	7.9	0.0
Death rate associated with malaria	1.4	0.01	0.0
Prevalence associated with tuberculosis	246.0	461.0	0.0
Death rate associated with tuberculosis	39.1	24.0	0.0
Proportion of TB cases detected under DOTS	53.0	55.0 ^{3/}	70.0
Proportion of TB cases cured under DOTS	73.0	91.0 ^{3/}	90.0

Unless otherwise indicated, the data source is from <http://www.psa.gov.ph/mdgs-main/mdg-watch> accessed 11 June 2019

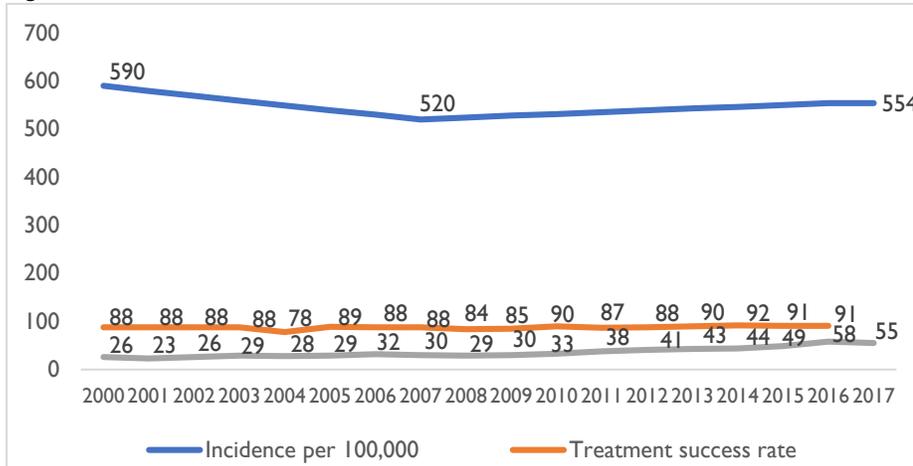
^{1/} As of 2013, see NOH 2017-2022 p21; ^{2/} As of 2015, see NOH 2017-2022 p21; ^{3/} World Bank data

Infectious diseases: malaria and tuberculosis

Malaria has been brought under control with the prevalence significantly dropping between 1990 and 2013. According to the DOH, the number of malaria-free provinces went up from 27 in 2012 to 32 in 2016 although this still falls short of the NOH 2016 target of 40 provinces (NOH 2017-2022).

Efforts to contain communicable diseases such as TB have shown positive gains. In 2016, the Philippines achieved a 91% treatment success rate for tuberculosis (Figure 5). The incidence of the disease fell from 590 per 100,000 population in 2000 to 520 in 2007. However, from 2007, new cases started to increase and by 2017, was back to 554 per 100,000 population. Multi-drug resistant tuberculosis is an emerging concern.

Figure 5. Tuberculosis incidence, treatment success rate, and case detection rate

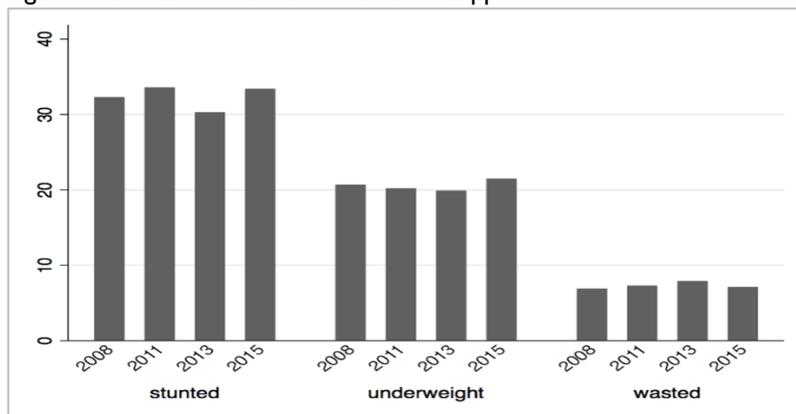


Source: World Bank in HLMA report, 2020

Malnutrition

Another challenging health issue in the Philippines is child nutrition. A heavily publicized data from the World Bank showed that the trend in malnutrition has not changed significantly over the last ten years (Figure 6). In spite of the sustained economic growth during the same period. The key measures of nutrition are stunting (low height for age), underweight (weight low for age) and wasting (low weight for height). Underweight and wasting can be rectified when children go to school, but stunting is irreversible past the first 1,000 days of a child. As the country enters the demographic dividend, it might not be able to reap the full benefits since about a third of children today are stunted. Stunted children have low cognitive capacities, and they carry this for life affecting future productivity (USAID-HRH2030 HLMA Report, 2019).

Figure 6. Trends of malnutrition in the Philippines



Source: USAID-HRH2030 HLMA Report, 2019

Health outcomes of Asian countries

As shown in Table 5, the Philippines remains in the middle of the pack for indicators of maternal and infant mortality and average life expectancy. It ranks one of the worst for Tuberculosis incidence rate in 2016 behind Myanmar, Timor Leste, and Indonesia.

Table 5. Health outcomes of Southeast Asian countries

Indicators		Average Life Expectancy (2016)	Maternal Mortality Ratio (2015)	Infant Mortality Rate (2016)	TB Incidence Rate (2016)
1st (Best)	 Singapore	 Singapore	 Singapore	 Singapore	
2nd	 Brunei	 Thailand	 Malaysia	 Brunei	
3rd	 Vietnam	 Brunei	 Brunei	 Malaysia	
4th	 Thailand	 Malaysia	 Thailand	 Vietnam	
5th	 Malaysia	 Vietnam	 Vietnam	 Thailand	
6th	 Indonesia	 Philippines	 Philippines	 Lao PDR	
7th	 Philippines	 Indonesia	 Indonesia	 Cambodia	
8th	 Cambodia	 Cambodia	 Cambodia	 Myanmar	
9th	 Timor Leste	 Myanmar	 Myanmar	 Indonesia	
10th	 Lao PDR	 Lao PDR	 Timor Leste	 Timor Leste	
11th (Worst)	 Myanmar	 Timor Leste	 Lao PDR	 Philippines	

Source: DOH presentation on F1 Plus: Boosting Universal Health Care

Aspirational goals in health outcomes

There are four indicators under Goal 1 of the strategic goals of DOH that coincide with Goal 3 on health of the SDGs (Table 6 and Table 7). These are the reductions in maternal and infant mortalities, premature mortality from NCDs, and reducing Tuberculosis incidence.

Table 6. DOH targets for Goal 1 – Better Health Outcomes

Indicators	Data source	Baseline	2022 Target
Average life expectancy (in years)	PSA	70 (2010-2015)	72
Maternal mortality ratio per 10,000 live births	UN estimates	114 (2015)	90
Infant mortality rate per 1,000 live births	PSA-NDHS	23 (2013)	15
Premature mortality attributed to cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases per 10,000 population	PSA-CRVS	188 (2014)	156

Indicators	Data source	Baseline	2022 Target
Tuberculosis incidence per 10,000 population	National TB Prevalence Survey	434 (2016)	427
Prevalence of stunting among under-five children	FNRI-DOST NNS	33.4 (2015)	21.4

Source: NOH 2017-2022, DOH

Table 7. Sustainable Development Goals for 2030

<ul style="list-style-type: none"> By 2030, reduce maternal mortality ratio to less than 70 per 100,000 live births
<ul style="list-style-type: none"> By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
<ul style="list-style-type: none"> By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
<ul style="list-style-type: none"> By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
<ul style="list-style-type: none"> Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
<ul style="list-style-type: none"> By 2020, halve the number of global deaths and injuries from road traffic accidents
<ul style="list-style-type: none"> By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programs
<ul style="list-style-type: none"> Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
<ul style="list-style-type: none"> By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
<ul style="list-style-type: none"> Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control, as appropriate
<ul style="list-style-type: none"> Support the research and development of vaccines and medicines for the communicable and non-communicable diseases, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health
<ul style="list-style-type: none"> Substantially increase health financing and the recruitment, development, training and retention of the health workforce
<ul style="list-style-type: none"> Strengthen the capacity for early warning, risk reduction and management of national and global health risks

Source: <https://sustainabledevelopment.un.org/sdg3> accessed 25 June 2019

Summary

Overall, the health outcomes of the Philippines are improving although the slow decline of maternal mortality rate and infant mortality rate remains a challenge. Many Filipinos still suffer from preventable and treatable diseases with cost-effective interventions such as HIV, TB, dengue, and vaccine preventable diseases such as measles and diphtheria.

A common factor apparent in these challenges related to a country's overall socio-economic development. This is supported by the MDG Report on the Philippines in 2015 showing that the regions and provinces faring poorly in poverty reduction are the same regions scoring poorly in reducing infant and maternal mortality, universal primary education, and gender equality. The latest NDHS 2017 shows that those at the lower wealth quintile and with less education are most likely to have more children (although they also tend to use contraceptives than the richer quintiles) and no vaccination. NDHS data also shows that it is lack of money, distance, and not

wanting to go to treatment alone that are the main reasons for non-access of health treatment (USAID-HRH2030 HLMA Report, 2019).

Fragmentation of the health service delivery system also affects health outcomes. The presence of different levels of authority by several national agencies, thousands of LGUs, and private providers have fragmented the operation of health facilities and the delivery of services (NOH 2017-2022). The devolution of existing DOH facilities at the local level and about 70% of the sector's staff has resulted in various facilities being poorly maintained and poorly staffed due to local budgetary constraints or the lack of priority given to health by certain local officials. More than 20 years after devolution, many health initiatives remain beyond the LGUs' skills and competencies. This has given rise to non-alignment of the priorities of provincial LGUs with DOH's priorities, and the non-alignment of the priorities of barangay LGUs with municipal LGUs (USAID-HRH2030 HLMA Report, 2019). Regional and national hospitals have become overcrowded, with patients bypassing primary health facilities even for simple illnesses (NOH 2017-2022).

Another challenge is that many areas remain underserved despite the deployment program of DOH (USAID-HRH2030 Deployment Report, 2019). Underserved areas appear linked to retention issues which are in turn largely related to job security.

HRH in the Philippines

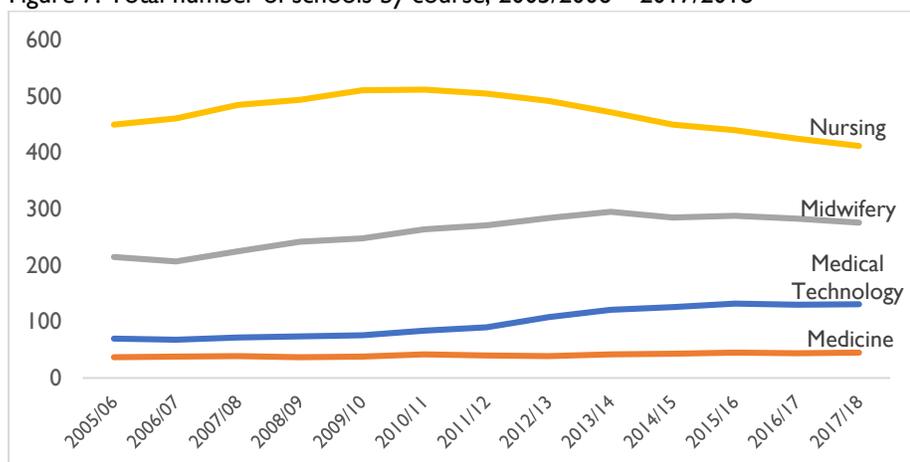
This section looks at HRH in the Philippines, presented according to WHO's Work Lifespan Strategies comprising of entry, workforce, and exit. Ideally, re-entry of medical personnel into the system should also be discussed. Because of the absence of data, this was left out of the discussion. Using currently available data from USAID's HRH2030/Philippines, only the cadres of doctors, medical technologists, nurses, and midwives are presented except for 2018 where data for 11 cadres was obtained.

Entry into the workforce

Schools for health sciences education

By type of higher education institutions (HEIs), those with nursing programs abound peaking at 512 in the 2010/2011 school year before gradually dropping to 412 schools in 2017/2018 (Figure 7). HEIs with medical technology have continuously increased from 2006/2007 reaching and holding steady at about 130 schools beginning in 2015/2016 up to the present. Medical schools have shown small increment increases to date but have not exceeded 45. Regardless of type, the NCR holds the highest number of schools. In 2017/2018, private schools comprised 82% of the total with the remaining 18% public schools.

Figure 7. Total number of schools by course, 2005/2006 – 2017/2018



Source: Commission on Higher Education

As of 2018, the ratio of government to private schools for health courses are as follows: 1 to 43 for medical technology, 1 to 4 for medicine, 1 to 4.75 for midwifery, and 1 to 4.5 for nursing. This points to the need for government schools to develop capacities in providing health sciences education but especially in teaching medical technology. This leaves midwifery and nursing as the most

accessible courses for potential entrants to health sciences education in the public sector. Table 8 shows the regional breakdown of public and private schools offering the four courses. There are many private schools relative to government run schools across regions (USAID’s HRH2030/Philippines HLMA Report, 2020).

Table 8. Government and private higher education institutions for HRH courses by region

Region	Medical Tech		Medicine			Midwifery				Nursing		
	SUCs	Pvt	SUCs	LUCs	Pvt	SUCs	LUCs	OGS	Pvt	SUCs	LUCs	Pvt
NCR	0	31	1	1	12	0	1	1	28	3	6	64
CAR	0	4	0	0	1	3	0	0	8	3	0	12
I	1	6	2	0	2	3	3	0	15	5	1	17
II	1	7	1	0	1	2	0	0	13	3	0	14
III	0	14	0	0	2	2	1	0	20	5	1	32
IV-A	1	17	0	0	3	4	2	0	19	7	1	43
IV-B	0	1	0	0	0	3	0	0	6	2	0	4
V	0	6	1	0	1	4	2	0	20	5	0	18
VI	0	7	1	0	3	2	1	1	9	4	0	20
VII	0	5	0	0	6	5	0	0	13	3	0	26
VIII	0	4	1	0	1	0	0	0	9	6	0	11
IX	0	5	0	0	1	3	0	0	8	7	0	11
X	0	7	0	0	1	0	2	0	13	4	0	16
XI	0	5	0	0	2	0	0	0	11	1	0	19
XII	0	7	0	0	0	1	1	0	19	2	0	14
ARMM	0	1	1	0	0	0	0	0	10	5	0	12
CARAGA	0	1	0	0	0	1	0	0	7	0	0	5
Philippines	3	128	8	1	36	33	13	2	228	65	9	338

Note: Unless labeled as ‘Private’, other HEIs are government classified as: SUCs- State Universities and Colleges; LUCs- Local Universities and Colleges; OGS- Other Government Schools. Source: Commission on Higher Education (CHED), as of SY 2017-2018

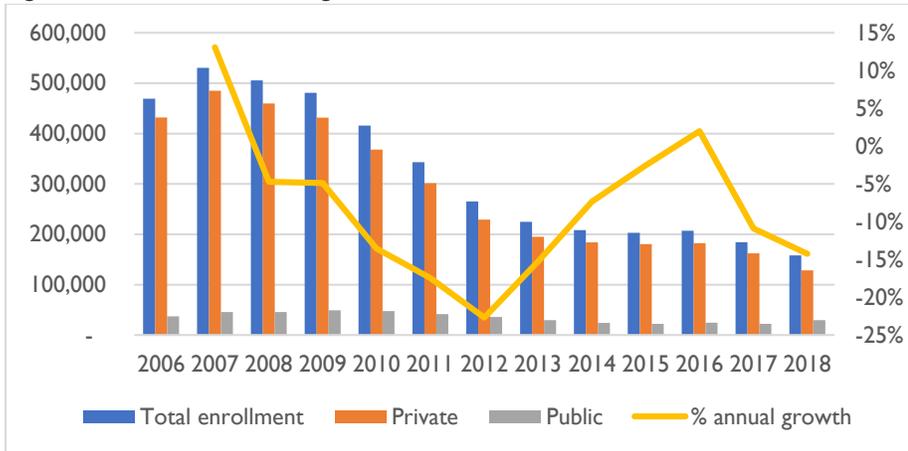
The dominance of the private sector in health sciences education is underscored based on the opinions of members of the HRH Network that participated in the validation workshop of the situation analysis. According to a participant, “anybody can open a new school as long as it complies with the requirements”. A similar view was raised by another, “quality is regulated but quantity is not; the opening of new schools and programs are not being regulated”. Another said that the “private sector controls supply but government cannot regulate education”. Others noted that the “priority of the country is to respond to the foreign market’s demand for health professionals” and that “there are schools focusing on producing global HRH supply”.

An emerging issue identified in the validation workshop is the increasing inflow of foreign students in medical and health sciences programs so that private schools’ business interests will likely take precedence over responding to the local health sector demand for HRH. Executive Order (EO) 285 states that only schools with accredited programs are allowed to accept foreign students, at a maximum of 30% of the student population. However, schools offering slots to foreign students tend to abuse the 30% cap of EO 285, prioritizing profit over local needs.

PRE-SERVICE EDUCATION AND TRAINING

The cumulative total of enrollees from the school year 2005/2006 to 2017/2018 was 4.2 million students or an average of 322,824 per year (CHED enrollment data from HHRDB). Trend-wise enrollment in public and private schools declined over the same period, with an average growth rate of -8% (Figure 8).

Figure 8. Total enrollees and growth rate, 2005/2006 – 2017/2018

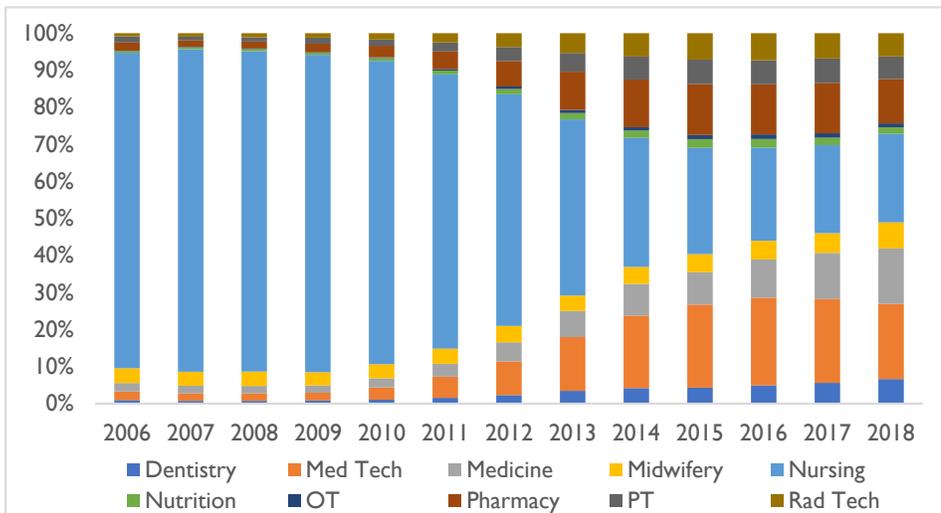


Source: Commission on Higher Education

The decrease in enrollment is influenced by the drop in the number of nursing students, which account for a significant portion of total enrollees each year. As shown in Figure 9, the proportion of nursing students to total enrollment has steadily gone down from 85% in 2005/2006 to 24% in 2017/2018 while the intake of students in other health sciences courses has grown.

Across cadres, female students outnumber males, accounting for nearly eight in ten or 77% of the total. It is only in radiologic technology where the distribution of females and males are roughly equal at 54% and 46%, respectively.

Figure 9. Share to total enrollment by cadre, 2005/2006 – 2017/2018



Source: Commission on Higher Education

Between 2005 and 2017, the system has produced about 3,000 qualified board passers for medical technology, medicine, and midwifery annually in the last 12 years. There are about 42,000 qualified nurses produced per year. Other than the dominance of nursing

education in the market, the strong participation of the private sector in health sciences education can also be observed (Table 9). Excluding midwifery, there is a large gap between the number of enrollees and graduates in government and private institutions. In the case of medical technology, medicine, and nursing, there are roughly eight private school graduates for every public school graduate. Hence, it can largely be understood as a market-driven supply. However, the opposite can be observed for midwifery; the ratio of public and private school graduates is about 1 to 1.5, which makes it the most equitable health course available. According to participants in a workshop on the situation analysis, the lack of screening of incoming students is a production issue. Regulation is needed especially in accepting enrollees for much needed professions. Except for students of medicine who have to pass the National Medical Admission Test (NMAT), other students of health sciences education do not undergo a screening process prior to entry in schools.

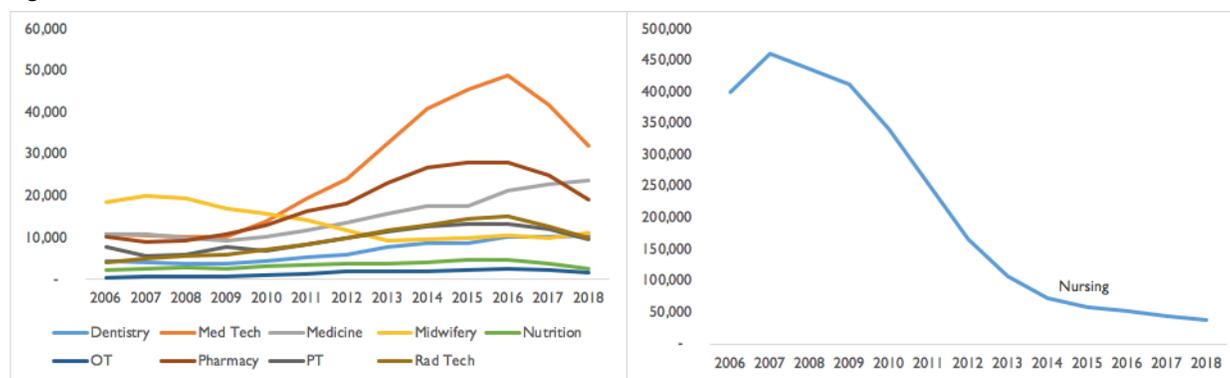
Table 9. Cumulative total of enrollees, graduates and passers in government and private HEIs, 2005-2017

Course	Enrollees			Graduates			Board passers
	Govt	Private	Total	Govt	Private	Total	
Medical technology	11,705	332,098	343,803	1,074	42,824	43,898	36,136
Medicine	27,461	171,625	199,086	5,601	29,973	35,574	33,053
Midwifery	54,476	122,762	177,238	24,292	38,193	62,485	36,603
Nursing	327,772	2,641,931	2,969,703	82,985	668,023	751,008	502,297

Source: Commission on Higher Education, Professional Regulation Commission

It should be noted that the shift to the K-12 education system introduced in 2016 and adding two more years in high school will trigger a drop in enrollment in the undergraduate levels. Except for dentistry, medicine and midwifery, the decline, especially in the last few years, is notable in the other nine cadres (Figure 10). The shift from a diploma course in midwifery to a four-year program is expected to slow down the influx of graduates entering the health workforce by about four years. The decline in enrollment must be something that the system should prepare for. On one hand, it helps improve the absorption rate of previous graduates and qualified health workers by the labor market, but on the other hand, it will affect the future supply of health workers (USAID-HRH2030 HLMA Report, 2019).

Figure 10. Enrollees in 12 health cadres, 2005/2006 – 2017/2018

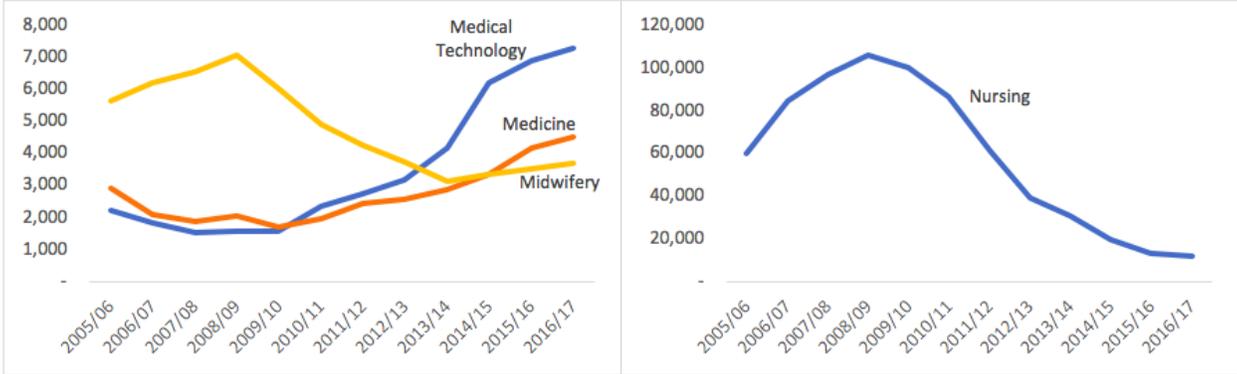


Source of data: Commission on Higher Education

In terms of graduates, the number of nurses continue to fall as it mainly caters for the international market in the last decade (Figure 11). The continued decline in graduates has serious implications to the future health workforce needs of the country. Planners should note that the graduates reflect the enrollment of past years. Given this pattern, it is likely that graduates of medical technologists will go down in the coming years if the declining trend continues. Hopefully, it is just the adjustment for the K-12 Program. In the case of midwifery, the increasing number of graduates reflected the reversal of the decline in enrolment four years ago. For medicine, the

increasing number of graduates is consistent with the increasing number of enrollees. This pattern also explains the trend in nursing graduates since the decline in enrollment beginning 2005 only reflected in the decline of graduates beginning 2009.

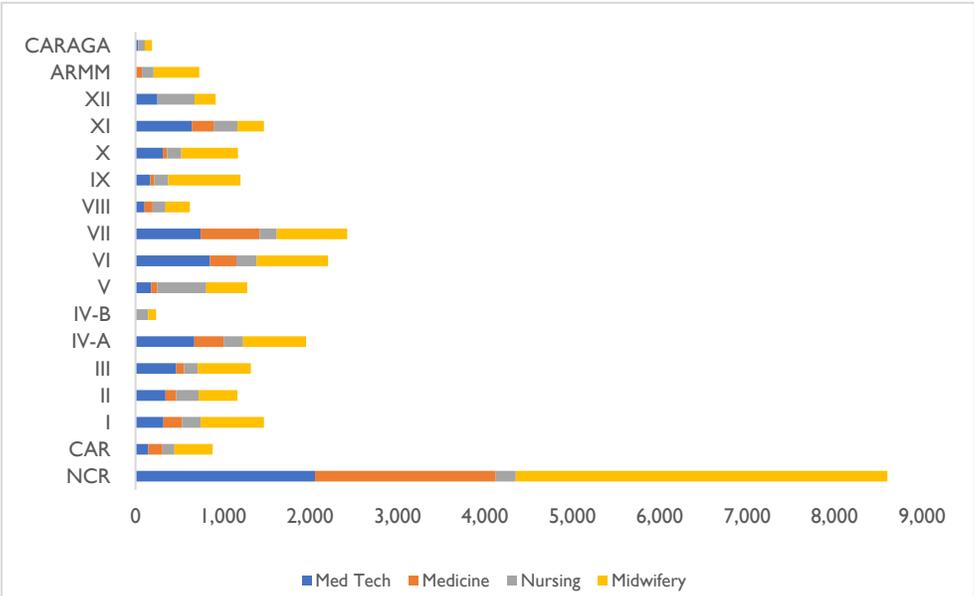
Figure 11. Graduates in medical technology, medicine, midwifery, and nursing, 2005/2006 – 2016/2017



Source of data: CHED in HLMA Report, 2020

In school year 2016/2017, a third of HRH graduates were from the NCR (Figure 12). The huge disparity between NCR and the regions signal the need to decentralize NCR as the main provider of health sciences education and to redistribute quality health sciences education institutions across regional centers. The reallocation will substantially help in the development of regional health workforce. Of note is that there were no medicine graduates reported for Regions IV-B, XII and CARAGA based on CHED data from 2004/2005 to 2016/2017. Nevertheless, these regions probably have medicine graduates that have studied in schools outside these regions.

Figure 12. Total number of graduates by region, 2016/2017



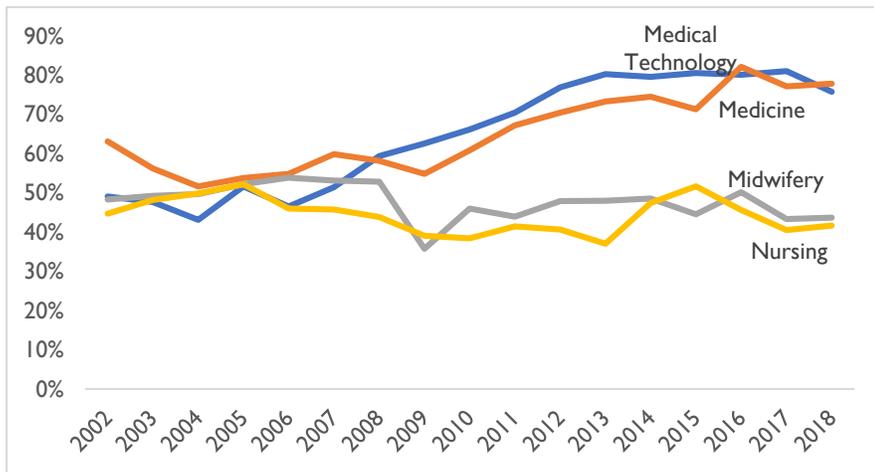
Source of data: CHED in HLMA Report, 2020

The number of graduates and passing rates in medical technology and medicine have been continually improving as evinced by passing marks that exceed 75% beginning in 2012 and 2014, respectively (Figure 13). The DOH reports that only 14 of 51 medical schools were accredited and an additional 20 are in the process of being accredited by the Philippine Accrediting Association of Schools, Colleges and Universities (PAASCU) (NOH 2017-2022). For midwifery and nursing, the passing rates remained largely below 50% in

the past decade, averaging 49% for midwives and 45% for nurses. Apparently, the large number of midwifery and nursing schools across the country do not assure better quality and maybe itself be the deterrent to attaining good quality.

Board examination passing rates of public program graduates are better than those from private schools because they have more permanent faculty i.e. faculty are not let go when external demand for health workers go down and there are less students accepted in schools. Also, public schools are affiliated with health facilities where students spend their clinical and residency experiences and have been found to implement their curriculum well. For instance, in the 2018 list of top performing nursing schools with first time 100 examinees, 6 state universities were in the top 12 schools (HLMA Report, 2020).

Figure 13. Passing rates by course, 2006-2018

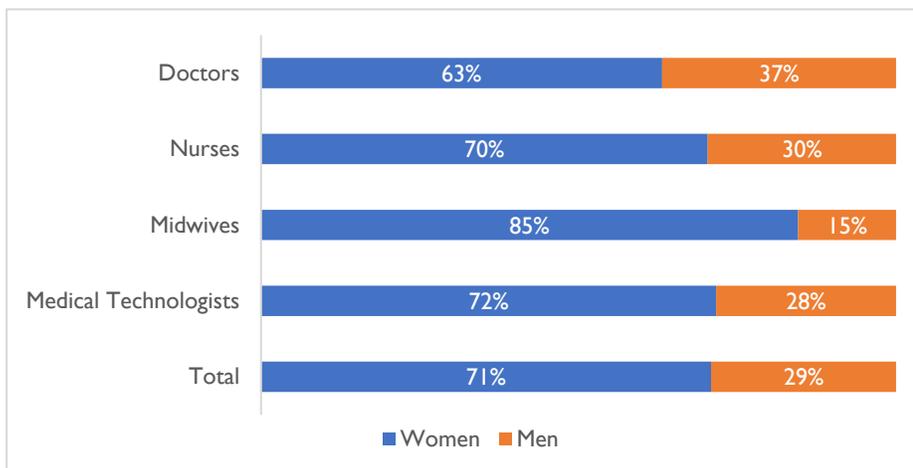


Source of data: PRC and PSA in HLMA Report, 2020

There is an emerging demand for emergency health professions in fields such as orthotics and prosthesis and the Masterplan should include these ‘new’ professions. The curriculum of health sciences education needs to be re-oriented as well as this mandated by the UHC law.

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 14), it is difficult 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 14. Distribution of Board Exam Passers by gender, 2002-2016



Source of data: PRC and PSA in HLMA Report, 2020

ATTRITION

Another way of looking at the performance of students in health courses and the schools is to look at the attrition rate, defined as the proportion of students that left the course or did not graduate. The highest attrition rates are in medical technology and medicine in government and private schools. The lowest are in midwifery at 55% for government schools and 69% in private schools (Table 10). However, among examinees, midwives had the highest attrition rate with two in five unable to pass the board exams.

Table 10. Attrition rate in government and private higher education institutions, 2005-2017

Course	Govt	Private	Total	Attrition rate of Licensure Examinees (% of total)
Medical technology	91%	87%	87%	18%
Medicine	80%	83%	82%	7%
Midwifery	55%	69%	65%	41%
Nursing	75%	75%	75%	33%

Source: CHED and PRC in HLMA Report, 2020

As a result of the high rates of attrition, only a small proportion of students who enroll in health sciences education complete their courses. This ranges between 9% and 45% of students who enrolled in medical technology and midwifery in public schools from 2005 to 2017, respectively (Table 11). One in four of nursing students graduated. Of around three million students who enrolled in nursing between 2005 and 2017, about 2.2 million did not graduate or 184,891 per year over the same period.

Table 11. Percent of students graduating by type of school, 2005-2017

	Number of enrollees			Number of graduates			Percent graduating		
	Gov't	Private	Total	Gov't	Private	Total	Gov't	Private	Total
Medical Tech	11,705	332,098	343,803	1,074	42,824	43,898	9%	13%	13%
Medicine	27,461	171,625	199,086	5,601	29,973	35,574	20%	17%	18%
Midwifery	54,476	122,762	177,238	24,292	38,193	62,485	45%	31%	35%
Nursing	327,772	2,641,931	2,969,703	82,985	668,023	751,008	25%	25%	25%

Source: CHED and PRC in HLMA Report, 2020

COST OF HEALTH SCIENCES EDUCATION AND WASTAGE

The average yearly tuition of private schools was gathered through the online database of finduniversity.ph, an online directory which consists of over 20,000 academic programs and 900 higher education institutions throughout the Philippines. Of the four health courses, the most expensive is Doctor of Medicine, which roughly costs PhP235,000 on average per year, ranging from PhP172,000 at Xavier University to PhP320,000 at the Ateneo de Manila School of Medical and Public Health (Table 12). A bachelor's degree in medical technology runs at an average of PhP55,000 while Bachelor of Science (BS) in Nursing costs at an average of PhP49,200. An undergraduate degree in midwifery costs the least at an average of PhP45,000 per year based on 2018 tuition fees.

Table 12. Average annual tuition in private schools

Course	Sample size	Average	Minimum / HEI	Maximum / HEI
Doctor of Medicine	11	235,700	172,000 Xavier University	320,000 Ateneo de Manila School of Medical & Public Health-Pasig

Course	Sample size	Average	Minimum / HEI		Maximum / HEI	
BS Nursing	194	49,200	14,000	Araullo University	120,000	De La Salle University Health Sciences Institute
BS Medical Technology	64	55,000	18,000	Medina College	110,000	UST, Philippine Women's University
BS Midwifery	19	45,000	21,000	Colegio de San Gabriel Arcangel	80,000	Emilio Aguinaldo College

Source: finduniversity.ph in HLMA Report 2020

The large number of students who do not graduate as discussed in the preceding section implies a huge loss in the formation of human capital for health. Using the average tuition fee in private schools and the total number of enrollees and graduates from 2005-2017, PhP169 billion representing initial investments in students of health sciences education is lost (Table 13). This translates to PhP14 billion per year in tuition fees of students who do not finish their courses. Adding other education-related expenses such as school supplies and other fees and charges would make the annual loss in investment in health sciences education even bigger.

Table 13. Wastage in health sciences education (PhP), 2005-2017

Course	Average tuition	Number of enrollees	Total cost	Number of graduates	Total cost	Wastage
Med tech	55,000	343,803	18,909,165,000	43,898	2,414,390,000	16,494,775,000
Medicine	235,700	199,086	46,924,570,200	35,574	8,384,791,800	38,539,778,400
Midwife	45,000	177,238	7,975,710,000	62,485	2,811,825,000	5,163,885,000
Nursing	49,200	2,969,703	146,109,387,600	751,008	36,949,593,600	109,159,794,000
Total	384,900	3,689,830	219,918,832,800	892,965	50,560,600,400	169,358,232,400

Source of data: CHED, PRC and finduniversity.ph in HLMA Report, 2020

Scholarships

There are agencies that provide student financial assistance programs (StuFAPs) to support capability building in the health sector. Among these agencies are: (a) the DOH with its Pre-Service Scholarship Program; (b) CHED which implements Scholarship Programs, Grant-in-Aid Programs; and Student Loan Programs; (c) Department of Science and Technology – Science Education Institute (DOST-SEI) which provides S&T Scholarship Programs; and (d) Technical Education and Skills Development Authority (TESDA) which also provides technical and vocational education and training (TVET) scholarships and other educational assistance through different TESDA programs including Private Education Student Financial Assistance (PESFA) program. National scholarship programs for continuing education are offered to HRH in LGUs as well to encourage their stay in their place of assignment (Philippines NRI on Code of Practice on International Recruitment).

The Pre Service Scholarship Program of the DOH, launched in 2017, combines the Pinoy MD scholarship program and the Midwifery Scholarship program of the Philippines that started in 2006 and 2005, respectively. The DOH Pre Service Scholarship Program aims to increase the availability of physicians and midwives to the unserved, underserved, hard to reach, economically underdeveloped, distressed, conflict, and GIDA of the country. Preference is given to low income families; those in geographically isolated provinces, municipalities or areas with high poverty rate; members of the indigenous community or minority sectors; and, children/dependent of government employees, victims of calamity, policy/military injured or fatally wounded while on duty, BHWs and/or traditional birth

attendants. Beneficiaries are expected to provide two years of service for every year of scholarship. As of March 2020, 1,142 medicine and 1,065 midwifery scholarships have been provided. Physicians and midwives that graduated from 2009 to 2020 with assistance from the Program were 652 and 1,093 respectively²

CHED's Cash Grants to Medical Students enrolled in State Universities and Colleges (CGMS-SUC) program, initially implemented in S.Y. 2017-2018, aims to provide tuition fee subsidies to all Doctor of Medicine students in eight participating SUCs nationwide. The program has provided financial aid to 1,699 beneficiaries as of S.Y. 2018-2019 in seven SUCs in Regions I, II, V, VI, VIII, ARMM, and NCR.

Another support that CHED offers to students of medicine is through the Memorandum Order 30 Series of 1996. This provide scholarship grants to applicants that satisfy its minimum requirements. Candidates who were female and had the lowest family annual gross income were prioritized. Aside from tuition and other school fees, privileges such as a living allowance of PhP10,000 per semester and a book and uniform allowance of PhP1,000 were provided.

TESDA offers the Training for Work Scholarship Program in order to meet the need for highly critical skills. The program offers support for several community health-related courses including Barangay Health Services and Health Care Services. The Barangay Health Services train workers in the aspect of community health and preventive health care, including health education. Their graduates can become barangay health workers. The Health Care Services training is to develop skills in assisting patients in health institutions, particularly hygiene and mobility. For this report, enrollment and graduates in three courses in three time periods are shown in Table 14. From 2010 to 2016, the highest increase in enrollment was in *hilots* with 90% passing and 93% being certified. The percentage of enrollees graduating with certificates in Barangay Health Services II and Health Care Services II were roughly the same. Among them, at least nine in ten were certified.

Table 14. Number of Training for Work Scholarship Program (TWSP) beneficiaries, 2010, 2015-2016

Year	Qualification	Enrollees	Graduates	%	Assessed	Certified	%
2016	Barangay Health Services NC II	125	50	40	50	45	90
2015	Barangay Health Services NC II	20	20	100	20	17	85
2010	Barangay Health Services NC II	50	25	50	25	18	72
2016	Health Care Services NC II	452	167	37	142	139	98
2015	Health Care Services NC II	542	475	88	454	389	86
2010	Health Care Services NC II	786	123	15	15	14	93
2016	Hilot (Wellness Massage) NC II	2,333	2,090	90	2,066	1,919	93
2015	Hilot (Wellness Massage) NC II	1,596	1,500	94	1,403	1,129	80
2010	Hilot (Wellness Massage) NC II	794	484	61	136	97	71

Source: Technical Education and Skills Development Authority (TESDA)

Return service agreements (RSA)

Under the Universal Higher Education Law (RA 10931) which covers the tuition and fees of students enrolled in 112 state universities and colleges (SUCs) and 78 local universities and colleges (LUCs), SUCs and LUCs are required to come up with return service programs for students who benefit from free tuition and other fees as a way of 'paying back' the country for their education.³ The UHC law reiterates the need for return service, requiring 'all graduates of allied and health related courses who are recipients of

² Data on the Pre Service Scholarship Program were requested and received from DOH-HHRDB on 8 July 2020.

³ <https://www.rappler.com/nation/212452-return-service-students-free-higher-education-law-for-review> accessed 30 June 2019

government-funded scholarship programs to serve in priority areas in the public sector for at least three years, with compensation, under the supervision of the DOH.

At present, there are only two higher education institutions presently pursuing RSAs: the UP Manila and the Pamantasan ng Lungsod ng Maynila. For instance, the UP Manila set a RSA in 2011 as an absolute requirement for students to be admitted to five baccalaureate health sciences programs. The RSA requires students to serve no less than two years within five years of graduation. A long-standing program that serves as an excellent example of how return service programs can be run is that of the UP School of Health Sciences (SHS) in Palo, Leyte. Established in 1976, the program offers a step ladder curriculum where service is embedded. It is competency-based and community-based integrating the training of midwife, nurse, nurse practitioner and Doctor of Medicine in a single, sequential and continuous curriculum. It is known to be very effective in addressing HRH problems e.g. retention and has been used as a model in community-based training worldwide. Students come from local communities and communities are committed to employ their scholars upon their graduation. Graduates provide two years of service per year of study. Twenty-seven years after the first cohort graduate, 90% still serve in areas with dire needs (Siega-Sur et al 2017). The quality of students in the UP SHS is evident in the completion rates and licensure rates as of 2018. For instance, nursing students had completion and licensure passing rates of 98.6% and 90.7%, respectively (Table 15).

Table 15. Performance of UP School of Health Sciences students, 2018

Program	Admitted	Completed	Completion rate	Licensed	Licensure passing rate
Medicine	197	181	91.87	149	75.63
Nursing	356	351	98.59	323	90.73
Midwife	1,968	1,710	86.89	1,550	78.76

Source: UPSHS personal communication

The DOH has a return service mechanism as well. In exchange for residency in DOH retained hospitals, graduates in obstetrics, pediatrics, surgery, and anesthesia will be deployed for one year to areas in need to improve service delivery and/or training capacity of LGU facilities (Philippines NRI-Code of Practice on International Recruitment).

A review of return service programs in the Philippines and other countries made in 2018 noted that these programs can be education linked or employment linked i.e. in-service training. The authors recommended that these should be in response to local health needs and development priorities, have clearly articulated goals and undergo periodic review to determine effectiveness, be transparent, provide institutional and system support to health workers during the period of service, and the provision of financial, non-monetary benefits and incentives during and post-service to encourage completion.

Even as the health sector is exploring with how best to implement RSAs, there are efforts to strike down this provision by ACT Teachers who believe that RSAs strip the true meaning of free education. Nevertheless, CHED has stated that it is in the universities' purview to establish a return service program and does not require the provision of the law.

Summary

- The Philippine health sciences education sector is largely driven by global demand and dominated by the private sector, which has led to a proliferation of schools especially in nursing and midwifery. It is not a response to the needs of the domestic market but a function of demand for training based on the assumption that graduates will join the global market (Buchan 2013). There is ineffective regulation of the private sector in the provision of health sciences education.
- The mushrooming number of private schools seems to have limited regulation, as shown by the lack of regard for strategic location or proper quality checks on the curriculum. The large number of private schools in urban areas has affected the extent to which opportunities for medical education are available in poorer, often remote areas. Additionally, there are great differences between public and private tuition fees, and scholarships are not widely available to those in remote areas. This has created a preference for urban areas among students which in turn affects their likelihood to serve in remote areas (ThinkWell).
- The quality of health sciences education leaves much to be desired. The DOH has noted that the quality of graduating doctors is challenged by the poor performance of medical schools. Of 51 medical schools in the country, only slightly above a quarter was accredited by PAASCU. The quality of many nursing and midwifery graduates is also suspect as many have had passing marks below 50%.

- Since the production of health workers is driven by the world market, schools and training institution ignore the needs of the local healthcare system, the need for other health courses, and a PHC-focused education, aiming only to provide the necessary qualification and training to enable graduates to work abroad.
- The huge enrollment numbers in health programs do not translate to a bigger number of qualified persons joining the health workforce. An average of 24% of enrollees graduate with a degree in medicine, nursing, midwifery, and medical technology. However, this masks the variation among the cadres: only 9% of medical technology students go on to graduate compared to 20% in medicine and 25% in nursing. Midwives have the highest completion rate among the four cadres at 44% from 2005 to 2017.
- Health sciences education is expensive and wasteful. The annual investment of PhP14 billion in students of medicine, nursing, midwifery, and medical technology who do not graduate represents a huge loss in investment in human capital formation. Adding other education-related costs such as school supplies and other fees and charges would make this annual loss even bigger.
- There is a high number of nursing schools and midwifery schools but graduates do not fare well as their average passing rates are consistently below 50% from 2002 to 2018. On the plus side, the number of medical technology and medicine graduates are increasing.
- The dominance of nursing education is not good for the provision of health care services as a mix of medical professions and competencies is necessary to provide primary care.
- There is insufficient information on historical data on beneficiaries and value of scholarships, the magnitude of available scholarships, and most importantly, the role of scholarships as incentives to entry in health workforce which can help ensure the appropriate skill mix in the healthcare system.
- As a mechanism and a targeted approach to boost numbers in the workforce especially in primary care, data on students with return service agreements is needed. At present, little is known as to what extent RSAs are being implemented in the country. RSAs might also work as a mechanism to improve retention. As shown by the experience of the UP SHS, effective return service programs/agreements are feasible.
- The forthcoming impact of the K-12 program needs to be taken account by the health sector as this will likely lead to a temporary shortfall in the HRH supply. Enrollment in medical technology has begun to decline, coinciding with the introduction of this program. It is expected that the effect in medicine will be felt in the next two years. Its effect in nursing may be disguised as enrollment has dropped in response to a global change in demand. The best way to avert the effects of the first wave of students that has proceeded with the K-12 program would be to work closely with national planners to develop future HRH. A way to address the upcoming gap in HRH supply would be to promote midwifery. The course is equitably distributed geographically and in terms of public and private ownership. Also, it seems to be unaffected by the K-12 program as it just recently shifted to a four-year course. For faster and practical development of HRH, the government should consider how this cadre can be tapped effectively.
- Emerging health professions such as orthotics and prosthesis require the enhancement of curriculum/course modules on health science courses. There is also a need to reorient health sciences education to primary health care.
- An emerging issue is the increasing number of foreign students in medical and health sciences programs. Anecdotal evidence suggests that schools offering slots to foreign students tend to abuse the 30% cap of EO 285, prioritizing profit over the needs of the local health sector.
- As might be expected, the public sector presence in health sciences education has been more regulatory in nature and less on the production of HRH. Its limited presence and its lack of resources to produce comparable quality and quantity of health science education graduates means that it should partner with the private sector to develop HRH for underserved regions of the country.

HRH in the workforce

Supply of HRH

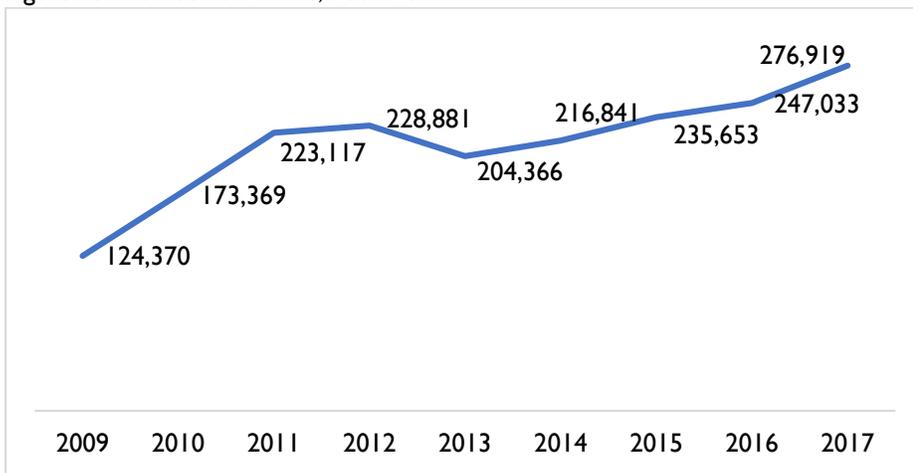
The supply of health workers in the Philippines comprise of health professional and non-professional health workers. Health professionals include physicians, nurses, midwives, dental medicine, medical technology, nutritionist and dieticians, occupational therapists, pharmacists, physical therapists, radiologic technologists, respiratory therapists, and optometrists. Non-health professional includes BHWs, BNS, and dental aides. While health professionals undergo formal education i.e. complete a four-year course and pass

the board to be licensed by PRC, Non-professional health workers are volunteers and not permanent staff that are trained by RHU staff including the deployed nurses.

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.

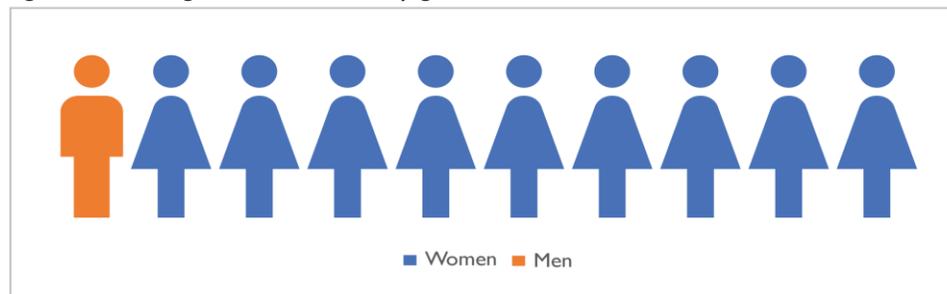
Except for a dip between 2012 and 2013, the number of BHWs has been increasing from 2009 and 2017 (Figure 15). Nearly all or 98% of the total of BHWs are female (Figure 16). This average share, alongside fewer men in the total health workforce, has produced the gender imbalance especially in BHS. Although 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” (Law, et al., 2019). This is found to discourage male partners/men to receive health care services or to support women partners/women in FP/MCH services.

Figure 15. Number of BHWs, 2009-2017



Source of data: Department of Health⁴

Figure 16. Average share of BHWs by gender, 2009-2016

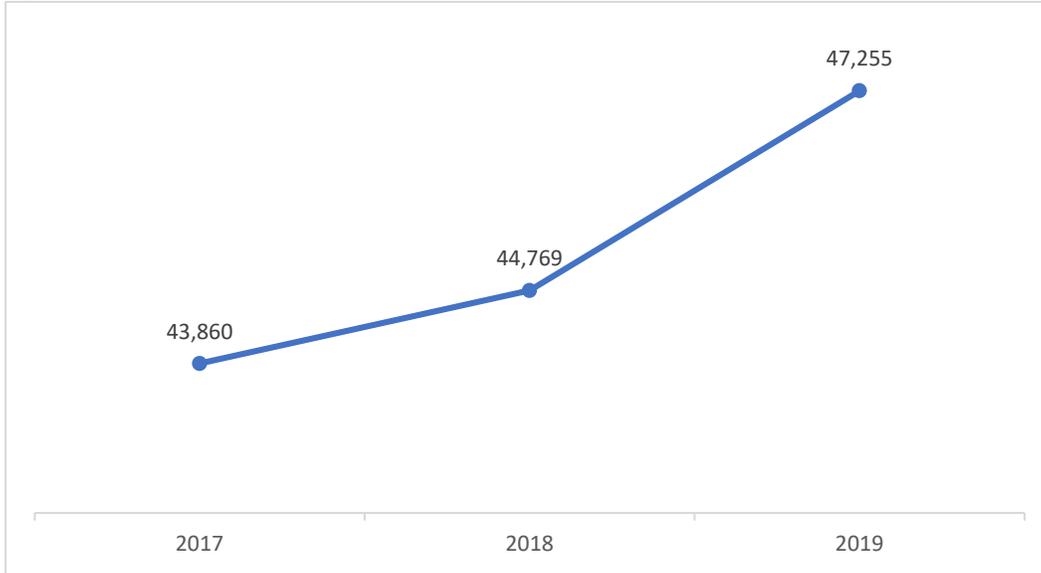


Source: Department of Health, 2009-2016

In terms of distribution, Region V had the most BHWs, accounting for 17% of the total. Other regions with a fairly large number of BHWs are Regions VI (10%), I (9%), IV-A (9%), and VII (8%). NCR, CAR, and BARMM had the least number of BHWs, each at 2% of the total (

⁴ www.bhw.doh.gov.ph

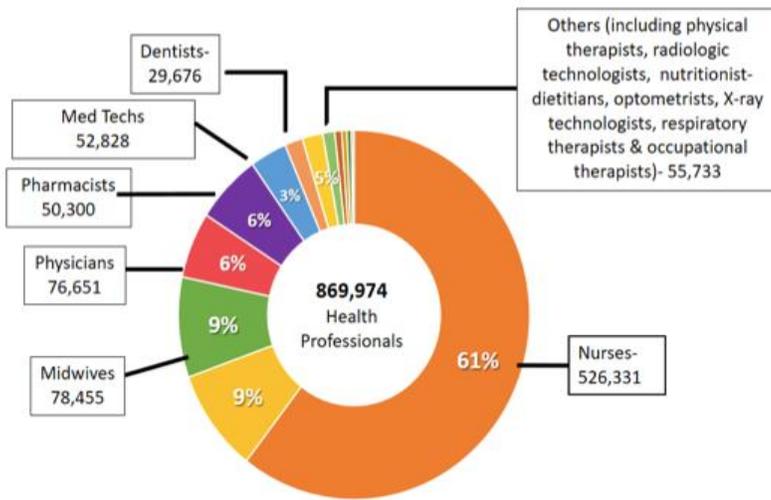
Figure 19. Number of BNS, 2017-2019



Source: National Nutrition Council-Nutrition Surveillance Division

On the other hand, there were 869,974 active health professionals based on the PRC ID renewal in 2018 (PRC 2019). The majority are nurses which is equivalent to 61% or a total of 526,331 (Figure 20). While cadres like physical therapists, radiologic technologist, nutritionist-dietitians, optometrists, X-ray technologists, respiratory therapists, and occupational therapists comprise a combined 6% each of the total.

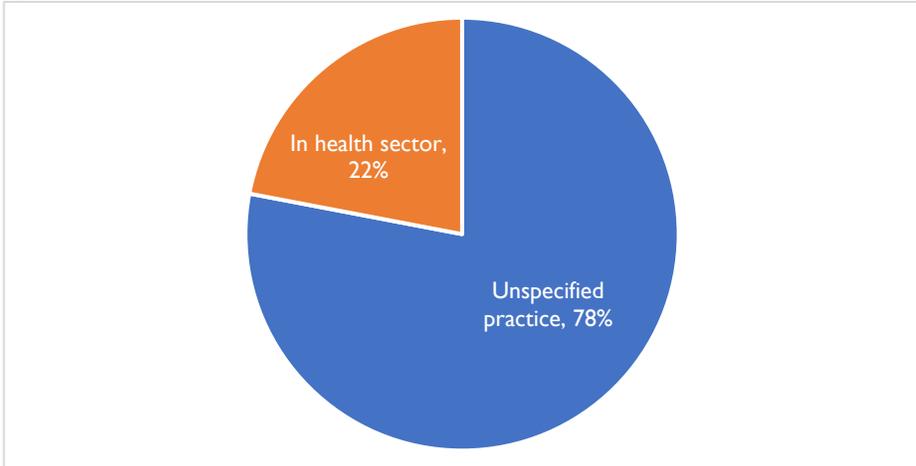
Figure 20. Health professional skills mix by cadre, 2018



Source: PRC, 2018

Of this total registered health workers, less than a quarter (22%) or 189,787 are in the health sector while nearly eight in ten (78%) have unspecified practice as of 2018 (Figure 21). The health sector category comprises 189,793 health workers captured by the DOH information systems. It includes those that are hired by the LGUs, clinical facilities, and deployed by the DOH. Those under unspecified might be employed privately, in the country or abroad. It could also include those who are working in a different industry but renew their licenses to have an additional valid identification card.

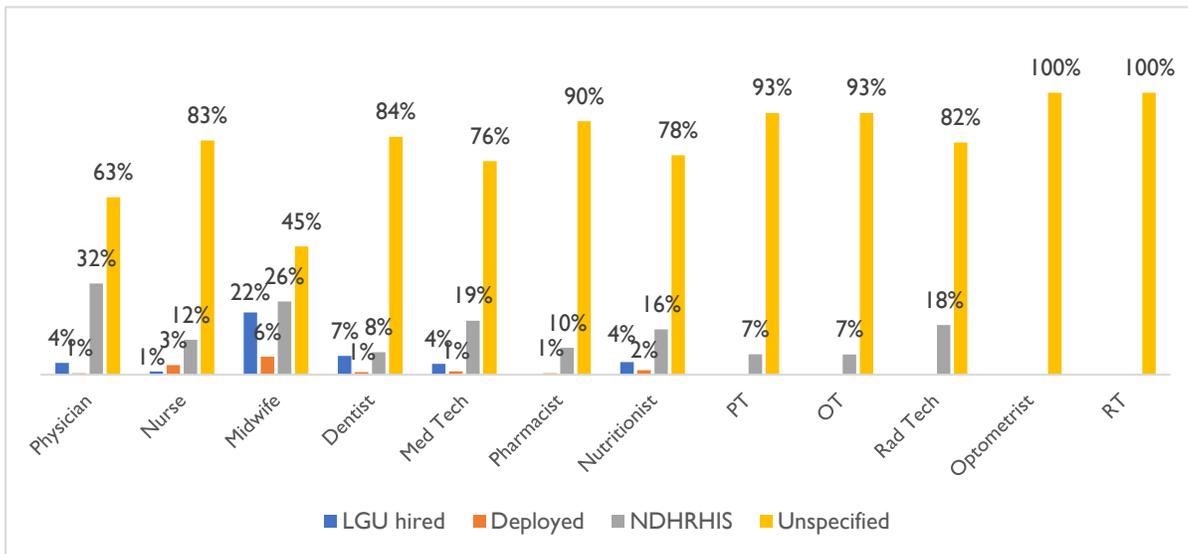
Figure 21. Distribution of active health workers with valid licenses, 2018



Source: HHRDB, DOH

Among the 12 cadres, only midwives are close to being fairly distributed (Figure 22). It is notable that cadres like optometrist and respiratory therapist have no representation in the health sectors but are under the unspecified category.

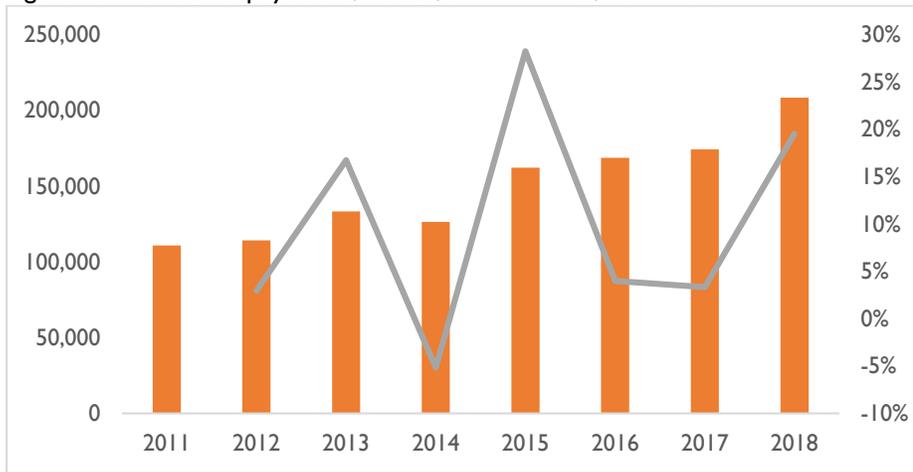
Figure 22. Distribution of active health workers for the past 3 years by LGU-hired, deployed, in clinics, and unspecified practice



Source: HHRDB, DOH

In the past decade, the number of health workers in government hospitals and in RHUs has been increasing (Figure 23), topping 208,542 HRH in 2018 which is nearly double the number of HRH in 2011 at 110,949. While growth in the number of HRH has been fluctuating between 2011 and 2018, the overall increase has been positive, at 10% per year.

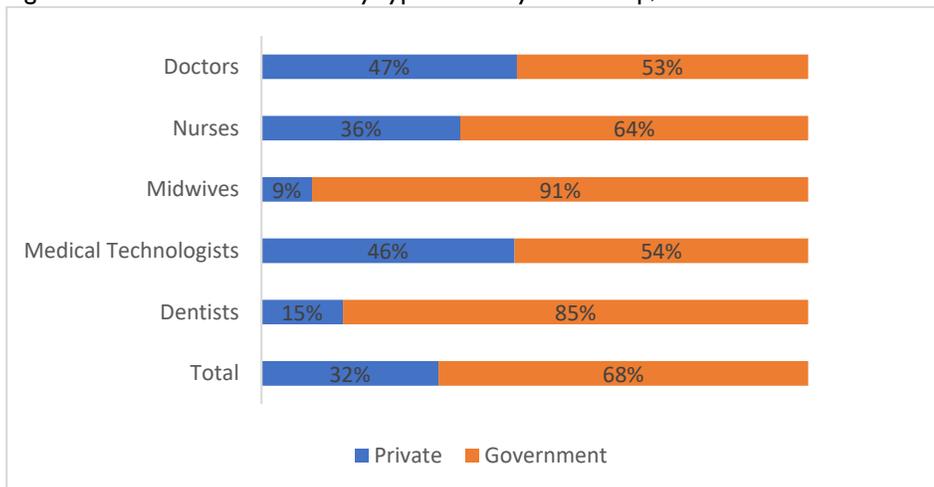
Figure 23. Number of physicians, nurses, and midwives, 2011-2018



Source: National Database of Human Resources for Health Information System (NDHRHIS), DOH

In terms of place of work, 68% of health workers are in a government facility (Figure 24) especially midwives and dentists. Physicians and medical technologists are roughly equally distributed between private and government health facilities.

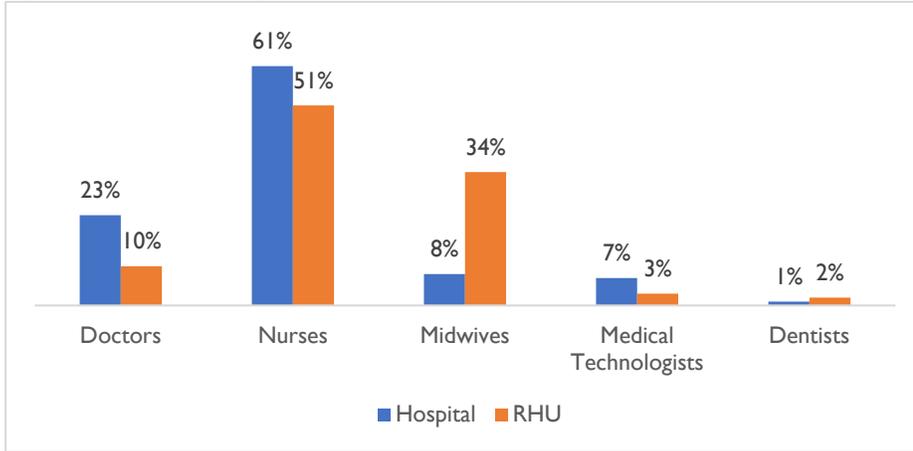
Figure 24. Distribution of HRH by type of facility ownership, 2019



Source: NDHRHIS March 2019; 2018 Deployment Program; iClinicSys, Epidemiological Bureau March 2019; ITIS, NTP February 2019; DOLE, March 2019

Comparing HRH working in hospitals and RHUs, more physicians, nurses, and medical technologists work in hospitals (Figure 24 and Figure 25). On the other hand, there are more midwives in RHUs, although a bigger proportion of nurses are also present. According to DOH, health personnel is skewed towards hospital-based services and in urban areas where economic opportunities are perceived to be better (NOH 2017-2022).

Figure 25. HRH working in hospitals and RHUs, 2019



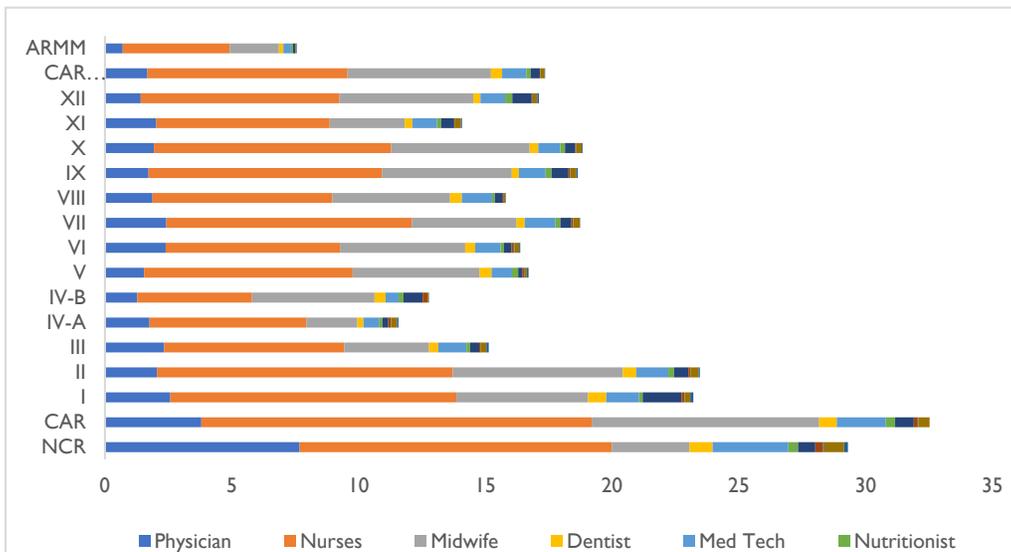
Source: NDHRHIS March 2019; 2018 Deployment Program; iClinicSys, Epidemiological Bureau March 2019

SKILLS MIX AND DISTRIBUTION OF HRH

Typically, PHC is the responsibility of teams composed of a physician, public health nurse, dentist, sanitary engineer/inspector, and midwives. A pre-determined ratio to population for each cadre serves as a standard to determine the required number of health workers (Policy Scoping Review, USAID-HRH2030 2019). Results of a local study on HRH skills mix suggest that the country needs a municipal health officer (MHO) and a clinician per 20,000 population. By considering the requirement of a clinician and a public health program manager in one municipality, the Philippines will need two doctors for every 20,000 population (USAID’s HRH2030 Philippines, DOH and WHO Joint Mission Report on NHWA and WISN 2018).

The inequitable distribution of HRH is evident when comparing the density across the Philippines. For instance, in the CAR, the HRH to population ratio is 29.33 per 10,000 while the ARMM has a ratio of 7.59 (Figure 25). The NCR has the highest doctor to population ratio (7.68), which is twice as many as that in the CAR (3.80).

Figure 26. Ratio of health workers per 10,000 population by region



Source of data: NDHRHIS as of December 2018, FHSIS as of 2017, and the DOH Deployment Program Accomplishment as of December 2018

The DOH has long recognized the imbalanced distribution of HRH in the country, resulting in overconcentration of health professionals in urban areas and limited health workers in rural areas. To address this situation, the DOH initiated the deployment programs for doctors, nurses, midwives, dentists, medical technologists, and nutritionist-dietitians. As of November 2019, 24,196 health workers have been deployed in rural health communities (DOH-CDMD 2019).

Despite these programs, HRH remain concentrated in urban centers while other areas have an average of 4% of the total HRH in health facilities - the BARMM in particular has <1% of the total human resources in the country (USAID's HRH2030 Philippines' Deployment Report, 2019). As of March 2018, DOH health facilities showed a shortage of 9,287 health workers, mostly doctors and nurses. In addition, about 25% of all barangays do not have a dedicated health worker (USAID-HRH2030 Joint Mission Report on NHWA and WISN, 2018).

In 2018, the USAID's HRH2030 Philippines undertook a review of the deployment program that looked at, among other things, the distribution and retention of deployed workforce. Using a mixed-methods approach, the study found that HRH and organic staff reported high satisfaction in working with each other, in working in the community, with their colleagues, in their assigned facilities, and patients. Deployed HRH affirmed their job satisfaction and intention to remain in service within the area beyond their contract. Job satisfaction arose from the satisfaction from giving service, good financial compensation, and employment that aligned with their education. The desire to provide service, a supportive social environment, and proximity to family were the main reasons for staying beyond the contract period. Among those who were dissatisfied, the main reasons given were job instability, having to pay for work-related expenses, not getting along well with the community, and living far from family. The need for job security factored into their decision to leave their area of assignment (USAID's HRH2030 Philippines' Deployment Report, 2019).

From the LGU perspective, it is challenging to absorb deployed HRH giving the personnel service cap as the reason. Internal Revenue Allocations (IRA) provided by the DBM were inadequate to recruit additional personnel as this was based on provincial classifications. This is particularly true for Geographically Isolated and Disadvantaged Areas (GIDAs) as they have low income levels and low IRA.

EMPLOYMENT OPPORTUNITIES IN THE PHILIPPINE HEALTH SECTOR

According to the DOH, there are about 9,287 vacancies in the public health sector comprising of 6,193 doctors and medical specialists; 1,638 nurses, 371 midwives, 284 medical technologists, and 801 other health professionals as of March 2018 (Personnel Administration Division, DOH, 2018). The number of applicants is limited, which may be attributed to the limited information dissemination activities regarding the vacancies.

In the private sector, applicants outnumber the available job positions. Using a biennial survey conducted by the PSA covering private enterprises with 20 or more employees, applicants outnumber the available job vacancies in nursing, midwifery, medicine, medical technologist and other health cadres in 2014 and 2016. However, the survey does not capture smaller clinics that employs at most 10 persons. Nevertheless, it provides a good indication regarding the state of the job market of the health sector. For instance, the number of nurses, midwives, and medical/pathology laboratory technicians in search of jobs in 2016 was twice as many as the employment opportunities (Table 16). To a lesser extent this is also true for midwifery associates, and specialist and generalist medical practitioners. For doctors, the likelihood of employment is higher since the number of applicants and the jobs available is about the same (2014 data). The number of nurses applying for jobs and the vacancies have doubled between 2014 and 2016. This suggests that local professional nurses are now looking for work domestically, especially given that global demand for nursing graduates has changed.

Table 16. Number of vacancies and applicants in establishments with 20 or more employees

Occupation	Jan 2013 – June 2014		Jan 2015 – June 2016	
	Vacancies	Applicants	Vacancies	Applicants
Nursing professionals	4,806	14,415	10,552	23,521
Nursing associate professionals	79	215	382	1,287
Midwifery professionals	278	89	66	118
Midwifery associate professionals	37	58	10	14
Medical doctors	142	155	nd	nd

Occupation	Jan 2013 – June 2014		Jan 2015 – June 2016	
	Vacancies	Applicants	Vacancies	Applicants
Medical technologists	1,323	2,662	nd	nd
Medical & pathology lab technologists	nd	nd	508	1,126
Specialist medical practitioners	nd	nd	396	458
Generalist medical practitioners	nd	nd	238	334

Source: Integrated Survey on Labor and Employment, PSA in HLMA report, 2020

The ISLE breaks down the matching of applications and vacancies into easy to fill and hard to fill vacancies. Health professional jobs have a range of 14 to 44 applicants for every 10 vacancies. Nursing professionals have about 30 applicants for every 10 openings. There are even more general practitioner doctors of about 42 applicants for every 10 openings. Some medical jobs are difficult to fill due to the specialized nature and the requirements of the job. The waiting time is higher, the most of which is about 3 months. This means that even if there are enough applicants, they do not match the requirements of the recruiting institutions. Due to the sheer number of available nursing professionals, the waiting time to find a match is about 2 months. For medical technologists and doctors, it takes about 3 months. The lag between application and being hired may be due to the numbers of health graduates entering the health workforce, and the demands of the market.

It should be noted that the extent of employment vacancies in the health sector is difficult to gauge. According to a representative from ILS/BLE-DOLE, it is not mandatory for agencies to post vacancies, and many use the internet sites like jobstreet. However, sites like PhilJobNet do not capture local level vacancies. There is no incentive to encourage the private sector to post their vacancies.

At the LGU level, recruitment of health workers is the responsibility of local governments, which to date has been inadequate. Part of the reason is the inadequate amounts that are budgeted for HRH at the provincial and municipal levels. Another is the limited capacity in HR management of LGUs, which has resulted in inefficient recruitment of HRH. Recruitment processes often take place only at local levels. An online platform exists for government vacancies but most LGUs do not use this to find candidates. When LGUs are unable or unwilling to allocate funds or unable to recruit health workers, the national government has stepped in through the National Deployment Program of DOH. However, this has acted as a disincentive for LGUs to hire health workers since they are paid from national budgets (ThinkWell 2018).

According to participants in the 1st quarter meeting of the HRH Network, there are no recruitment standards in place so that non-qualified health personnel are recruited. Proximity to people in position favor some applicants. For instance, there are BHWs that are hired by the LGUs but their future lies in the hands of LCEs i.e. they can be co-terminus with the term of the LCE.

Despite the aforementioned vacancies, there are still limited permanent positions at the national and local levels and many health workers are on temporary contracts lasting six months to a year. Hence, there is no job security, and there is no continuity of service. Additionally, those on short-term contracts receive limited or no benefits, and employers are only required to pay social security contributions if contracts are for longer than five months (ThinkWell 2018).

Another issue identified in the 1st quarter meeting of the HRH Network during the was the de-skilling of health workers because of underemployment. The movement of health workers to non-health sectors contributes to this issue as their skills are no longer up to par when returning to work in the health sector.

DEMAND FOR HEALTH WORKERS IN THE PHILIPPINES

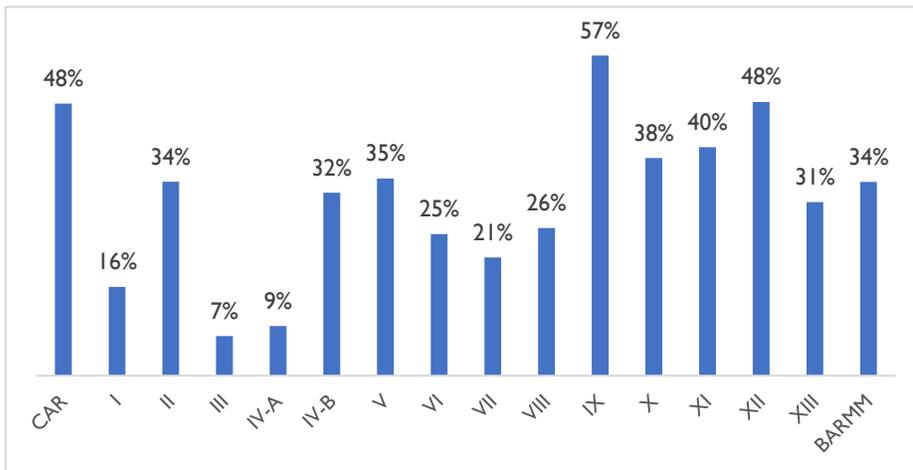
Demand for healthcare, influenced by demographic, financial and geographical barriers to access, drives the demand for health workers. Variations in disease patterns across the regions, and trends over time affect the numbers and skill sets for health required at various levels. In a workshop to validate the issues facing the HRH sector attended by members of the HRH Network, participants agreed that demand for health services is increasing in the country. The reasons for the increase included the country's growing population, emergence of new diseases, a rise in NCDs, and increasing awareness about healthy lifestyle and other health issues. They also noted that the mentality of Filipinos is geared towards curative and rehabilitative approach rather than preventive and promotive.

Filipinos are becoming health conscious because of the information they encounter in the internet e.g. they think they have an illness because what they feel matches the symptoms they read online. The passage of the UHC Law in 2019 promotes access to health services, effectively becoming a strong driver for demand in the country. Demand is also affected because of the lack of recruitment and retention of health workers which is in turn caused by inequities in salaries and poor working conditions. A previous consultation with a CHED representative by HHRDB suggested that estimates of the local demand should be provided to the education sector.

Participants in the workshop pointed out the growing aging population which will affect demand as well. The growing percentage share of the elderly to the total population, particularly people aged 65 and above, has been increasing. In 1980, only 3.2% of the population were in the elderly age group compared to 5% in 2017. The annual growth rate of the elderly age bracket has increased from 2.7% in 1980 to 4 percent in 2017 after peaking at 5% in 2006. It is projected to reach 11% of the total in 2045.

Demand for health services is high in (GIDA, a priority for DOH, since the health situation is generally characterized by high morbidity and mortality, lack of health facilities and low logistical support resulting to poor access and delivery of quality health services. Using data from HHRDB as of 2019, Region IX, Region XII and CAR have the highest number of barangays classified as GIDA (Figure 27). Seven other regions (Regions II, IV-B, V, X, XI, XIII, BARMM) have at least a third of barangays categorized as GIDA.

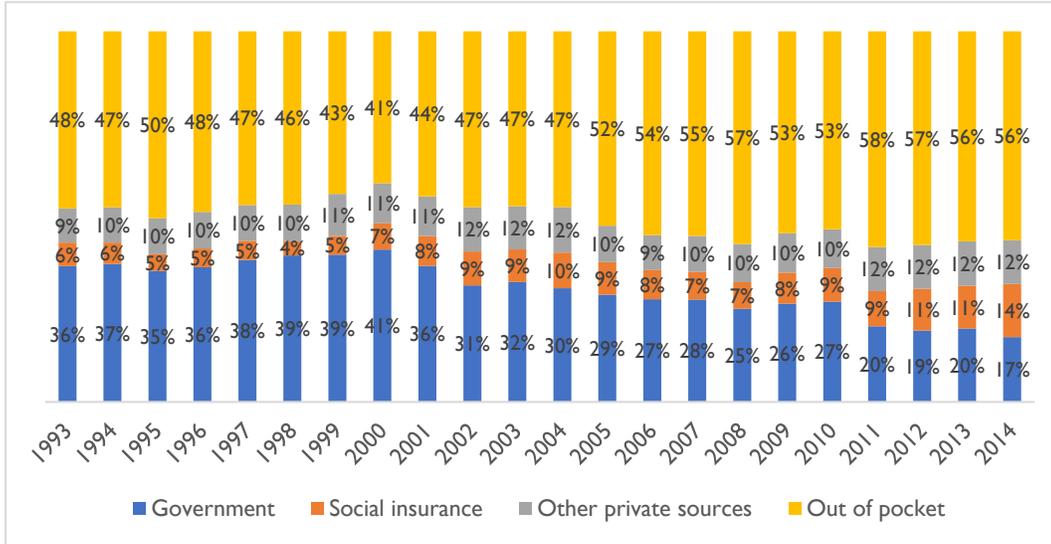
Figure 27. Percentage of GIDA to all barangays by region



Source: HHRDB, 2019

A good proxy of demand for health services is health expenditures. As tracked by the PNHA, the health care system is largely financed by out-of-pocket expenditures, which has accounted for 56% of the total in 2014, up from 48% in 1993 (Figure 28). In 2017, this dropped slightly to 55%. Spending by government was over a third of the total (36%) in 1993 and dropped to 17% in 2014.

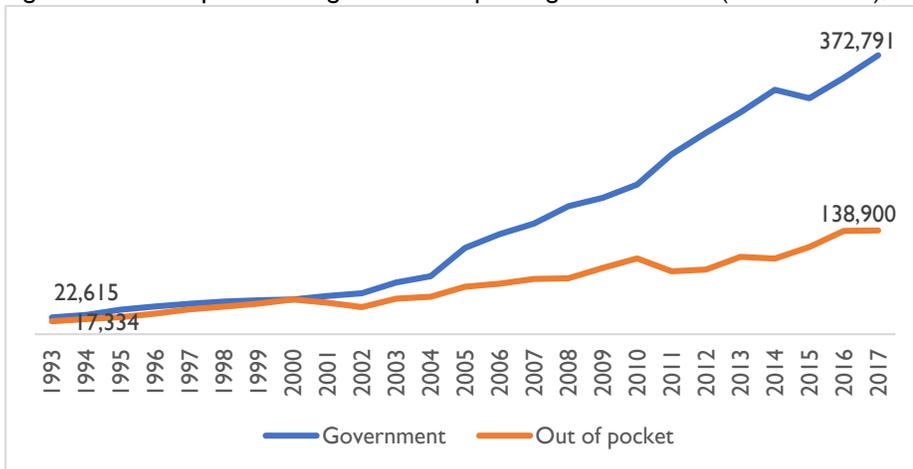
Figure 28. Distribution of healthcare expenditure by type, 1993-2014



Source: Philippine National Health Accounts

In current prices, out-of-pocket spending on health went up to PhP326.8 million in 2014 from P22.6 million in 1993 (Figure 29). The increase in out-of-pocket expenditures suggest that Filipinos are spending more on health care. Another indicator of the rise in health awareness is the growth of social insurance. Over the same period, social insurance spending increased at the same time as out of pocket expenditures although significantly smaller (14% in 2014 from 6% in 1993). This implies that the utilization of the NHIP remains low and perhaps need to become more visible to the population.

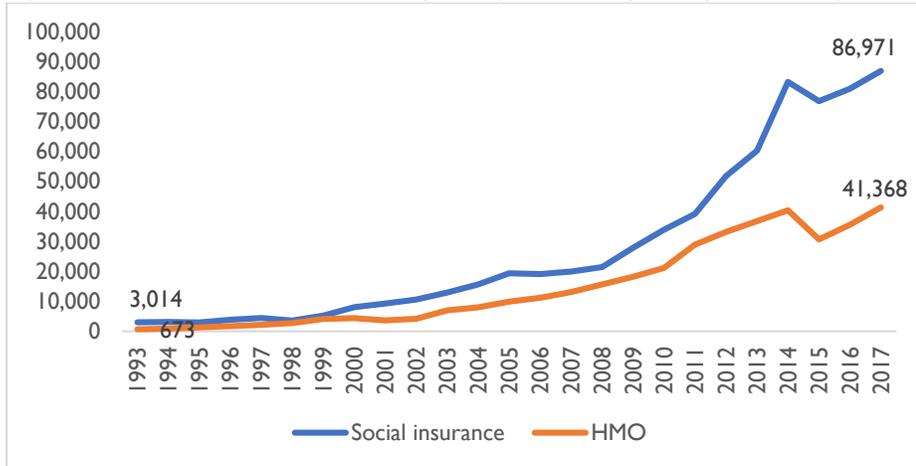
Figure 29. Out-of-pocket and government spending on healthcare (in million PhP), 1993-2017



Source: Philippine National Health Accounts

Similarly, the amount of spending by health maintenance organizations (HMOs) significantly increased as well from PhP673 million in 1993 to PhP41.4 billion in 2014, resulting in an annual growth rate of 19% (Figure 30). The increasing funds available for health is also validated by the rising share of health care spending as a percent of gross domestic product (GDP). The latest data shows that the country is already close to reaching a share of 4.5% of GDP. With faster economic growth, it is possible that the country can soon reach health care spending of 5%. This means that the country's internal requirements for health workforce are also expected to rise faster.

Figure 30. Social insurance and HMO spending in current prices (PhP millions), 1993-2017



Source: Philippine National Health Accounts

IMPLICATIONS OF THE DEMOGRAPHIC DIVIDEND

By 2045, the projected Philippine population will stand at 142 million, up from 93 million in the 2010 Census count. The population is anticipated to increase despite the slowdown in the average population growth rate per year, from 1.73% between 2010-2015 to 0.65% from 2040-2045. The age structure of the country's population from 2010 through 2045 is expected to be biggest in the working age population between 15 and 64 years old for the entire projection period.⁶ This is called a demographic dividend. As defined by the United Nations Population Fund (UNFPA), this is the 'economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population (15 to 64) is larger than the non-working-age share of the population (14 and younger, and 65 and older)'.⁷ However, the 'demographic dividend is not automatic' and should be seen as a window of opportunity that combined with the right policy environment can 'produce a sustained period of economic growth' (Mapa 2015). As the author pointed out, the policy challenge at this demographic transition is 'how to absorb the growing working age-group, particularly from the 15-24 group, the first group to enter the labor market'. The implications to the health sector are two-fold: a) demand for healthcare and services will remain strong in line with Filipinos spending more on health care, especially among the working population; and, b) demand among 65 and over age group will continue but at a slower pace as their share to the total population incrementally increases from 4% in 2010 to 11% in 2045.

STAFFING NEEDS AND WORKLOAD PRESSURES

A recent study was undertaken by USAID's HRH2030 Philippines using the WISN methodology of WHO to determine the staffing requirements for midwives in BHS and four cadres in different health facilities based on workloads for improved primary care services. The WISN results were obtained through the difference between the current and required number of staff and the ratio of the difference. Based on the calculated WISN ratio, workload pressure was categorized from extremely low, very low, low, normal, high, and very high.

⁶ <https://psa.gov.ph/sites/default/files/attachments/hsd/pressrelease/Highlights%20of%20the%202010%20Census-Based%20Population%20Projections.pdf> accessed 30 June 2019

⁷ <https://www.unfpa.org/demographic-dividend> accessed 30 June 2019

In 49 BHS, findings show that midwives are not fully optimized in that they offer limited services against their prescribed scopes of practice and training backgrounds. Adequacies and sufficient number of staff existed in 24 BHS and there were surpluses or underutilization of midwives in 17 BHS. Shortages were minimal and found only in 8 BHS. In terms of workload pressure, midwives in 28 BHS, were found as 'operating at extremely low pressures due to very little workload' i.e., they do not provide the full range of services that a well-trained midwife could provide. Two facilities were operating at normal pressures meaning that the BHS are adequately staffed with midwives enabling the range of services and professional standards to be offered. Three facilities were found to be operating at very high pressures and 6 at high pressures, which could affect the quality of services being offered. Ten BHS had midwives operating at low (9) and very low (1) pressure. Given the variation in the work pressure, a 'range of standardized services should be prescribed for this level of health care and create a uniform package of services throughout the country' (USAID-HRH2030 WISN Report, 2019).

For RHUs and city health offices (CHOs), 6 facilities were found to have significant shortages, none operated at normal levels, and 34 indicated underutilization of staff. Of the 40 RHUs/CHOs under study, 4 facilities did not have a doctor and 10 facilities did not have medical technologist to offer laboratory and diagnostic services including Marikina City, which has a city public laboratory that serves all its health centers. Among the cadres, medical technologists in 25 RHUs/CHOs operated at extremely low (20), very low (1) and low (4) workload pressures indicating very limited work as compared to the scope of practice and their abilities. Similarly, nurses in 24 facilities operated at extremely low (19), very low (4) and low (3) work pressure. Midwives were also underutilized with 23 operating at extreme low (12), very low (4), and low (7) work pressures. In contrast, physicians in 22 facilities faced either there high (7) or very high (15) work pressures.

In general, staff in 16 secondary hospitals show surpluses or are underutilized or have less workloads due to the limited services offered. For instance, the two facilities in Bataan and three in Cebu City exhibited staff surpluses, or less workloads due to the limited services offered. In Tuan Tuan Ligaddung Lipae Memorial Hospital in Tawi Tawi, which is GIDA classified, has staff that are far more than the required numbers. The exceptions would be in:

- New San Jose Payumo Memorial Hospital, Bataan where the physicians numbered 9 and the calculated staffing need was 13 thus signifying high workload pressure;
- Oriental Mindoro Southern District hospital where staff shortages were recorded for all the four cadres; and
- Batangas Medical Centre and Tacloban City Hospital where physicians and medical technologists were found to be in shortage.

In 12 tertiary or apex hospitals, at least one cadre (a doctor in Sultan Kudarat Provincial Hospital and a midwife in Sta Cecilia, Zambales) had high workload pressure. In Datu Halun Sakilan Provincial Hospital in Tawi-Tawi, all the cadres are in surplus or exhibiting extremely low pressures, highlighting the ideal case for all tertiary facilities. In these facilities, more secondary and tertiary care should be provided and should not depict very high workloads of primary care services. Apex facilities should offer specialized services not offered at lower levels to strengthen the referral system.

The nine private hospitals had adequate health workers with the calculated staff balanced with the existing staff in most cases. Only two cases of shortages were found: Buda Community Health Centre in Davao City and Mary Johnston Hospital in Manila City. Health workers in private facilities spent most of their time in health services activities with less than 20% of their time on support and additional activities. This is not the case in public health facilities.

Using the results of the WISN study is a better indicator of local demand for health workers since it is based on the activities that take most of daily working time, of health workers. Based on the WISN results and the planned UHC services for RHUs/CHOs, the following minimum staffing levels are recommended for urban, rural, and GIDA areas (Table 17). Since barangay health workers that act as first point of contact for primary health care services do not exist in urban areas, more midwives and nurses will be needed.

Table 17. Recommended ranges of minimum staffing patterns for urban, rural and GIDA areas for RHUs/CHOs

	Urban	Rural	GIDA
Physician	4	3	2
Nurses	6	6	7
Midwives	4	2	2
Medical Technologists	3	2	2

Source: USAID's HRH2030 Philippines WISN report, 2019

WAGES AND WORK CONDITIONS IN THE HEALTH SECTOR

Table 18 presents the average wages of health workers from the public sector and private sector, which technically, are not comparable since the private sector data dates from 2016 while the government data are up to date. Despite this limitation, looking at the data is useful as it indicates the compensation that health workers receive. While government rates have gone higher in the last 10 years, the average pay of nurses is still low compared to what they will get in industries like Information Technology-Business Processing Outsourcing (IT-BPO). The private sector wages might also have been depressed by too many job applicants (USAID's HRH2030 Philippines HLMA Report, 2020).

Table 18. Average monthly wages of HRH (PhP)

Occupation	Public sector	Private sector
Medical technologist (grades I-IV for government)	20,754 – 73,157	14,115
Nurse (grades I-IV for government)	20,754 – 50,702	12,662
Midwife (grades I-IV for government)	17,975 – 33,279	11,678
Medical officer/Physician (grades I-IV for government)	33,584 – 106,493	35,460

Source: Department of Budget and Management, 2019; Philippine Statistics Authority – Occupational Wages Survey, 2016

A comparison of wages between 2014 and 2016 from the Occupational Wages Survey of the PSA in establishment with 20 or more employees shows an incremental increase in the salaries of professional midwives, nurses, and medical technologists. Doctors on the other hand, showed a 29% increase in their monthly salary (Table 19).

Table 19. Average monthly wages (PhP)

Profession	2014	2016	% change
Midwives	10,580	11,678	10
Nurses	11,269	12,662	12
Medical technologists	13,425	14,115	5
Doctors	27,572	35,640	29

Source: Occupational Wages Survey, PSA

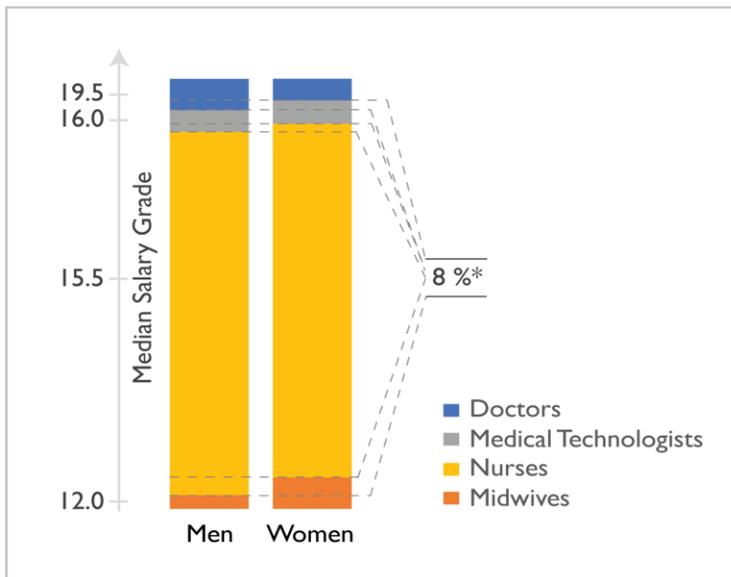
Considering the wage differentials among health cadres and the occupational segregation by gender of HRH workers, the gender pay gap can be estimated. Analysis based on median salary grades of 2019⁸ showed health workers face gender-related gaps in pay, with 8% of men health workers earning, on average, more than 8% of women (Figure 31). The pay gap is attributed to the occupational segregation of women and men in the health workforce.⁹ This is slightly lower than the global estimates of gender pay gap data which

⁸ Median salary grade based on Salary Grade (2019) per cadre.

⁹ Distribution of board exam passers by gender used as proxy for sex-disaggregated occupational segregation.

shows a 9.9% pay gap between women and men based on occupational segregation (ILO, 2018). Since women are greater in numbers compared to men in the HRH cadres, the 8% pay gap is even worse. Using proxy data in 2002-2016 from Figure 14, the 8% gender pay gap translates to 16,730 men earning more than 40,699 women in the health sector.

Figure 31. Gender pay gap among health workers as a percentage of occupational segregation vs. median salary grade



*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 as part of the health sector. 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 a non-BHW jobs.

At the LGU level, there is also a wide disparity between the salaries of the LGU health staff and deployed HRH. Salary standards for LGU health staff depend on the municipality's/city's income classification and the IRA received by LGUs from the national government. A lower classification meant a lower amount of IRA for Personnel Services (PS) and Maintenance and Other Operating Expenses (MOOE) by the LGUs. Hence, many of the local LGU staff received lower salaries unlike deployed HRH which followed much higher national wage standards, an incentive of the deployment program to attract applicants.

The wages of health workers in the private sector used to be higher than those in the public sector, which at present is reversed. The Civil Service Law sets the pay scales of permanent and temporary health workers, which are much higher than the wages set by the DOLE for the private sector. Moreover, the minimum wage levels are often ignored and it has been suggested that approximately 40% are either unpaid (voluntary) workers or receive salaries below the minimum (ThinkWell 2018).

The motivations of health workers in the public sector have been negatively affected by unfavorable terms of employment. Resident doctors' and nurses' salaries are generally lower than those of professions of similar levels of training, leading to dissatisfaction, and ultimately reduced productivity. This may also reduce the attractiveness of a career in health. Location-wise, rural and remote areas are considered unattractive working places compared to big cities because of shortages in medical supplies, and limited training opportunities. The isolation, lack of potential employment for family members, limited education facilities for children, and the absence of tertiary care facilities hinder health workers taking up posts in remote areas (ThinkWell 2018).

A 2015 study found that RHUs and BHS lacked doctors or trained and accredited midwives making them partially or not functioning at all. In addition, the physical facilities had major construction defects, lacked electricity, were poorly located, or had more than one

birthing center. Equipment were defective (e.g. uninstalled autoclave, broken ambulance), improperly maintained during construction or undelivered (Picazo, Pantig and Dela Cruz as cited in the 2018 Philippines Health Systems Review).

In a workshop with members of the HRH Network during their 2nd quarterly meeting validating the situation analysis, participants noted that health workers in the country encounter poor working conditions, poor working environment, low compensation, distance to work and the cost of travel/commute, lack of security of tenure, security or safety in their place of assignment, long hours of work, being overworked because of the load and scope of work, and not benefitting from the Magna Carta of Public Health Workers as this is not fully implemented by LGUs since this could disrupt their budget. Related to the LGUs is that their lack of funding does not allow them to provide the needed number of personnel.

At the national and local levels, HRH is not given the same priority as teachers and soldiers as can be seen from the budget allocation especially for HRH recruitment. Another point raised which touched on the issue of wages was the cost of health sciences education is vastly disproportionate to the income after graduation. Moreover, the effect of poor working conditions that health workers cannot change e.g. crowded health facility, not working equipment, was the misplaced anger of patients directed towards health workers. Another is that health workers go out of the country after training. HRH are also leaving the private sector and the LGUs to apply for work at the national level because of higher compensation.

In addition to wages and work conditions, a participant in the workshop pointed out that the well-being of health workers including their mental health is important so care and support should be provided. There is also a higher sense of fulfillment among health workers when there are clear goals to follow.

IN-SERVICE TRAINING

Administrative Order (AO) 147 of the DOH issued in 2002 requires all health workers to be responsible to develop their competence necessary to attain the job outputs at an expected level of quality given the organization's internal and external environments. In 2015, the DOH Academy was created to serve as the training arm of the department, providing learning and development interventions (LDI) that were relevant, rational, and effectively responds to the needs of the health sector including LGUs. The approach taken to build the capacities of HRH is through face-to-face interaction between trainers and trainees. Health workers are often called to seminars or workshops for several days to train on specific health programs. This requires time away from the health facilities and causes a disruption of health services (Policy Scoping Review, HRH2030 2019).

With the advent of the UHC bill, competencies of health managers would need to be raised to manage increased demand for health care services. To date, the DOH has not put in place effective trainings on leadership and management for HRH in healthcare (USAID-HRH2030 Policy Scoping Review, 2019).

For deployed HRH, continuing education and training were not provided (ThinkWell 2018). Since deployed HRH hold job order positions, they could not be covered by the Commission on Audit (COA) rules and regulations since it only supports the activities of employees with plantilla items. As any expenditures given to deployed HRH may be disallowed by COA, the DOH Regional Health Offices and LGUs do not send them to health training programs. The net effect is that many deployed HRH, most of whom are new graduates and have no experience in public health programs, are unable to build their capacity and can only provide limited services.

ADEQUACY OF HEALTH WORKERS IN THE HEALTH SECTOR

There appears to be a shortage of health workers in the Philippines, judging by the different estimates that are available. As of March 2018, DOH data show that there is a shortage of 9,287 health workers, mostly doctors and nurses, just in DOH facilities alone. In addition, about 25% of all barangays do not have a dedicated health worker.

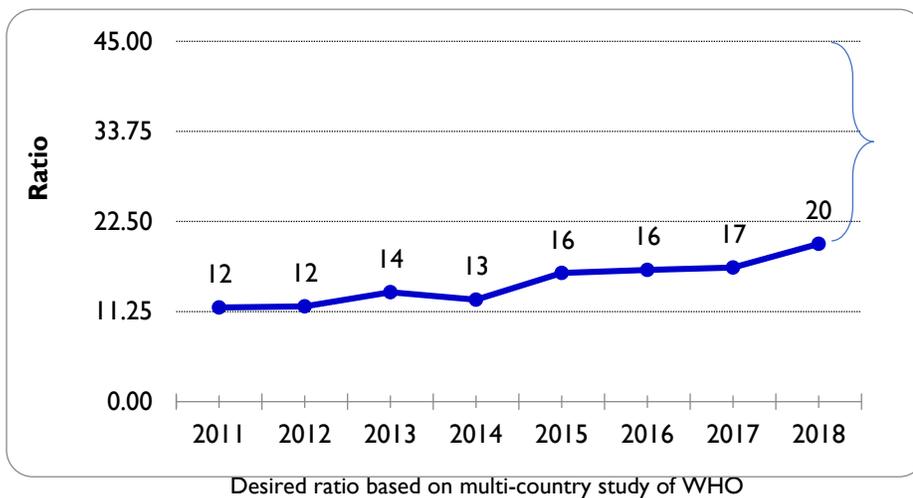
Considering the number of health facilities as of September 2018 data, the country needs at least about 125,798 health workers (Dones et al 2017). Based on 2016 FHSIS and 2017 DOH Deployment program, there are 48,685 health workers, which results in a total deficit of 77,113 primary health care workers. The 2018 Philippine Health Systems Review notes that although HRH is a major export, there are shortages of doctors and nurses in the country.

In 2016, 44.5 doctors, nurses and midwives per 10,000 population were deemed necessary to achieve the SDGs and UHC. This is based on an estimate from a multi-country cited in WHO Global Strategy on HRH: Workforce 2030. However, this can be higher or lower depending on a country's health situation and goals. A recent rapid review of the health labor market in the Philippines pointed out that using ratios as an approach does not fully consider the demand for health services as the demand is linked to access in many areas. For instance, the requirement for one doctor per 10,000 population might be met in relatively isolated areas but patients would

still need to travel for an hour to reach the facility. Local demand for health services directly impacts on the HRH requirements and distribution (ThinkWell 2018). Also, the ratios used to determine the required number of facilities and health workers were formulated in the 1970s and have never been updated. The exception is the bed per population ratio which now stands at 1:800 from the original ratio of 1:1,000.

Nevertheless, to obtain an indication regarding the approximate number of health workers needed in the country, 44.5 per 10,000 is compared to HRH ratio per 10,000 population from 2011 to 2018 (Figure 32). A gap of about 25 per 10,000 population remains in 2018, which translate to 262,571 health workers in absolute terms.

Figure 32. Total HRH ratio per 10,000 population, 2011-2018



Source: National Database of Human Resources for Health Information System (NDHRHIS), DOH; PSA, HRH Country Profile, HRH2030 2019

A specific estimate can be made for the number of nurses needed in BHS. The WISN study recommend a full-time nurse and midwife for each BHS to undertake primary interventions, which translate to a total of 84,050 needed across the country.¹⁰ If the WISN recommendation is applied to the existing 20,045 BHS, there is a looming gap of 40,090 nurses and midwives.

Another indicator of the inadequacy of health workers is that one in six deaths were unattended in the country (NDHS 2017).

The views of participants in a workshop with members of the HRH Network on the issue of HRH inadequacy in the Philippines were divided. Some agreed that HRH supply was inadequate due to the following reasons: the cost of health sciences education; not meeting local staffing standards; not enough dentists and pharmacists although there are cadres with enough population to HRH ratios; and, difficulty in meeting local and global needs. Among those who disagreed that HRH supply in the country was inadequate, the reasons were: health workers are shifting professions due to low salaries and working conditions; maldistribution of health workers i.e. 70% are in Luzon, 20% in the Visayas, and 10% in Mindanao; and, the absorptive capacity of the health sector is inadequate i.e. jobs are the issue, not the supply.

¹⁰ There are 42,025 barangays in the Philippines classified as urban (5,697) and rural (36,328). From <https://psa.gov.ph/content/urban-barangays-philippines-based-2010-cph> accessed 30 June 2019

SUMMARY

- The current production of health workers seems to be insufficient to address the needs and gaps in the national health workforce as can be seen from estimates based on the HFDP 2017-2022, the WISN staffing recommendations, or from the estimated ratio to achieve the SDGs. The gaps are underscored by a strong demand from a rapidly rising Philippine population that is spending more on health care and an equally strong demand from other countries, especially for nurses and rehabilitation workers.
- To address the inequitable HRH distribution across regions, underlying issues need to be rectified such as:
 - There are many cases of staff underutilization due to limited services being provided by the facilities or overstaffing in some cases across the regions covered by WISN study.
 - High workload pressures especially doctors in certain areas which can affect the quality of the provision of health services.
 - Overlapping of functions means redefining scope of works, streamlining functions and implementing these changes.
 - Retention of health workers deployed by DOH is affected by the lack of job security.
- The use of ratios to determine staffing needs and the skill needs vis-à-vis the health needs of the population as an approach does not fully address the changes in disease burdens, health needs of the population, the necessary adjustments to the UHC, the effects of migration, inadequate compensation, and maldistribution of HRH (USAID- HRH2030 Policy Scoping Review, 2019).
- From the WISN study, the underutilization of staff in many facilities, occurrence of shortages in some, and the absence of health workers e.g. doctors in a few cases indicate an issue not only about geographical distribution of health workers but also workload distribution and the skill mix in field health facilities.
- Remuneration is a key factor that motivates health workers. There is wide disparity in wages between the public and private sectors, among health workers (across occupations and gender), and between health workers supported by LGUs and the DOH. In the private sector, minimum wages set by DOLE are ignored. Wages offered in destination countries is higher than salaries in the Philippines and it is highly unlikely that the DOH or the private sector will be able to match. Nevertheless, this issue must be addressed as this impacts retention and is one of the push factors for migration.
- The difficulty in knowing about vacancies and the limited applicants in the public health sector make the issue of shortage harder to resolve, which may further reduce access to health services.
- Work conditions plays an important consideration for health workers. Some workers have experienced extended periods where they have had no job security. The conditions in remote locations such as limited opportunities in terms of employment, education or entertainment make these places unattractive to health workers. Instead of top-ups as in other countries, some provinces have started investing more in hospitals and education systems in their areas, thereby making their regions attractive to potential workers (ThinkWell 2018). Work conditions in the private sector need to be better understood and perhaps regulated. Poor working conditions are push factors for health workers to find work elsewhere in the Philippines or abroad.
- The disparity in wages due to a lack of regulation and standardization of wages between the public and private sectors and for similar types of jobs is a key push factor.
- The lack of standardized wages and poor working conditions does not induce health workers to accept assignments where demand for their services are highest such as in GIDA.
- Training needs to be provided to health workers, especially those who have been deployed and are on job orders employment status. The absence of training in or close to the place of work means that new graduates are unable to upgrade their skills and can provide only limited health services. On the other hand, practitioners that are able to access training meant their absence from local health facilities. Alternative ways of upgrading and honing health-related skills and knowledge can be made available and be accessible for all HRH especially those not in or close to regional or central offices where trainings can be readily accessed. Technical capacity building programs need to be made available to health workers.
- There is little information and data regarding health workers' practice ready training. For instance, there is no baseline data regarding the competency levels of health workers. There is also no available data on unemployed HRH and HRH out of the labor force.
- Technical competencies for health staff providing primary health services are defined in the DOH national programs. However, these leave gaps in the knowledge, skills and attitudes of health workers, particularly in competencies that require cross-cutting knowledge, skills and attitudes, such as change management, patient experience, and supportive supervision.
- There is a need to evaluate training approaches used to build competencies of HRH managers and leaders, especially among HRH at PHC levels, and identify gaps in leadership and management skills of health workers.

- Current coaching, mentoring, and supportive supervision (CMSS) approaches need to be reviewed to determine how the provision of CMSS will now be re-configured or structured to ensure continued technical support in building service capacities of different HRH under the service delivery network (SDN).
- Findings from the Deployment Report (USAID-HRH2030 2019) indicated that health workers derive great satisfaction out of serving their fellow country man. Developing career paths can further motivate health workers to stay and a policy may need to be crafted for this.
- Full implementation of return service programs should be pursued as this will mitigate to a certain extent the current imbalanced HRH distribution.
- LGUs, from many studies, exercise little responsibility in providing and managing health services, facilities, and human resources frequently citing the lack of sufficient resources. In light of the Mandanas case, LGUs now have more resources that can be utilized for health services and recruiting and retaining health workers.
- It is difficult to plan for the production of HRH as the needs change with international demand. However, there are pioneering studies on WISN, as well as HLMA, which helps inform HRH production and distribution. The periodic undertaking of WISN and HLMAs can help better estimate and understand domestic demand for health workers.
- There is a need to clarify the estimated 680,187 HRH with unspecified practice – does this include temporary and permanent migrants, non-practicing health workers i.e. in non-health sectors, and health workers who have retired?
- The extent of deskilling of health workers because of underemployment and their shift to employment in non-health sectors needs to be assessed.
- An effect of the poor working conditions is the misplaced anger of patients directed at health workers. As frontline health providers, they face the brunt of patients' dissatisfaction.
- The mental health of health workers should be determined since they may face constantly stressful situations including crowded facilities, not properly operating equipment, dissatisfied patients, long hours, and heavy workloads.

Exit out of the health workforce

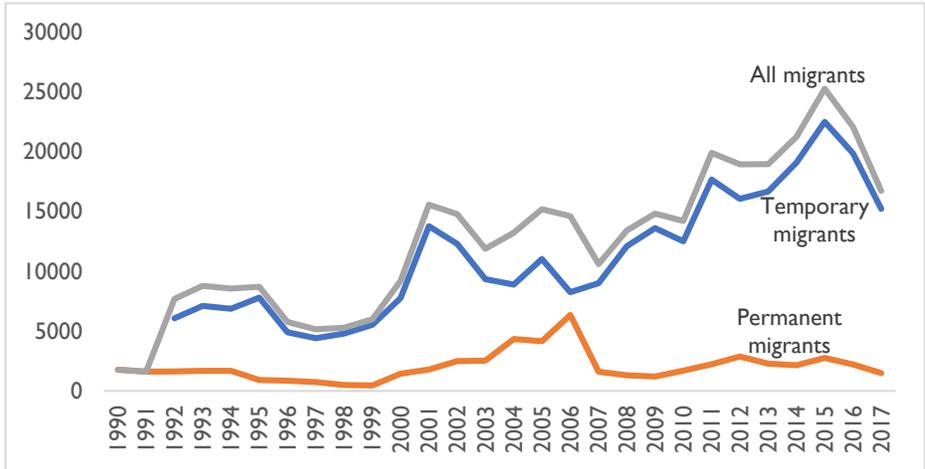
International demand for HRH

The Philippines' promotion of labor export, introduced in 1974 by way of RA 442 and initially a response to high unemployment rates, has, over time, led to the country's reputation as a source of health workers.

Overall, the total number of HRH migrants has been steadily increasing since 1990 until 2017, the bulk of which are temporary migrants (Figure 33). In 2015, the total HRH migrants reached 25,409 then dropped fairly dramatically, coinciding with a drop in the HRH production (Figure 34). The decline is influenced too by the shift in K-12 education system which introduced the addition of two years of senior high school in 2016 producing a two-year lag time in graduation. The decline is more evident among temporary than permanent migrants. Nurses comprise more than nine of ten migrants, averaging 93% per year from 1990 to 2017.

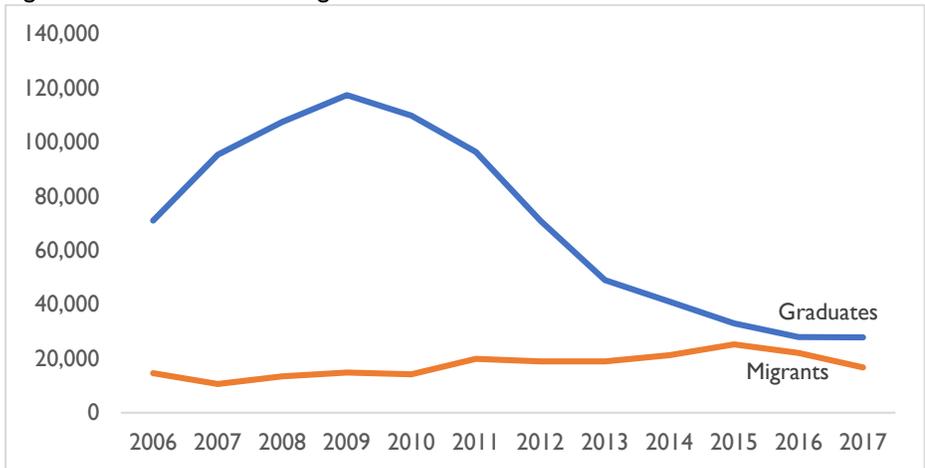
Among the four health cadres, the demand for nurses abroad, where the elderly population is growing and there is little production of health workers, has been highest. Also, developed countries cannot cope with their human resource requirements and a quick solution is to get from source countries such as the Philippines.

Figure 33. Temporary and permanent migrants, 1990-2017



Source: Data from Philippine Overseas Employment Administration (POEA), Commission on Filipino Overseas (CFO)

Figure 34. Production and migration of PH Nurses 2006-2017



Source: POEA, CFO, CHED

Based on the records of the POEA data from 1992, the number of deployed Filipino nurses has experienced an upward and fluctuating trend throughout the years. The growth rate had been relatively stale from 1992 to 1999, with a compound annual growth rate (CAGR) of -0.85%, until a rapid increase was seen from the years 2000 to 2002. Afterwards, the growth of deployed workers slowed down again. During the years 2010 to 2015, deployment grew rapidly from 12,082 to 22,175 at a CAGR of 13%. After this period of robust growth, a significant decrease happened again with deployment dropping to 14,867 in 2017 (Table 20). Cumulatively, a total of 284,820 nurses have been deployed since 1992. Most migrate temporarily and there is a likelihood that they will return to work within the country. However, it should be noted that deployment data is based on temporary contracts and it is possible that many of the nurses with annual renewal are the same persons being counted.

More doctors have been migrating permanently from 1990 until 2008. The number of doctors migrating permanently has exceeded temporary migrants anywhere from two to seven times during this period. Beginning in 2008, the ratio of permanent to temporary physician-migrants went down to 1:1 further declining until at present, there are more doctors working temporarily abroad.

Table 20. Temporary and permanent HRH migrants, 1990-2017

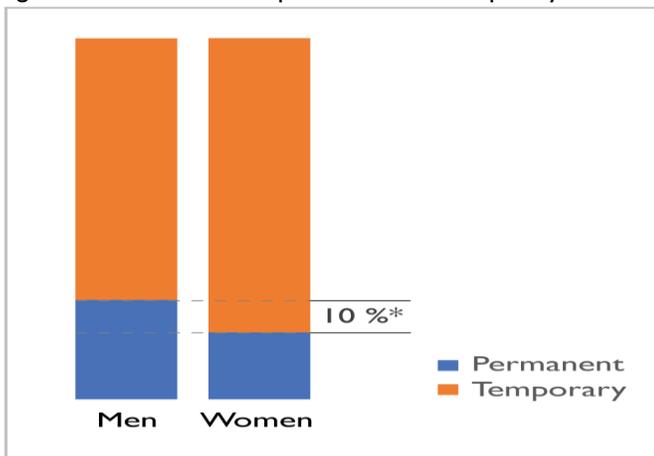
Year	Doctors		Midwives		Nurses	
	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
1990		340		87		1,356
1991		356		108		1,151
1992	84	324	246	82	5,747	1,226
1993	71	316	297	93	6,744	1,278
1994	57	285	126	86	6,699	1,318
1995	63	242	159	65	7,584	604
1996	38	276	142	77	4,734	505
1997	60	201	113	101	4,242	438
1998	55	128	149	48	4,591	321
1999	59	65	66	27	5,413	370
2000	27	158	55	58	7,683	1,231
2001	61	179	190	44	13,536	1,575
2002	129	204	312	42	11,867	2,248
2003	112	237	276	58	8,968	2,245
2004	91	295	250	60	8,556	3,988
2005	97	275	230	60	10,718	3,827
2006	171	358	18	53	8,076	5,953
2007	164	286	423	53	8,429	1,267
2008	214	255	403	51	11,495	1,009
2009	224	218	391	51	13,014	943
2010	176	380	266	66	12,082	1,258
2011	292	361	162	50	17,236	1,827
2012	250	353	169	51	15,655	2,486
2013	165	172	123	38	16,404	2,081
2014	220	142	94	43	18,799	1,966
2015	220	148	125	33	22,175	2,583
2016	249	131	80	17	19,551	2,067
2017	191	91	177	19	14,867	1,396
Total	3,540	6,776	5,042	1,621	284,865	48,517

Source: Philippine Overseas Employment Administration, Commission on Filipino Overseas

According to CFO, a cumulative total of 60,000 HRH, mostly nurses between 25 and 34 years old, have been lost to permanent migration from 1990 to 2017.

From 2000 to 2010, for both women and men, 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 10% of their women counterparts (Figure 35). 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 36 D). 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 (Figure 36 B and Figure 36 C). Doctors' migration patterns are quite different (Figure 36 A). There are generally more permanent doctor migrants for both genders, 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 35. Distribution of permanent and temporary HRH migrants by gender, 2000-2010

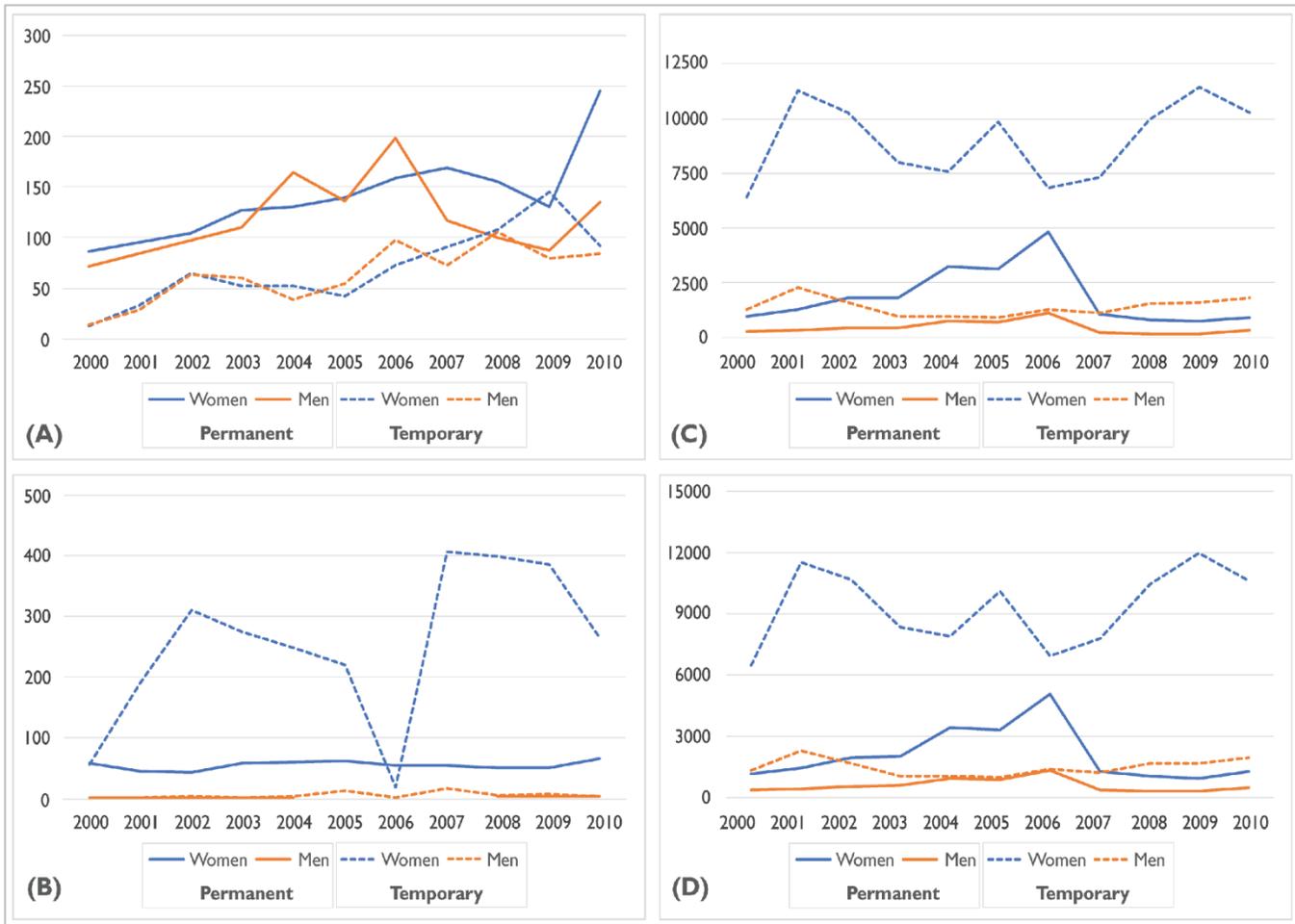


*10% more men are permanent HRH migrants compared to 10% of their women counterparts.

Source: POEA and CFO. Total bar stock is 100% per gender, absolute number is unequal for both genders.

Individuals are pushed to migrate due to poor wages, poor working conditions, outdated healthcare technologies, and lack of employment opportunities. Pull factors include the prospect of better social, economic, and professional opportunities abroad and by the presence of relatives in the destination country. Additionally, poor health infrastructure, job insecurity, inconsistencies in practice, outdated or inappropriate curricula, institutional politics, and inadequate opportunities for specialty training influence migration decisions. Human rights abuses, especially in rural areas, is another push factor in HRH migration. Finally, the policy and institutional support currently in place facilitate the migration of HRH. For instance, the destination countries' visa provisions allow family members to join the migrating health worker (Castro-Palaganas et al 2017, WHO 2018).

Figure 36. Temporary and permanent HRH migrants by gender, 2000-2010



(A) Doctors; (B) Midwives; (C) Nurses; (D) Total; Source: POEA and CFO in HLMA Report, 2020.

The latest temporary migration of nurses show that they are in the Middle East, especially in Saudi Arabia and the United Arab Emirates, and Europe (Table 21).

Table 21. Deployment of nurses by destination, 2016-2017

Destination	2016			2017		
	Male	Female	Total	Male	Female	Total
Saudi Arabia	1,501	12,316	13,817	983	8,010	8,993
United Arab Emirates	232	1,238	1,470	92	891	983
Qatar	115	670	785	306	1,122	1,428
Kuwait	69	455	524	59	559	618
United Kingdom	435	998	1,433	472	1,079	1,551
Ireland	83	173	256	130	252	382
Singapore	171	383	554	73	276	349
Other	278	434	712	146	417	563
Total	2,884	16,667	19,551	2,261	12,606	14,867

Source: Philippine Overseas Employment Agency

High-income countries see the Philippines as an ethical source to recruit workers from and come to memoranda of agreement with the Department of Foreign Affairs (DFA) on their working conditions. However, these do not include an agreed-upon number of health workers that will be recruited from the Philippines every year. Receiving countries may communicate their needs, usually in the aggregate and may not necessarily be only Filipinos, which training institutions use for planning. By the time health workers finish their four years of education, external demand might have already been saturated from other countries, producing a glut in the local supply of nurses and depressing local salaries. This may prompt nurses to drop out of the health labor market and seek other jobs in other industries or sectors (ThinkWell 2018). Bilateral labor agreements, the mechanism by which the Philippines has facilitated employment for and provide protection to Filipino workers abroad, have provisions for: exchange of labor market information, procedures for recruitment and selection of workers, setting of minimum employment standards, mandatory orientation for workers, protection of workers, formation of a joint consultative committee, and mechanism for mutual development of HR to promote sustainability (WHO 2018). For instance, in March 2013, an agreement between the Philippines and Germany was signed. Through government to government hiring, Filipino nurses were hired at reduced recruitment fees paid by the workers (Casco 2013 as cited in WHO 2018).

Salaries in destination countries

Using data from PayScale.com, an American online database that provides information on salaries, benefits, and compensations on jobs worldwide, a nurse's entry level salary per month in Saudi Arabia is PhP10,000 higher compared to the highest monthly salary of PhP50,702 in the Philippines. Saudi Arabia was chosen since it has the lowest annual salary among the countries with data (Table 22). To facilitate comparisons, salaries expressed in foreign currencies were omitted. Taking a simple average of the salaries in different countries, a doctor would receive PhP367,000 per month, a nurse PhP122,000 per month, and a midwife PhP144,000.

Table 22. Average annual salaries of doctors, nurses, and midwives in destination countries (PhP)

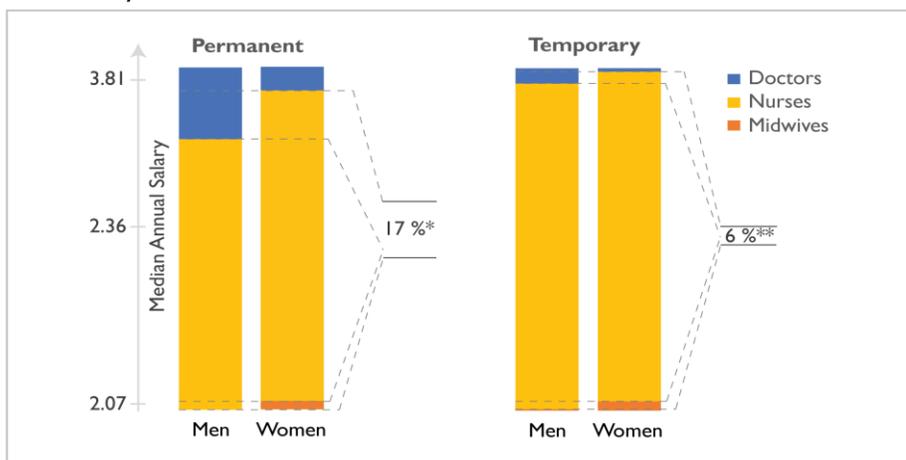
Country	Doctors	Midwives	Nurses
United States of America	7,270,000	2,700,000	2,850,000
Canada	4,590,000		
Australia	3,810,000	2,070,000	
New Zealand	2,900,000		
United Kingdom	3,460,000	1,630,000	1,550,000
Ireland			2,030,000
Saudi Arabia		510,000	720,000

Country	Doctors	Midwives	Nurses
United Arab Emirates			1,300,000
Qatar			1,070,000
Kuwait			850,000
Singapore			1,340,000
Average monthly wage	367,167	143,958	121,979

Source: payscale.com

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 concerning the HRH migrants' occupational segregation.¹¹ 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 37). 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 37, the 17% gender pay gap for permanent HRH migrants translates to 1,062 men earning more than 3,865 women among permanent HRH migrants.¹² 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.¹³ 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 37. Gender pay gap among permanent and temporary HRH migrants as a percentage of occupational segregation vs. median annual salary



*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.

¹¹ Median annual salary based in 2016 annual salaries for US, Canada, Australia, New Zealand and the UK; expressed in million PHP.

¹² 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.

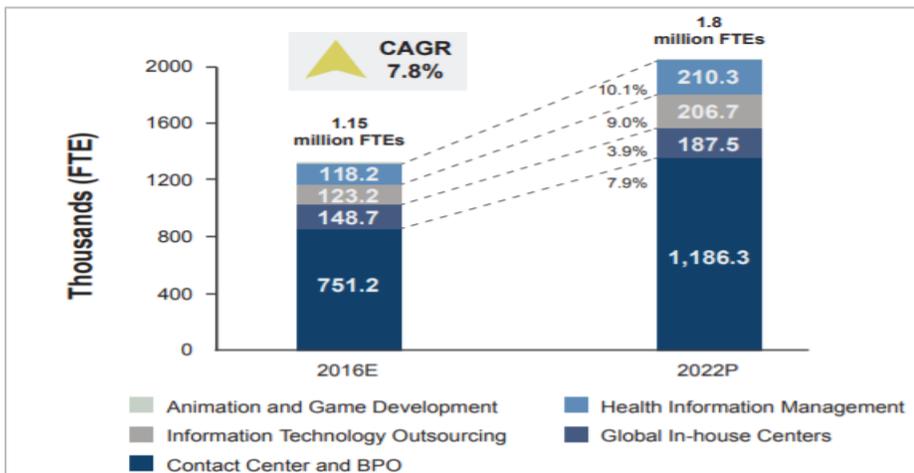
¹³ Women temporary HRH migrants (2002-2010): 102,591; Men temporary HRH migrants (2002-2010): 16,097. 6% of 102,591 = 6,155; 6% of 16,097 = 966.

Working abroad is seen by health workers as an opportunity for professional growth and enhancement. For the Philippines and its health system, this has meant the loss of human capital, commercialization of health sciences education and compromised its quality, reduced its learning facilitators, and affected the quality of health care, especially in rural areas (Castro-Palaganas et al, 2017).

Health workers in other industries/sectors

The rise of Healthcare Information Management Outsourcing in the Philippines has led to an exodus of workers, most notably nurses, from the healthcare setting to the Business Process Management (BPM) industry. According to the Information Technology & Business Process Association (IBPAP), the health information management subsector of the Information Technology & Business Process Management (IT-BPM) industry had an estimated headcount of about 118,000 employees out of the total number of 1.15 million employees in the industry (Figure 38). Furthermore, the association also projects that the number of employees will increase to 210,000 in 2022 (USAID-HRH2030 HLMA Report, 2019).

Figure 38. Number of health workers in the IT-BPM industry



Source: USAID HRH2030 Philippines HLMA Report, 2020

Summary

- Given the estimated 42,000 qualified nurses and about 3,000 qualified doctors, medical technologists and nurses who have graduated annually between 2005 and 2017 and the unknown vacancies in the health sector, it is perhaps not surprising that many leave the health workforce. It is critical to find ways to have them, especially nurses, to move to direct health service rather go into other industries such as the IT-BPO industry.
- Better wages and opportunities abroad remain strong pull factors for health workers. There are large numbers of HRH leaving – a total of about 15,000 temporary and 1,396 permanent migrants in 2017. While it provides benefits to Philippine households and the economy, HRH departure is largely detrimental to the health sector as it affects the quality and quantity of supply of health workers in the country.
- The downturn in international demand for nurses has meant that those who are part of the oversupply seek employment in other industries.
- At present, the public and private sectors would be hard pressed to compete with the pay scales health workers are receiving abroad. To attract the health workers back to the country or prevent others from leaving, other benefits or in-kind compensation can be provided, which when monetized, can provide a package that health workers would find appealing and appreciate. This can be offered in conjunction with campaigns the government can mount to appeal to the patriotic feelings of HRH as they are critical in achieving the UHC objectives and improve the country's health outcomes.
- While the WHO Global Code of Practice on International Recruitment of Health Personnel serve as a guide to sending and receiving countries, it largely relies on the countries' willingness to abide. It may be necessary to incorporate elements of the

Code in bilateral labor agreements (BLAs) not only to protect the rights of workers but also to inform the production, management, retention, and deployment of the Philippine HRH.

- The unregulated emigration flows, and cyclical changes in international demand affect domestic shortages or surpluses, and salary levels, especially for nurses (ThinkWell 2018). It may be necessary to take policy action so that the Philippine health sector does not suffer from the vagaries of the international market.
- Data shows 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, the bigger share of men as permanent migrants 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.

HRH systems and stakeholders

It is necessary to determine the key players and stakeholders in HRH and to understand their roles as facilitators and gatekeepers. This section attempts to look at the whole HRH spectrum, from pre-service to exit from the local health workforce.

HRH governance

There appears to be no single formal governance structure that provides management and oversight to HRH in the Philippines. Prior to entry into the workforce, it is CHED, TESDA, and the public and private HEIs that are responsible for them. As professionals, they are managed and/or regulated by PRC, specialty societies and boards, accredited professional organizations, and their employers which can be the private sector, the DOH, or LGUs.

The DOH provides leadership, capacity-building, and career development to HRH. The addition of performance accountability in the Strategic Framework and Implementation Guidelines of the *FOURmula One Plus (FI+)* for Health policy of the DOH raise concerns regarding the identification of appropriate performance standards and indicators for health workers that will ensure their commitments to the policy goals. An assessment of current performance accountability approaches, methodologies and tools is critical to ensure that performance accountability processes and measures are improved to achieve FI+ objectives (USAID- HRH2030 Policy Scoping Review, 2019). In a workshop that validated the situation analysis of the 2020-2040 HRH Masterplan, participants noted several gaps relating to the poor health system performance: the lack of baseline data on the competencies per cadre, lack of ample support from LGUs, and the need to revisit the strategic plans of national health programs as well as review the performance of national program managers.

With decentralization, LGUs have become responsible for the management and provision of health services at the local level. Acknowledging that health workers may have been the most severely affected in the devolution lead to the enactment of the Magna Carta for Health Workers in the 1990s. However, its implementation has been uneven as the law had no provisions for enforcement. Many LGUs did not implement the Magna Carta, citing the absence of financial means (WHO 2018) or the PS cap of 45%-55%. When the DOH deployed doctors, nurses, midwives, and medical technologists, this unintentionally disincentivized LGUs to hire locally and create permanent health worker positions.

Of note is that in Mindanao, a distinct subnational entity called the ARMM was created by Republic Act No. 6734, as amended by Republic Act No. 9054. ARMM consists of five provinces and has its own regional Department of Health that is directly responsible to the ARMM Regional Governor (WHO 2018).

HRH financing

DOH funds the compensation of HRH in the deployment program and those in the medical pool while LGUs is responsible for HRH recruited locally. In 2018, the DOH's budget for PS covering salaries and benefits was PhP33.9 billion taking about a third of the total. A separate amount for the Deployment Program was earmarked at PhP9.6 billion in 2018, up by 23% from PhP7.82 billion in the previous year. The budget of DOH for PS has seen an eleven-fold increase from PhP3 billion in 1991 to PhP34 billion in 2018.

Since the devolution in 1991, LGUs have the responsibility for the remuneration of health workers in the municipality, city or province. But as pointed out in the preceding section, not many LGUs took on the responsibilities that came with devolution citing a lack of financial means or the PS cap of the 1991 Local Government Code.

The 2019 proposed budget of PhP640.6 billion allotment to LGUs will increase by 50% due to the inclusion of all national taxes unlike before where only the national internal revenue taxes was used as basis for computing the IRA. The change comes out of the Supreme Court ruling on the petition filed by the former Batangas 2nd District Representative Hermilando Mandanas in 2012 who questioned the government's wrong computation and alleged misappropriation of IRA funds for LGUs.¹⁴

The National Economic and Development Authority (NEDA) as an agency involved in national level policy and funding, is a cross cutting agency.

Health information systems

A large amount of information on HRH is available in different government agencies, including LGUs, and from the private sector. HRH data collected on nine health professional categories are housed in the NDHRHIS of the DOH. LGUs submit HR data through the Human Resource Information System (HRIS), which are consolidated at the provincial and regional levels prior to submission to the HHRDB. The HRH Network, an alliance of agencies and organizations that play a role in the production and management of HRH, established the Integrated Database Human Resources for Health Information System (IDHRHIS) in 2014. The IDHRHIS is an integrated system solution intended to 'capture, process, store, and report vital information on HRH encompassing production, utilization, and deployment up to migration, re-entry and retirement at the national level.

The policy scoping review in 2018 found gaps in the current Human Resource Information System (HRIS) including:

- Current information systems used by different organizations to collect HRH data within the health sector seemed to lack common standards on data.
- There are barriers to data sharing and data use that hinder information exchange. Data integration and discussion also need to be considered in the light of the new data privacy act.
- There is no central repository of HRH data in the health sector and no designated custodian to manage and coordinate data use for HRH at the national level. In addition, the governance structure on HRIS needs to be assessed to identify: who oversees formal decision making on HRIS, institutions in charge of particular HRH mandated committees on HRIS, and barriers to governance as it relates to data privacy and sharing of information.
- There is a need to review and assess factors which affect data quality in the collection of information about HRH. In addition, there is a need to identify policy gaps relating to data quality standards and validation procedures.
- There is a need to coordinate with the PHIC data systems to identify critical HRH information needs and arrangements for data sharing with the DOH. In addition, there is a need to explore the possibility of the PR) sharing their data on licensed HRH to the DOH.

Participants in a validation workshop with members of the HRH Network said that there were issues in the interlinkages of data such as inconsistent data definitions, limited data sharing within and among organizations, and limited data from the private sector.

HRH education and training

HRH management responsibilities are scattered across numerous agencies and organizations. The private sector plays an enormous role in the education and training of students intending to enter the health professions. While it also engages in education and training, the public sector is responsible for the regulating the production of HRH. For instance, the CHED, regulates both public and private institutions of higher learning, which covers colleges and universities offering medical and other professional health degrees. Recently, CHED has moved to emphasize outcome-based education stressing the need to prepare health workers for community-oriented health interventions (Philippine Health Systems Review 2018).

¹⁴ <https://news.abs-cbn.com/news/07/04/18/supreme-court-says-local-govt-shares-should-come-from-all-national-taxes> accessed 30 June 2019

TESDA sets direction, promulgates relevant standards, and implements programs geared towards a quality-assured and inclusive technical education and skills development and certification system. The private sector has a strong presence in the education of health workers.

In addition to government agencies, the Association of Deans of Philippine Colleges of Nursing (ADPCN) and the Association of Philippine Medical Colleges (APMC) are also engaged in the health sciences education.

HRH management and regulation of professional health workers

The PRC is responsible for the registration and licensing of all professionals in the Philippines, which includes doctors, nurses, midwives, dentists, pharmacists and other allied health professionals. Specialty societies and specialty boards in the medical profession, such as the Philippine College of Physicians, Philippine College of Surgeons, Philippine Academy of Family Physicians, Philippine Pediatrics Society, Philippine Obstetrical and Gynecological Society, Philippine Nursing Association, and Philippine Medical Association among many other medical specialty organizations, are also involved in the accreditation of training institutions, administration of qualifying examinations and granting of certificates for Diplomates and Fellows for medical specialists. These specialty boards and accredited professional organizations are private professional entities given recognition by the Professional Regulatory Board of Medicine under the PRC (Philippine Health Systems Review, WHO 2018).

HRH migration and employment

When leaving the country to work temporarily or to permanently migrate, several agencies play a direct role: CFO, DFA, POEA, Overseas Workers Welfare Administration (OWWA), the Bureau of Immigration, and the Public Services Labor Independent Confederation (PSLINK). For health workers employed in the Philippine healthcare system, the agencies involved are DOLE, CSC, DBM, Department of the Interior and Local Government (DILG), Department of Finance (DOF), DOH, National Reintegration Center for OFWs (NRCO) and the LGUs.

Summary

- There are multiple national government agencies involved in the oversight of the production, regulation, capacitation, distribution, management, and deployment of HRH that independently develop policies and programs specific to their mandates. There is lack of clarity to what extent individual agency's policies overlap and have effect on the policies and programs of other agencies involved in HRH. Specifically, there is a lack of consistency and strategic coherence in linking critical policies between the education and labor sectors to effectively use these as levers towards achieving UHC goals.
- There is a huge amount of HRH related information and data in the public and private sectors and attempts to collect, store, and analyze through databases remain disparate, making it difficult to form a clear picture of the changing HRH situation and inform decision making. For instance, within the DOH and at the LGUs, current information systems do not cover all facilities and are not linked to each other. The same is true with agency-partners despite mutual agreements. Health information is one of the critical components of the health systems that support evidence-based planning and interventions (USAID-HRH2030 WISN report, 2019). There is limited HRH data coming from the private sector.
- The devolution of health services has meant that political will for HRH is dependent on local political appointees that match election cycles and there is lack of capacity and/or lack of political will to recruit and manage HRH (ThinkWell 2018).
- Another aspect that devolution has imposed on local governments is to finance, plan for, and recruit HRH which they have limited capacity to do.
- There are no common goals to work on and no framework to guide the development of HRH policies, and divergent policy strategies may negate achievement of HRH development goals within the health sector.
- There is a need to review policies outside health sector that impact HRH e.g. labor policy that aim to reduce unemployment in the 1970s has inadvertently made the Philippines a labor sending country.

Current and emerging issues

On HRH systems

The core problem that underlies HRH in the Philippines is the lack of a fully functional integrated HRH systems including information systems, production planning, professional development, attractive compensation packages, management and regulation, and sustainable deployment of health workers whether locally or to other countries. This is caused by the lack of accurate and up to date information, the presence of many stakeholders that are involved in the HRH sector including players outside of the country, fragmented governance, and policy related issues. The effects of the core problem have been attenuated to a certain extent (e.g. establishment of the HRH Network as a mechanism for discussing issues and decision making, data sharing agreement). However, it is necessary to further harmonize similar or overlapping functions of stakeholders so that they can effectively collaborate and appropriately address their roles in the achievement of UHC goals and at the same time participate in the global HRH market without unintentionally creating adverse effects on the provision of health care and services locally.

- Lack of accurate HRH information to guide planning and policy. The currently available data on the number of health workers in the country is not up to date and comes from multiple sources and does not accurately reflect the actual numbers. The estimate of the total number of health workers for instance, is based on the number renewing their PRC license. There are disparate information systems so that the number of workers in the health sector comes from the NDHRHIS, an information system operated by the DOH. Other HRH-related data such as on production and migration are housed by other agencies. There is no data on out of the workers or unemployed health workers. There is no single source of HRH related data and information. There is a lack of support and structure for HRH information management.
- Multiple interlinked HRH systems that are not fully functional and many HRH stakeholders that operate independently. Agencies that are in the different parts of the HRH system operate independently according to their mandate, disregarding the impacts that their programs and policies may have on other parts of the system. This is evident in the disjoint between the education and labor sectors. There are too many schools in urban areas which is a business response to external demand without regard to the quality of the graduates being produced. There is no information coming from the health sector to inform the production of health workers for the country. Representatives from the education sector value the remittance from health workers working abroad, which while important, disregards the population health needs of the country, particularly in rural areas. There is weak regulatory capacity, and limited accountability and responsiveness of the education sector's accreditation system to health priorities.
- Lacking and poorly implemented HRH policies. At present, there is variable implementation of policies. There are several policy gaps and issues, most prominent of which are the lack of policies on competency standards and skill mix, effective deployment of HRH, strengthening health leadership and performance management systems, and innovative approaches to coaching, mentoring, supportive supervision, and training. Additionally, there are policy gaps in setting data standards and strengthening data sharing. There is no policy to identify a central custodian for HRH information. Human resources management and development (HRMD) standards, roles, and functions are also not promoted among national and local governance structures. The implementation of HRH policies showed some weaknesses due to fragmented HRH systems and use of ineffective guidelines. There is a lack of consistency and strategic coherence in linking critical policies between the education, labor, and other sectors. Policies emanating from non-health sectors also impact the HRH sector.

On HRH governance

The overall health governance system became fragmented with the passage of the 1991 Local Government Code, due to the devolution of the operations of provincial and municipal hospitals and other field health facilities. The DOH provides technical assistance in policy development, health regulation, monitoring and evaluation, capacity, building, and specialty care provision (NOH 2017-2022 p99). Particular to HRH, the DOH is responsible for the recruitment of health workers at the national level, the Deployment program, and for DOH retained hospitals. LGUs on the other hand, have taken on the role of health service provider, including the responsibility of staffing field health facilities. Frequently mentioned in the regional consultations is the political and bureaucratic interference in HRH processes and management. For example, the recruitment process is non-transparent with those having connections to those in power being favored. Health workers that are locally recruited are not always adequately compensated, provided benefits or given security of tenure, which can be traced to the personnel services cap mandated in the LGC, and the income of municipalities and provinces.

Additionally, LCEs may not prioritize health during their tenure to the detriment of health workers and health care provision in the locality. The private sector, while guided by the policies, standards, and programs established by the DOH, operates independently. Temporarily or permanently migrating HRH are governed by a different set of agencies and policies. In general, there is poor HRH management as shown in the unclear job descriptions of health workers; inadequate supervision in clinical, public health, and health systems administration; and the variable capacity of local health systems in HRH management and development. HRH governance consists of complex interactions and further illustrates the lack of coordination among stakeholders.

Issues prior to and entry into the workforce

A major issue prior to the entry of HRH into the workforce is a *lack of collaborative planning in the production of HRH*, an effect of the disjoint between the education and health sectors as mentioned previously. Responding to demand from wealthy countries with a growing elderly population and minimum production of health workers, private schools act on information provided by receiving countries that, upon graduation of their students, may be outdated and no longer actionable. Nevertheless, the number of private schools have dramatically increased usually setting up in urban areas and without proper quality checks on the curriculum. The effects are multiple: young people, drawn by the prospect of working abroad with all the perceived benefits, enroll in great numbers especially in nursing schools. On average three quarters (75%) of nursing students do not complete the course. Among those who graduate, two thirds (67%) are able to pass the board exams although the passing marks are not remarkable. Because of the overall high attrition, not enough 'new' health workers join the workforce.

An emerging issue is the need to develop curricula and produce workers for incipient health professions such as orthotics and prosthesis. It is also necessary to re-orient health sciences education to primary health care as mandated in the UHC law.

Issues of HRH in the Philippine workforce

There are several interlinked prominent issues that beset HRH in the country: inadequate remuneration and working conditions, the inadequacy of health workers in the health sector, and their inequitable distribution across the regions (DOH 2017, USAID-HRH2030 Joint Mission Report on NWAHA and WISN 2018, ThinkWell 2018).

- *Inadequate remuneration and poor working conditions.* Health workers, especially women, receive low wages in comparison to similar jobs in different industries, receive low pay when they are hired by LGUs as opposed to the DOH deployed staff, when they work for the private sector compared to workers in the public sector, and when compared to workers recruited to other countries. In addition to the poor pay, there is a small chance of career progression, many experience job insecurity for extended periods of time, have limited training opportunities, work in poor health infrastructure, use outdated healthcare technologies, encounter inconsistencies in practice, and face institutional politics. A representative from ILS-DOLE pointed out that there is little security of tenure for 'bottom of the ladder' health workers such as laboratory technicians since opportunities are limited. All these influence the decision to migrate. These factors greatly affect productivity as well.
- *Inadequacy of health workers in the health sector.* This is based on various estimates despite the large number of active health workers in the workforce according to PRC data. For instance, there are 869,974 health professionals who renewed their PRC identification cards in 2018. However, there is a gap of about 25 HRH per 10,000 population in 2018 when compared to the WHO estimate of 44.5 per 10,000 population needed to achieve coverage of SDGs. Estimates from the DOH also point to a shortage of 9,287 health workers in health facilities. The inadequacy is caused in part by fewer number graduates in the health sciences due to high attrition rates; the limited number of decent jobs in the health sector; unclear career paths of health workers; the inadequate support for health workers' health, safety, and well-being; and the increasing demand for Filipino health workers in overseas destination countries. For health workers who decide to work abroad, some of the pull factors include higher salaries, the prospect of better social, economic, and professional opportunities abroad, and the presence of relatives in the destination country. Factors that facilitate the move to other countries are also present. For instance, some receiving countries have visa provisions that allow family members to join the migrating health worker. The effect of temporary and permanent health worker migrants has been on the quality and quantity of workers left in the country. A growing phenomenon is for health workers, particularly nurses, to work in non-health sectors. To mitigate the insufficiency of health workers especially in LGUs, the HRH sector is exploring the implementation of RSAs. In this agreement, students who receive financial support under the free higher education law are required to participate in return service programs as a way of giving back to the country for their education.

- *Inequitable distribution* of HRH across the Philippines has been well documented (NOH 2017-2022, WHO 2018, WISN 2018, Joint Mission on HLMA 2018, HLMA paper 2019). The DOH Deployment Program has addressed to a certain extent. Factors affecting the maldistribution of health workers include the inadequate remuneration in low income class municipalities; disparities in salary between private and public, national and local; and the inability of some LGUs to absorb health workers such as those who are deployed. In addition, the local conditions affect retention of deployed health workers. These conditions can include the limited employment and educational opportunities and hospital facilities for family members, and the relative isolation of the place of assignment. Many health workers study in urban areas, creating a bias in terms of place of employment. The WISN study, which catalogued staffing patterns and levels of workload pressures in nine regions of the country, found varying degrees of surpluses, shortages and normal workloads at various levels of care and cadres. For example, nurses and doctors had the highest workloads at the secondary and tertiary levels of care. Extremely low workload pressures were found for midwives at the BHS indicating staff underutilization. There is an opportunity to redistribute staff from facilities with relatively high numbers of staff against their available workloads to understaffed facilities.

Issues on HRH out of the Philippine workforce

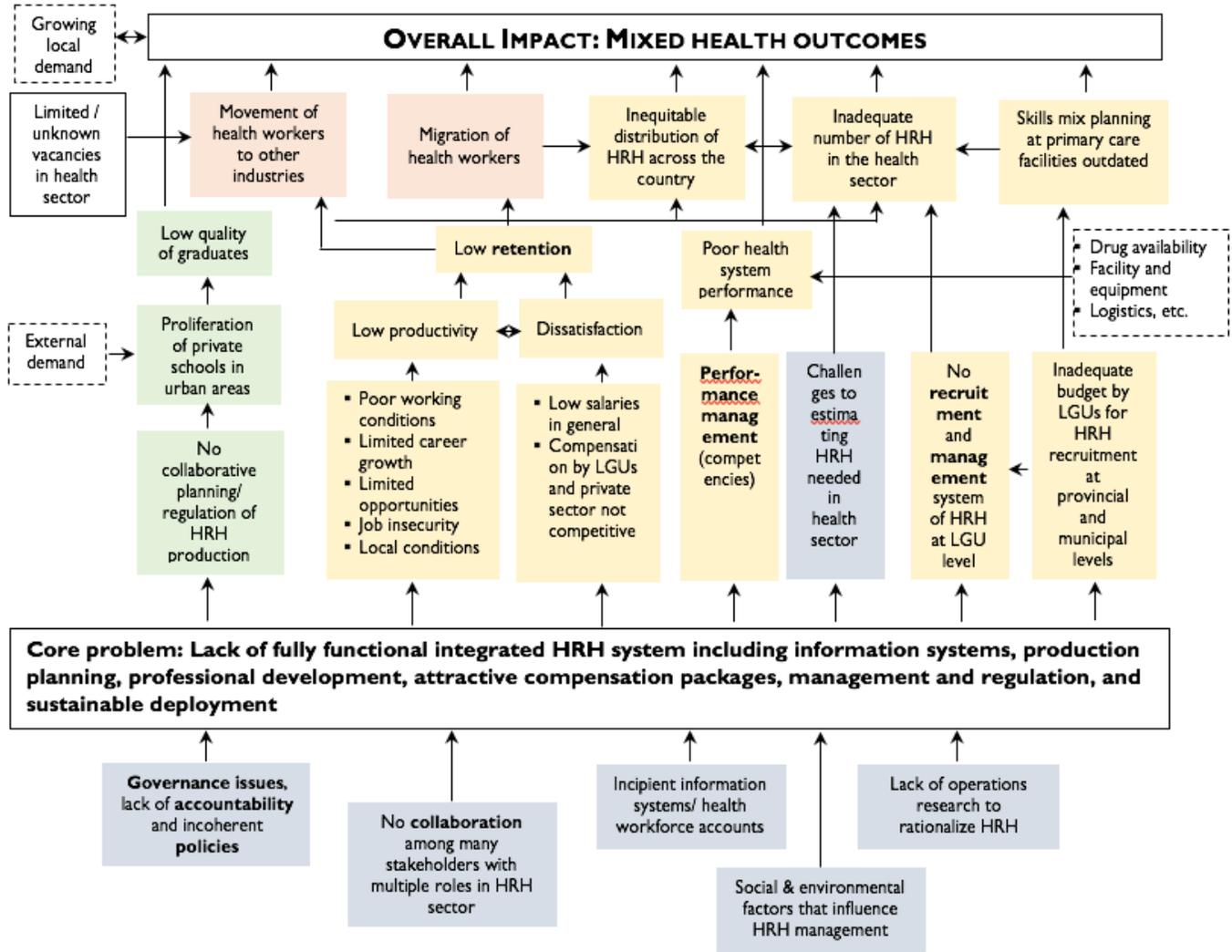
There is a strong demand for Philippine health workers, especially nurses. Poor wages and working conditions are the main push factors while professional growth and better socio-economic opportunities for themselves and their families are the pull factors for migration. The effect, however, has been the loss of investment in human capital, commercialized health sciences education which has adversely affected the quality of education, and the loss of skilled workers.

Summary of issues

The causes and effects that have produced the current state of HRH in the Philippines can be seen in its totality in the problem tree (Figure 39). A problem tree is a planning tool that maps causes and effects arising from an issue or in this case, interlinked issues. In 2019, the core problem identified is the lack of a fully functional integrated HRH system including information systems, production planning, professional development, attractive compensation packages, management and regulation, and sustainable deployment. Four of the five causes of the core problem and several effects, like inequitable HRH distribution, poor wages and working conditions, among others, have been identified as key issues that will be addressed in the 2020-2040 Masterplan. The cumulative effect of the interlinked and persistent issues has resulted in mixed health outcomes for the Philippines.

Addressing the causes of the core problem will require an extended period of time but will lead to systemic changes and eventually resolve issues that have persisted since the first Masterplan was formulated in 2005. Focusing on the effects of the core problem will likely offer short-term solutions. However, rectifying these issues in the short-term is necessary since they not only solve pressing problems but also contribute to the accomplishments of goals (e.g. equitable distribution, retention) embedded in broad policies such as the UHC law, PDP 2017-2022, the NOH 2017-2022, the SDGs, and the Global Strategy on HRH Workforce.

Figure 39. The HRH problem tree in 2019



Legend: green: entry into the workforce; yellow: in the workforce; light orange: exit; gray: cross cutting

Conclusion

Overall, the HRH sector is better organized since the first HRH Masterplan was crafted in 2005. As a result of the 2005-2030 HRH Masterplan and with the leadership of the DOH, the HRH Network has been established and regularly meets to discuss and decide on HRH related concerns. Databases such as the NDHRHIS and IDHRHIS are in place and being used. There are new tools and methods such as WISN, HLMA, and the policy scoping review. HLMA can provide a better understanding of how the health labor market operates and impacts on the HRH sector in the Philippines. WISN can lead to better staffing in health facilities across the country, help HRH distribution and also in revising the scopes of work of health workers based on the needs of the health facility. The policy scoping review, once expanded to include policies outside the health sector, will help understand what policies can be adjusted, changed or introduced to sustainably produce, retain, and enhance HRH productivity and contribute to better health outcomes. Nevertheless, progress has been incremental. The issues identified in the situation analysis of the first HRH Masterplan are essentially the same issues e.g. inequitable HRH distribution, HRH migration, poor working conditions etc. that are being dealt with at present.

Going forward, it is necessary to address issues that will lead to systemic changes i.e. the causes of the core problem as identified in the problem tree, as opposed to focusing on its effects, which will likely offer short-term solutions. Accelerated and close collaborative action is required in order to have a fully functional integrated HRH systems and policies in the Philippines.

Appendix

Mapping data and information to use in the situation analysis

Section objectives	Data needed	Data source
Determine goals, processes and accomplishments of previous Masterplans	Goals, processes and accomplishments of previous Masterplans	Department of Health (2005). Philippine Human Resources for Health Master Plan 2005-2030
		Department of Health (2013). Reformulation of the Human Resources for Health Master Plan
Determine policy parameters of the Masterplan i.e. how should the Masterplan be framed so that its contribution to the attainment of the goals of different national policies is clear	National policies on health and HRH	Ambisyon Natin 2040, NEDA
		Philippine Development Plan 2017-2022, NEDA
		National Objectives for Health 2017-2020, HHRDB
		RA 11223 UHC law from HRH2030
		RA 7160 Local Government Code
	Departmental policies on health and HRH	Health Facility Development Plan, DOH
International policies on HRH	International policies on HRH	WHO Global Code of Practice on International Recruitment of Health Personnel, HHRDB
		WHO Global Strategy on Health Workforce, WHO
		ASEAN MRAs, HHRDB & ASEAN website
International policies on health	International policies on health	UN (2017). Sustainable Development Goal 3. Ensure healthy lives and promote well-being for all at all ages
Describe current health outcomes in the Philippines	Indicators on maternal and child health, family planning, non-communicable diseases, infectious diseases	National Objectives for Health 2017-2040
		Philippine Statistics Authority (2016). Statistics at a glance of the Philippines' Progress based on the MDG indicators
Determine location and distribution of health schools, enrollees and graduates in health sciences education, cost of education, and return service programs	Available scholarships for health sciences education	CHED Scholarships for Health Education
		TESDA Scholarships for Health Education
		Department of Health (2015). National Reporting Instrument – Monitoring Implementation of the WHO Code of Practice on the International Recruitment of Health Personnel
	Number of schools and location	CHED, 2005-2018 Number of Schools Offering Medical Courses by Province
	Number of enrollees and graduates	CHED, 2004-2018 Enrollees and Graduates in Medical Professions by Province
	Passing rates	PRC & Philippine Statistical Yearbook, 2002-2018 Number of Examinees, Passers, and Passing Rates
		RA 10968 An Act Institutionalizing the Philippine Qualifications Framework (2017)

Section objectives	Data needed	Data source
		ASEAN (2015). ASEAN Qualifications Reference Network
	Cost of tuition	FindUniversity, Average Tuition of Health Programs
	Description and data on return service programs/agreements	Antonio et al (2018). Feasibility of a Return Service Agreement for Selected HRH in the Philippines, HHRDB Sana et al (2015). Transformative scale up of the “Tacloban Experiment”: Post-Yolanda School of Health Sciences, University of the Philippines Manila (personal communications) Siega-Sur et al (2017). The impact of socially-accountable, community engaged medical education on graduates in the Central Philippines: Implications for the global rural medical workforce (personal communications) rappler.com (2018). ‘Return service’ up to state universities – CHED University of the Philippines Manila (2011). UP Manila as a Public Service University and its Returns Service Agreement Program
Determine availability and adequacy of HRH in the Philippines	Number of HRH	Philippine Regulatory Commission 2018 National Database on Human Resources for Health Information System (NDHRHIS), December 2017 Field Health Services Information System (FHSIS), 2016 DOH Deployment Program Database, December 2017 HLMA in the Philippines, HRH2030 2019 HRH Country Profile, HRH2030 2019 Philippine Statistics Authority (2013). Urban Barangays in the Philippines
	Distribution of HRH by region and practice	National Database on Human Resources for Health Information System (NDHRHIS) as of December 2017 Field Health Services Information System (FHSIS) 2016 DOH Deployment Program Database December 2017
	Staffing needs and workloads	WISN study, HRH2030 2019
Determine working conditions facing HRH	Working conditions of health workers	Castro-Palaganas et al (2017). An examination of the causes, consequences, and policy responses to the migration of highly trained personnel from the Philippines: the high cost of living/leaving – a mixed method study
	Retention of HRH	Review of deployment program, HRH2030 2019
	Employment and vacancies in the health sector	Integrated Survey on Labor and Employment, DOLE, DOH Integrated Survey on Labor and Employment

Section objectives	Data needed	Data source
	Wages of health workers	Department of Budget and Management, 2019 Philippine Statistics Authority – Occupational Wages Survey, 2016 Concept Note for HLMA in the Philippines, ThinkWell 2018
	Description of in-service training, its basis, number and types of training of health workers	AO 147 s.2002: Revised Guidelines Governing the Management of Health Human Resource Training and Development Programs in the Department of Health
Determine level of demand for HRH	Number of GIDAs by region	AO 185 s.2004: Establishment of the Geographically Isolated and Disadvantaged Areas (GIDA) in support to local health systems development. Manila, Philippines, Department of Health Number of GIDAs by region, HHRDB
	Health expenditures as proxy for demand	Philippine National Health Accounts, 1993-2017 Out of pocket, Government, HMO, and Social Insurance Spending (Total Health Expenditures)
	Description of demographic dividend	Mapa, Dennis (2015). Demographic Sweet Spot and Dividend in the Philippines Philippine Statistics Authority (2011). Highlights of the 2010 Population-based Projections
Determine extent of migration issue	Number of temporary and permanent migrants	Philippine Overseas Employment Administration, 1992-2010 Deployment of OFWs Commission on Filipino Overseas, 1997-2017 Emigrant (Permanent) Medical Professionals PayScale, Average Salaries in Top Destination Countries for Health Professionals
	Push and pull factors of migration	Castro-Palaganas et al (2017). An examination of the causes, consequences, and policy responses to the migration of highly trained personnel from the Philippines: the high cost of living/leaving – a mixed method study WHO (2018). Philippine Health Systems Review Concept Note for HLMA in the Philippines, ThinkWell 2018 Siyam et al (2013). Monitoring the implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel Department of Health (2012). Monitoring of the WHO Global Code of Practice on the International Recruitment of Health Personnel. The Philippine Multistakeholder Approach WHO (2010). Global Code of Practice on the International Recruitment of Health Personnel

Section objectives	Data needed	Data source
Determine stakeholders and roles in HRH sector	List of HRH system and stakeholders and their roles	WHO (2018). Philippine Health system Review Philippine HRH Network Phils (2014). Memorandum of Agreement on Data Sharing HRH Network Phils (2016). Joint Statement of Commitment for the Creation of the Human Resources for Health Network Philippines
Determine policies that affect HRH sector	List of policies that affect HRH Identify factors that affect implementation	Policy Scoping Review, HRH2030 2019

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