STRENGTHENING HEALTH WORKFORCE INFORMATION IN THE DEMOCRATIC REPUBLIC OF THE CONGO: IMPLEMENTING IHRIS IN KASAI AND KASAI CENTRAL PROVINCES

April 2016

Background

A significant barrier to meet health-related development goals in the Democratic Republic of the Congo (DRC) is the lack of a well-trained, well-distributed, and capable health workforce. The World Health Organization (WHO) estimates DRC has only six qualified health workers per 10,000 population, as compared to the recommended minimum of 23 per 10,000 population.[1] The Ministry of Health (MOH) *Plan National de Développement Sanitaire* and the *Plan National de Développement des Ressources Humaines pour la Santé* identified significant gaps in the way that health workers are deployed, distributed, managed, and compensated and set out a roadmap for the decentralized management of human resources for health (HRH) in the DRC. The plan also recognized that systems that track HRH data are outdated, ineffective, and plagued with governance issues and recommended that an electronic human resources system be put in place.

The DRC is in the process of dividing its existing 11 provinces into 26, known as *decoupage*. The country is also undergoing decentralization and transferring governance of many of its systems, including health, to the provincial level. This devolution process is also providing an opportunity to clean up salary payment systems (*bancarisation*), put in place more effective monetary controls, and reinforce the HRH management information systems at the provincial level.

Recognizing that timely and complete health workforce data are essential for effective HRH management, the DRC MOH began introducing an electronic human resources information system (HRIS) in 2014 with support from the *Accès aux Soins de Santé Primaires* (ASSP) project. The ASSP project is led by IMA World Health and funded by DFID; IntraHealth International leads its HRH strengthening work.

[1] http://www.who.int/hrh/workforce_mdgs/fr/

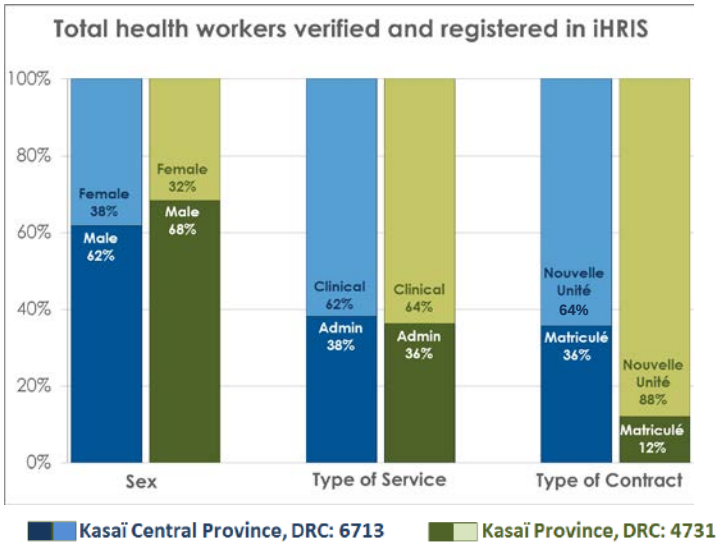
The DRC MOH is using ***iHRIS,*** IntraHealth's free, open source HRIS software that helps countries capture and maintain ***high-quality information for health workforce tracking, planning, management, and regulation***. iHRIS is built on a flexible framework that allows ministries of health, professional councils, and health service delivery organizations to adapt applications for a wide variety of uses. IntraHealth emphasizes open access to iHRIS through publishing the software, source code, and other resources at www.ihris.org and by supporting a global community of software developers and information technologists with forums, interactive discussions, and training. Additionally, iHRIS conforms to a variety of ***international standards for data exchange*** to ensure that data are ***interoperable*** with many systems (including OpenMRS and DHIS2) and can be linked via health worker registries to other systems in governments' information architecture. Developed in collaboration with national stakeholders beginning in 2005, with support from USAID, iHRIS is used in over 20 countries to manage more than a million health worker records.

Collection of health workforce data in DRC

As part of the ASSP project, IntraHealth worked in close partnership with the MOH, Public Service, and the *Comité Provincial de Pilotage*, which includes representation from the provincial governors' office, to deploy and implement iHRIS Manage in Kasaï Central and Kasaï provinces, including the collection and verification of health workforce data. The MOH and IntraHealth teams interviewed health workers in person in each health zone and entered data on the health workers' identification, photo, job, and employment/education history directly into iHRIS software on laptop computers on-site. Daily data quality checks included the physical review of identification, education, and employment paper records by supervisors and comparison of collected data against existing health worker records. Teams uploaded collected data to an online database for analysis. An appeals commission reviewed appeals from health workers excluded from the iHRIS data collection due to improper documentation or absence.

Results

The MOH, with support from ASSP, collected, verified, and registered 6,713 health worker records in Kasaï Central Province and 4,731 in Kasaï Province. The majority of registered health workers are male and just over 60% provide clinical services in both provinces (Figure 1). The majority of health workers reported they were considered *nouvelle unité*—meaning the health worker is recognized as a new employee, but they do not have official status or an employment contract with the public service. The proportion of health workers with *nouvelle unité* status was much higher in Kasaï province.

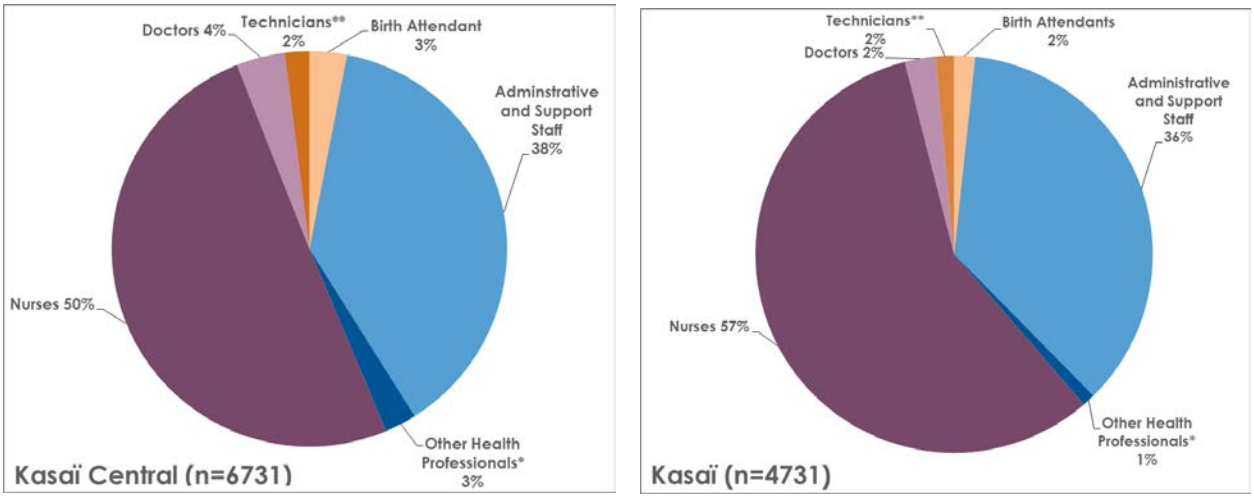


Job category and job function

In both provinces, nurses make up over half of all staff (50% in Kasaï Central and 57% in Kasaï), while administration and support staff represent over one third of all employees. Further analysis of the

administration and support staff showed that janitorial staff comprised the majority of this category. Kasai Central Province has proportionally more doctors (4%) than Kasaï Province (2%).

Figure 2. Categories of health workers in Kasaï Central and Kasaï Provinces



*Kasai Central - Other health professionals, unspecified (141); pharmacist & pharmacist assistant (41); nutritionist (9); Kasai - Other health professionals, unspecified (32); dental surgeon (6); pharmacists & assistants (6); nutritionist (4); physical therapist (1); **Kasai Central - Technicians in laboratory (121); hygiene (11); and radiology (1) sciences; Kasai - Technicians in laboratory (68); radiology (2); hygiene (1).

Health worker density and distribution

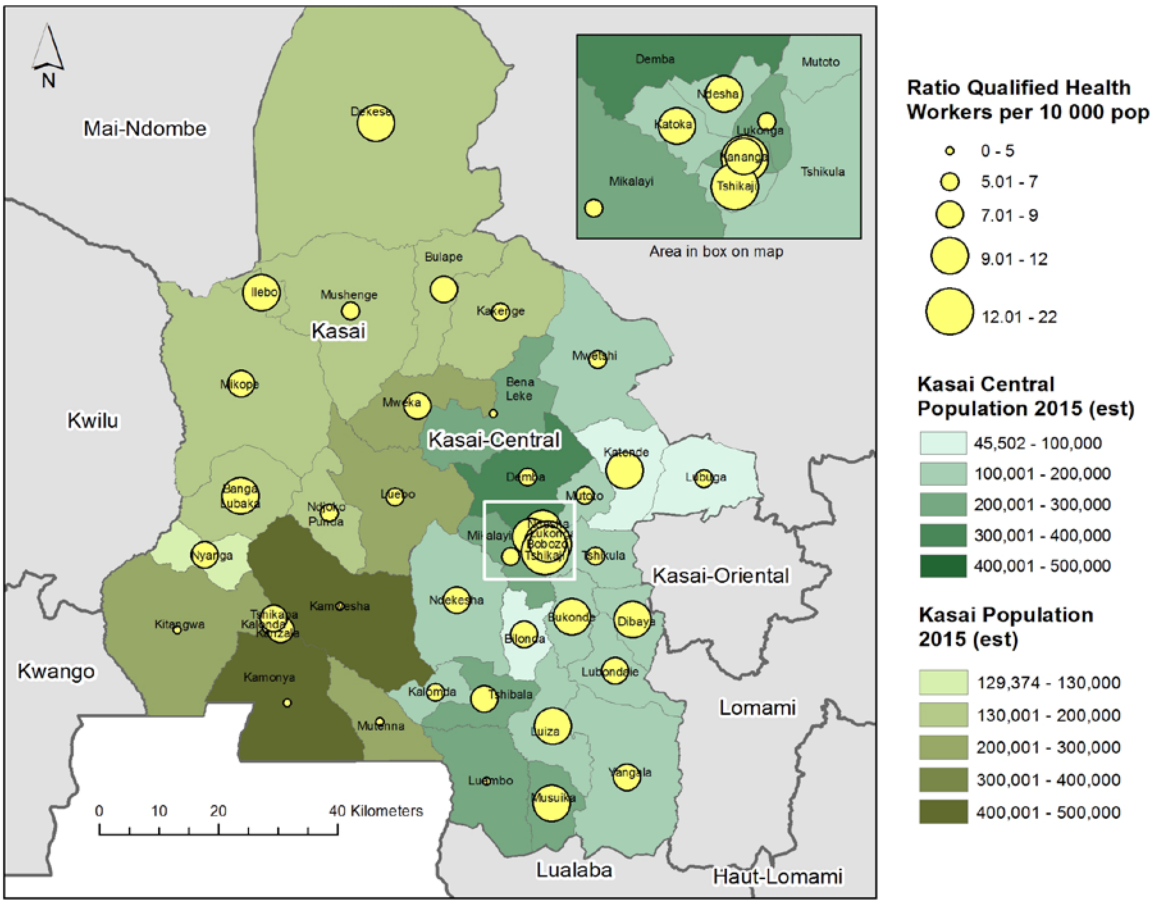
As noted above, the WHO recommends a minimum threshold of 23 doctors, nurses, and midwives per 10,000 population to deliver essential maternal, child, and primary health services. Kasaï Central and Kasaï provinces, with estimated populations of just over four million each, have a critical shortage of qualified health workers to deliver health services to their populations (Table 1). Kasaï Central has fewer than eight qualified workers per 10,000 population and Kasaï Province has fewer than seven per 10,000 population. As noted above, the majority of qualified health workers are nurses; both provinces have less than one doctor per 10,000 people.

Table 1. Ratio of Qualified Health Workers* per 10,000 population

	Province	
	Kasaï Central	Kasaï
Qualified health workers* per 10,000 population	**7.85**	**6.9**
Nurses per 10,000 population	**7.13**	**6.61**
Doctors per 10,000 population	**0.55**	**0.27**

*Doctors, nurses, and midwives

Figure 3. Density of qualified health workers in Kasaï Central and Kasaï provinces by health zone and population



Both provinces also suffer from highly unequal distribution of health workers, with health workers disproportionately located in urban areas (Figure 3). Urban health zones have a density ratio of more than 12 qualified health workers per 10,000 people, while most rural health zones have a density ratio of less than eight.

Compensation

In the DRC, health workers receive compensation for their work in a variety of ways. Health workers may receive a salary from the central government (state) and/or a bonus (*prime*) from the central MOH, and/or other types of compensation such as a portion of funds generated directly by the health center and/or a locally paid bonus. The majority of health workers (57% in Kasaï Central; 73% in Kasaï) reported they did not receive any government compensation on a regular basis and relied solely on other types of compensation (Figure 4).

Figure 4. Reported types of compensation among health workers in Kasai Central and Kasai provinces

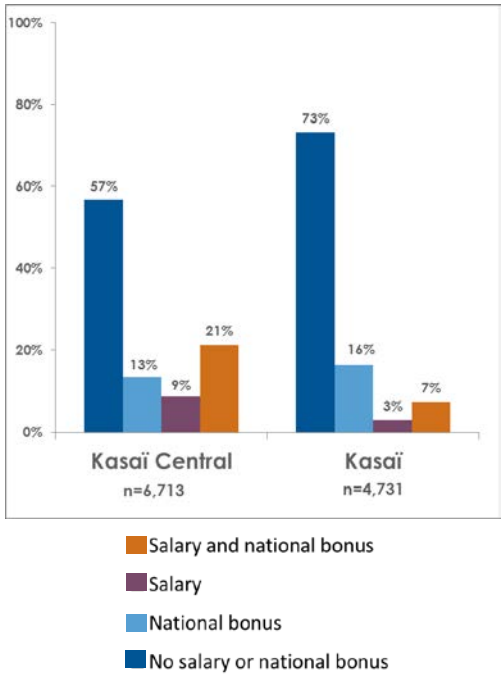
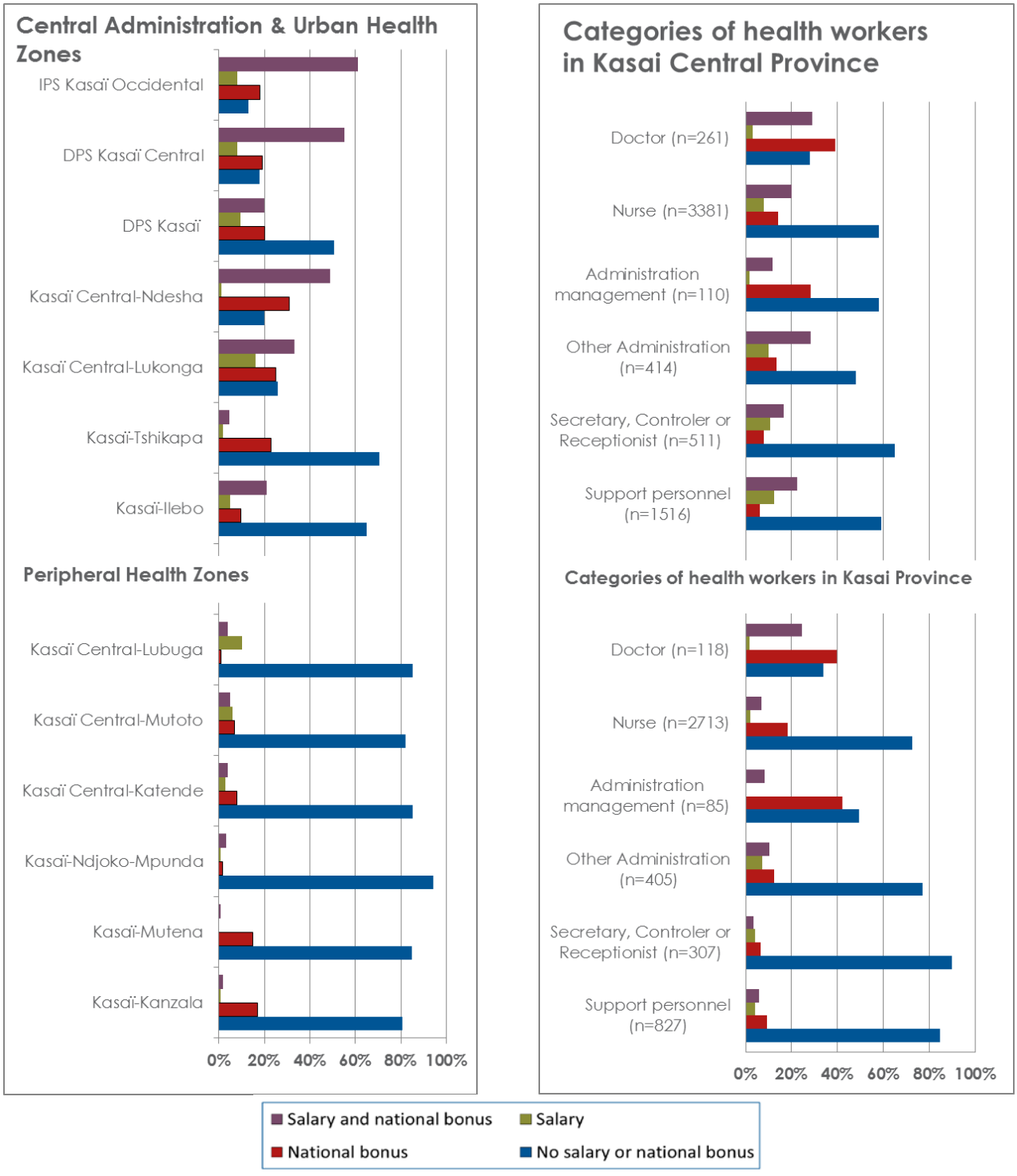


Figure 5. Reported types of compensation among health workers by health zone and by job category in Kasaï Central and Kasaï Provinces



Most health workers reporting government salaries and/or bonuses are located in urban areas, while the majority of health workers in peripheral health zones do not receive any salary or bonus from the state or central government (Figure 5). Disaggregated analyses also revealed that most nurses and administrators

are not compensated by the state, while a majority of doctors received some type of compensation from the central government (Figure 5).

Cost of health workers

Health worker salaries and bonuses are paid according to central and provincial level salary and bonus scales. The project applied the provincial level salary and bonus scales for each job cadre to the number of health workers in the corresponding cadre that reported receiving a salary and/or bonus. Based on iHRIS data collected from health workers in Kasaï Central and Kasaï, we estimate that the monthly cost for all staff who report receiving compensation is US$464,639 in Kasaï Central and US$159,445 in Kasaï (Table 2). Further analysis shows that if all health workers identified during data collection were to receive compensation (salary and bonus) according to their grade and the provincial pay/bonus scale, Kasaï Central province would need to spend an additional US$288,924 on salaries and US$259,692 on bonuses while Kasaï would spend an additional $375,549 on salaries and $182,801 on bonuses. It is important to note that health workers were not asked the amount of salary/bonus but only if they received it or not. There have been cases of salary splitting, where health workers share one salary/bonus between two or more people. In such a case, a health worker would report having received a salary/bonus but it would not be according to the salary scale. Table 2 shows the estimated cost to pay all health workers by group and province, as well as the monthly cost of health workers who report receiving compensation.

Table 2. Current cost of health workers reporting salary or bonus and estimated cost to pay all health workers according to salary and bonus scales.

	Monthly cost of health workers who report receiving a salary and/or a bonus				Simulation - monthly cost to pay all health workers in province according to provincial salary and bonus pay scale			
Kasai	**N**	**Salary ($US)**	**Bonus ($US)**	**Total Salary and Bonus ($US)**	**N**	**Salary ($US)**	**Bonus ($US)**	**Total Salary and Bonus ($US)**
Administration	325	15,514	7,310	22,824	1615	142,072	41,656	183,728
Health professionals	863	25,438	52,790	78,227	2984	265,565	168,156	433,722
Pharmacists, dentists and others	4	178	928	1,107	14	1,264	4,331	5,596
Doctors	77	2,777	54,511	57,287	118	10,555	84,195	94,750
Total Kasai	1269	43,907	115,538	159,445	4731	419,457	298,339	717,795
Kasai Central	N	**Salary ($US)**	**Bonus ($US)**	**Total Salary and Bonus ($US)**	**N**	**Salary ($US)**	**Bonus ($US)**	**Total Salary and Bonus ($US)**
Administration	1023	74,288	27,829	102,118	2441	222,947	74,978	297,925
Health professionals	1695	98,876	122,882	221,759	4004	222,947	275,221	498,169
Pharmacists, dentists and others	6	197	2,512	2,709	7	653	2,821	3,474
Doctors	187	7,794	130,260	138,053	261	23,533	190,155	213,687
Total Kasai Central	2911	181,156	283,484	464,639	6713	470,080	543,175	1,013,255
Total both provinces				**624,084**	**11444**			**1,731,051**

Retirement

The legal retirement age in the DRC is 65 years. Data showed that in Kasaï Province, almost 6% of health workers were 65 or older and should have retired by 2015. Similarly in Kasaï Central Province, almost 10% of health workers had reached the age of 65 or more but were still in the workforce.

Fraudulent records

During verification of employment and education records, data collection teams reported reviewing a significant number of falsified documents. Teams seized many of the fraudulent records and refused registration of "health" personnel. Review of the documents collected by data collection teams highlights the challenge of verifying and checking that employment and education records are genuine. Furthermore, the lack of an official certification process for health education institutions complicates the MOH's ability to verify that health workers have met minimum training requirements and are qualified to provide health care services to the population.

Conclusion and Next Steps

The collection, verification, and registration of health workforce data in iHRIS in two provinces in DRC provided important information about the density, distribution, and compensation of health workers. Kasaï Central and Kasaï provinces have a critical shortage of qualified health workers (7.4 per 10 000 inhabitants) and fall far below the WHO recommended workforce necessary to deliver basic health services. Qualified health workers are distributed inequitably between urban and rural health zones. The majority of health workers are not officially contracted by the state and more than half of all health workers (57% in Kasaï Central and 73% in Kasaï) do not receive either a salary or a bonus from the state. In terms of retirement, almost 8.7% of health workers in both provinces should have already retired in 2015.

The iHRIS pilot in Kasaï and Kasaï Central has clearly been a success because up to date HR data are now available to inform policy makers, but much more remains to be done to strengthen HRH management and information systems. Partners at both the national and provincial levels have voiced their strong support for the system. However, to ensure iHRIS is robust and sustainable to support ongoing evidence-based improvements to the health workforce, the government of DRC and partners should:

- Deploy iHRIS and collect health worker data in the remaining districts/provinces
- Support the MOH and Ministry of Budget to compare the names of those employees verified through the iHRIS processes and health workers on the official payroll to determine if any absentee health workers are still being paid
- Support the MOH to advocate for the mechanization (contracting) of health workers not currently under a government contract
- Support the MOH to issue identification cards
- Support the MOH to use iHRIS data and results for health workforce management, planning, and decision-making
- Work with the provinces to create standard operating procedures for entering new employee data, transfers, retirement, and deaths in order to keep the iHRIS database up-to-date
- Work with the government to explore assisting the MOH to license health training institutions
- Work with professional associations to improve professional guidelines and registration of members.

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