Understanding the Current Situation and Challenges in the Public Private Mix (PPM) of Human Resources for Health (HRH) in Selected Areas in Egypt

by

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Enis Baris

Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in the Duke Global Health Institute in the Graduate School of Duke University

2015
ABSTRACT

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Abstract

Background: Human Resource for Health (HRH) is one of the most important building blocks of the health system. The performance of the health systems is substantially impacted by the performance of health workers. Egypt has a highly fragmented health care system. Health services in Egypt are currently managed, financed, and provided by agencies in both public and private sectors. Egypt’s health system has limited government oversight of the private sector and more open-ended healthcare market, which has contributed to a complexity of Public Private Mix (PPM). Since 1996, Egypt has been undergoing the Health Sector Reform Program (HSRP) with the aim of achieving universal healthcare coverage of the country. This study was conducted to contribute to the evidence in understanding the PPM of HRH in Egypt, towards contributing to the national dialogue to address related issue with its governance and development. Methods: This study uses qualitative method and literature review to approach the research topic. We visited 4 public hospitals and 3 private hospitals in Cairo, Benha and Fayoum in May to July, 2014. We conducted 45 in-depth interviews with health workers and 5 key-informant interviews with health policy experts. Document reviews were conducted from December 2013 to February 2015. Documents relevant to the country context and health profile were retrieved through PubMed and Google Scholar. Government activity and statistics were retrieved through
openly published government report and reports from international organizations. An interview guide was developed and pretested. Interviews were recorded and transcribed. Data analysis began while data collection was still ongoing. Using a grounded theory approach, we reviewed the transcripts of interviews and coded with a table of key words. Codes and transcripts were double-checked for accuracy, based on which relevant themes were decided. We also compared the codes and transcripts among different stakeholders. Results: Egypt has a highly fragmented health care system. Health services in Egypt are currently financed and provided by a mix of agencies in both public and private sectors. The uncontrolled growth of private sector has impacted the performance of health workers. Dual practice, the practice of a health worker simultaneously engaging in both the public and private sector, is a prevailing phenomenon in the health workforce in Egypt. Dissatisfaction with the public salary is considered as the main reason which drives health workers to private sector. While pursuing private practice, most people still hold their position in public sector for a variety of reasons. Perceived as a mechanism to compensate the low salary in public sector, dual practice is accepted in the current Egyptian health system despite well-recognized negative impacts on the quality of care. Conclusions: A vast majority of doctors in Egypt has been involved in dual practice, while the prevalence of dual practice is much lower in nurses than in doctors. Financial concerns drive Egyptian doctors to conduct private practice. Meanwhile, most of them still hold their public
posts, with various reasons including to gain clinical experience, academic titles, professional reputation, etc. Comparing with doctors, smaller proportion of nurses engage in dual practice as nurses tend to have longer shift time, less significant difference between public and private salaries, and more family responsibility. Dual practice helps to compensate the low salary in public sector although it is considered to negatively impact the quality of care in public sector. However, there is lack of rigorous regulations being implemented to govern the dual practice in Egypt. The weakness in health workforce management in public sector, especially in retention and performance evaluation, is interacting with the regulation and impact of dual practice in the country. The international experience indicates that definitive answer to cope with dual practice is not available and there is no uniform recipe to deal with the issue of dual practice. Further research is needed for the design of the approach to break the vicious circle of weak public capacity and unregulated dual practice, and to make use of HRH as a potential component to bridge public and private sector. It is also necessary to quantify and evaluate the impact of dual practice on social welfare from the perspectives of different stakeholders. Additionally, structural interventions are sorely needed in strengthening public sector and integrating private sector into the overall health system reform.
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1. Introduction

1.1 Egypt’s Context

1.1.1 Country Overview

Egypt is one of the low- and middle-income countries in the WHO Eastern Mediterranean Region. It is located in the northeast of the African continent, bordered by the Mediterranean Sea to the north, the Red Sea to the east, Sudan to the south, and Libya to the west. The majority of the country land is covered by desert and scarcely inhabited. Egypt was geographically divided into Upper Egypt and Lower Egypt. Lower Egypt is to the north, where the Nile Delta is formed along the branches of the Nile; Upper Egypt is to the south, where the Nile valley stretches out to Syene ("Political handbook of the world", 2014).

According to the latest World Bank estimation, in 2013, Egypt has a total population (millions) of 82.06 million, with the crude birth rate of 24 per 1000 population and annual population growth of 1.6%; 49.8% of total population is female; 43% of the total is urban population (World Bank, 2015). Islam is the dominant religion in Egypt, with Muslims accounting for more than 80% of the overall population ("Political handbook of the world", 2014).

Since 2011, Egypt has been experiencing political upheaval. In January 2011, the outbreak of the large-scale anti-regime demonstrations led to the resignation of President Mubarak, who had been in power of Egypt since 1981. President Morsi was
elected as President of Egypt in June 2012 and was removed in July, 2013. In June 2014, Abdel Fattah El-Sisi was elected as President of Egypt with a victory of nearly 97% of votes (“Political handbook of the world”, 2014).

1.1.2 Economy

According to the latest World Bank estimation, in 2013, Egypt has Gross Domestic Product (GDP) of $272.0 billion, with the annual growth of 2.1%; the Gross National Income (GNI) per capita (Atlas method) is $3,140. Figure 1 shows the trend of GDP annual growth rate from 2005 to 2013 of Egypt (World Bank, 2015).

![Figure 1: GDP annual growth rate from 2005 to 2013 of Egypt.](image)

Figure 1 indicates the overall economic development trend since 2005 in Egypt. Although between 2005 and 2008, Egypt experienced high GDP growth, the global financial crisis in 2008 had affected Egypt. Moreover, the political events since 2011 have
also adversely affected Egypt’s economy. However, in July, 2014, President Sisi announced a set of reform plans, of which the preliminary effect is showing on the economy of the country.

Egypt is also faced with a big challenge of poverty and unemployment. In 2011, the poverty headcount ratio at national poverty lines (% of population) is 25.2 (World Bank, 2014). Meanwhile, many of the households along the poverty line are actually vulnerable to catastrophe and susceptible to falling below the line. With the Gini-coefficient of 31 in 2010, the inequality issue is shown to be prominent. In the first quarter of 2014, the unemployment rate (of population) is estimated to be 13.4%, which has been increased by nearly 5% since 2011 (CAPMAS, 2014). Moreover, the highest unemployment rate is seen among young people who are between 15 and 29 years old. Geographically, the majority of the poor population in the country is distributed in Upper Egypt, where the issues with health, education and basic infrastructure are also prevalent (CAPMAS, 2014).

### 1.2 Egypt’s Health Profile

#### 1.2.1 Health Status

According to the latest World Health Organization estimation, in 2013, Egypt has the total health expenditure of 4.9% of GDP, with the primary health care centres and units of 0.6 per 10 000 population, and the total life expectancy at birth (years) of 70.4. Table 1 shows selected health indicator of Egypt in 2013, comparing to several regional
countries within similar social-economic level in WHO Eastern Mediterranean Region (WHO, 2013).

Table 1: Selected health indicator of Egypt in 2013, comparing to other countries in the region.

<table>
<thead>
<tr>
<th>Health Indicators</th>
<th>Egypt</th>
<th>Jordan</th>
<th>Iran</th>
<th>Algeria</th>
<th>Lebanon</th>
<th>Libya</th>
<th>Syria</th>
<th>Tunisia</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth (years)</td>
<td>71</td>
<td>74</td>
<td>74</td>
<td>72</td>
<td>80</td>
<td>75</td>
<td>68</td>
<td>76</td>
<td>73.8</td>
</tr>
<tr>
<td>Life expectancy at age 60 (years)</td>
<td>17</td>
<td>19</td>
<td>20</td>
<td>18</td>
<td>22</td>
<td>20</td>
<td>19</td>
<td>21</td>
<td>19.5</td>
</tr>
<tr>
<td>Healthy Life expectancy at birth (years)</td>
<td>61</td>
<td>64</td>
<td>64</td>
<td>62</td>
<td>69</td>
<td>64</td>
<td>59</td>
<td>66</td>
<td>63.6</td>
</tr>
<tr>
<td>Under-five mortality rate (per 1000 live births)</td>
<td>21</td>
<td>19</td>
<td>17</td>
<td>25</td>
<td>9</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>17.0</td>
</tr>
<tr>
<td>Maternal mortality ratio (per 100 000 live births)</td>
<td>45</td>
<td>50</td>
<td>23</td>
<td>89</td>
<td>16</td>
<td>15</td>
<td>49</td>
<td>46</td>
<td>41.6</td>
</tr>
</tbody>
</table>


Table 1 indicates that Egypt shows worse health performance comparing to other regional countries within similar social-economic level. For the livelihood indicators including Life expectancy at birth (years), Life expectancy at age 60 (years) and Healthy Life expectancy at birth (years), Egypt is lower than the average; for the mortality indicators including Under-five mortality rate (per 1000 live births) and Maternal mortality ratio (per 100 000 live births), Egypt is higher than the average.
1.2.2 Health expenditure

Egypt is a low health care spender compared to countries of similar levels of economic development. Table 2 shows the health expenditure indicators of Egypt in 2013 (WHO, 2015).

Table 2: Health expenditure indicators of Egypt in 2013.

<table>
<thead>
<tr>
<th>indicator</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita total expenditure on health</td>
<td>$137</td>
</tr>
<tr>
<td>Per capita government expenditure on health</td>
<td>$55</td>
</tr>
<tr>
<td>Total expenditure on health as % of GDP</td>
<td>4.9</td>
</tr>
<tr>
<td>General government expenditure on health as % of total health expenditure</td>
<td>40.5</td>
</tr>
<tr>
<td>General government expenditure on health as % of total government expenditure</td>
<td>6.9</td>
</tr>
</tbody>
</table>


Figure 2 shows the trend of health expenditure in Egypt from 2005 to 2012, which indicates that Egypt remains a low health care spender (World Bank, 2015).

Figure 2: Total health expenditure as percentage of GDP of Egypt from 2005 to 2012.
1.2.3 Composition of Health Spending

As shown in Figure 3, in 2008/09, most of Egypt’s health spending (72%) came from out-of-pocket (OOP) payments, with approximately 25% from the government and approximately 3% from the private and external sources (Nakhimovsky et al., 2011).

Figure 3: Financing Sources as Percentage of Total Health Expenditure in 2008/09.

Household OOP expenditures account for an increasing share of THE, while the public sector’s share is shrinking. In 1994/95, OOP accounted for 51% of THE and the public sector accounted for 33%, while in 2008/09, OOP’s share increased to 72% and the public sector decreased to 25%. This trend is represented in Figure 4 (Nakhimovsky et al., 2011).
Egypt has a prominently high OOP expenditure proportion within the THE among all the middle-income countries in the Eastern Mediterranean region, while the proportion of public health spending in the total government spending is lower than other middle-income countries in the region. This comparison is represented in Table 3 (Nakhimovsky et al., 2011).

In Figure 5, a breakdown of OOP payments by provider shows that the majority of OOP expenditure is for pharmacies (43%), with 29% for the Offices of Physicians, and 14% for private or NGO clinics and hospitals (Nakhimovsky et al., 2011).
Table 3: Egypt Compared with Other Middle-Income Countries in the Region in 2008/2009.

<table>
<thead>
<tr>
<th>Countries</th>
<th>Percentage of GDP Spent on Health</th>
<th>Government Health Spending as % of THBE</th>
<th>Government Health Spending as % of Total Government Budget</th>
<th>Out-of-Pocket Expenditure as % of THBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>4.1</td>
<td>80.6</td>
<td>9.2</td>
<td>18.3</td>
</tr>
<tr>
<td>Djibouti</td>
<td>7.0</td>
<td>76.9</td>
<td>13.9</td>
<td>22.8</td>
</tr>
<tr>
<td>Egypt</td>
<td>6.2</td>
<td>24.8</td>
<td>4.3</td>
<td>71.8</td>
</tr>
<tr>
<td>Iran</td>
<td>5.5</td>
<td>39.0</td>
<td>8.7</td>
<td>58.9</td>
</tr>
<tr>
<td>Jordan</td>
<td>8.6</td>
<td>60.8</td>
<td>10.2</td>
<td>42.3</td>
</tr>
<tr>
<td>Lebanon</td>
<td>8.1</td>
<td>49.2</td>
<td>12.1</td>
<td>40.5</td>
</tr>
<tr>
<td>Libya</td>
<td>3.9</td>
<td>66.1</td>
<td>5.5</td>
<td>33.9</td>
</tr>
<tr>
<td>Morocco</td>
<td>5.5</td>
<td>34.4</td>
<td>7.0</td>
<td>56.6</td>
</tr>
<tr>
<td>Syria</td>
<td>2.9</td>
<td>31.0</td>
<td>4.6</td>
<td>69.0</td>
</tr>
<tr>
<td>Tunisia</td>
<td>6.2</td>
<td>54.1</td>
<td>10.4</td>
<td>40.0</td>
</tr>
<tr>
<td>Regional Average</td>
<td>5.8</td>
<td>51.7</td>
<td>8.6</td>
<td>45.4</td>
</tr>
</tbody>
</table>


All indicators are from 2009 except for Jordan and Tunisia, which are from 2008.

1.2.4 Health Service Use

Table 4 shows the per capita utilization rate for outpatient visits. It is indicated that the highest per capita utilization rate is for acute illnesses, with the average of 6.16
visits per person per year. Comparing to urban area, rural area has higher outpatient visit rates for acute disease but lower total visits. Rural Lower Egypt is the region with highest outpatient visit rates for acute disease among regions. Population in the highest income quintile also has the most outpatient visits (Rafeh et al., 2011).

Table 4: Annual Per Capita Utilization Rate: Outpatient Visits.

<table>
<thead>
<tr>
<th>Background Characteristic</th>
<th>Acute</th>
<th>Chronic</th>
<th>Dental</th>
<th>Preventive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban/Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>5.83</td>
<td>3.42</td>
<td>0.36</td>
<td>0.38</td>
<td>9.99</td>
</tr>
<tr>
<td>Rural</td>
<td>6.38</td>
<td>2.02</td>
<td>0.28</td>
<td>0.50</td>
<td>9.19</td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Cities</td>
<td>5.80</td>
<td>4.39</td>
<td>0.40</td>
<td>0.31</td>
<td>10.90</td>
</tr>
<tr>
<td>Urban Lower Egypt</td>
<td>6.23</td>
<td>3.14</td>
<td>0.38</td>
<td>0.48</td>
<td>10.23</td>
</tr>
<tr>
<td>Urban Upper Egypt</td>
<td>5.32</td>
<td>2.31</td>
<td>0.28</td>
<td>0.35</td>
<td>8.27</td>
</tr>
<tr>
<td>Rural Lower Egypt</td>
<td>6.60</td>
<td>2.44</td>
<td>0.34</td>
<td>0.54</td>
<td>9.92</td>
</tr>
<tr>
<td>Rural Upper Egypt</td>
<td>6.09</td>
<td>1.44</td>
<td>0.21</td>
<td>0.44</td>
<td>8.17</td>
</tr>
<tr>
<td>Income Quintiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>4.79</td>
<td>1.21</td>
<td>0.17</td>
<td>0.43</td>
<td>6.61</td>
</tr>
<tr>
<td>Second</td>
<td>6.01</td>
<td>1.72</td>
<td>0.24</td>
<td>0.52</td>
<td>8.50</td>
</tr>
<tr>
<td>Third</td>
<td>6.39</td>
<td>2.04</td>
<td>0.29</td>
<td>0.50</td>
<td>9.22</td>
</tr>
<tr>
<td>Fourth</td>
<td>6.92</td>
<td>2.84</td>
<td>0.37</td>
<td>0.46</td>
<td>10.60</td>
</tr>
<tr>
<td>Highest</td>
<td>6.68</td>
<td>5.12</td>
<td>0.50</td>
<td>0.34</td>
<td>12.64</td>
</tr>
<tr>
<td>Total</td>
<td>6.16</td>
<td>2.59</td>
<td>0.32</td>
<td>0.45</td>
<td>9.51</td>
</tr>
</tbody>
</table>


Table 5 shows the annual per capita utilization rate for inpatient visits. The average number of annual inpatient visits is 0.07 visits per capita. The visit rate in urban area is higher than in rural area, and population in the highest income quintile has the highest inpatient visits (Rafeh et al., 2011).
Table 5: Annual Admissions Per Capita: Inpatient Visits.

<table>
<thead>
<tr>
<th>Background Characteristic</th>
<th>Inpatient Visit Utilization Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban/Rural</td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>0.08</td>
</tr>
<tr>
<td>Rural</td>
<td>0.06</td>
</tr>
<tr>
<td>Region</td>
<td></td>
</tr>
<tr>
<td>Major Cities</td>
<td>0.08</td>
</tr>
<tr>
<td>Urban Lower Egypt</td>
<td>0.08</td>
</tr>
<tr>
<td>Urban Upper Egypt</td>
<td>0.08</td>
</tr>
<tr>
<td>Rural Lower Egypt</td>
<td>0.06</td>
</tr>
<tr>
<td>Rural Upper Egypt</td>
<td>0.06</td>
</tr>
<tr>
<td>Income Quintiles</td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>0.05</td>
</tr>
<tr>
<td>Second</td>
<td>0.06</td>
</tr>
<tr>
<td>Third</td>
<td>0.06</td>
</tr>
<tr>
<td>Fourth</td>
<td>0.08</td>
</tr>
<tr>
<td>Highest</td>
<td>0.09</td>
</tr>
<tr>
<td>Total</td>
<td>0.07</td>
</tr>
</tbody>
</table>


1.3 Public Private Mix in Egypt’s health sector

1.3.1 Definition of Public Private Mix (PPM)

In this study, Public Private Mix (PPM) refers to the engagement of health care providers from both public and private sectors in health system functions, including stewardship, financing, resource generation and service delivery (WHO, 2013).

Types of private and public service providers are highly diverse and currently there is no consensus regarding the definition and distinction of public and private sector. In this study, we refer “public sector” to health service providers funded
primarily by the government of Egypt, especially the Ministry of Health and Population (MOHP); we refer “private sector” to all actors outside of government including for-profit, non-profit, formal and non-formal entities, and here the “formal” refers to registered practice with official license.

1.3.2 Overview of Public Private Mix of Health Sector in Egypt

Egypt’s health system is highly complex and fragmented, within which healthcare is funded, managed and provided by both public and private sectors (WHO EMRO, 2011). Within the public side, Egypt’s health system is characteristic of centralized control, while at the same time, the government has limited oversight over the private sector and the healthcare market is largely open-ended (Haley & Beg, 2012). The greater and uncontrolled growth of private sector has become more of government concern.

In terms of public sector health provider, major entities include the Ministry of Health and Population (MOHP), the Health Insurance Organization (HIO), the Teaching Hospitals and Institutes Organization (THIO), the Curative Care Organization (CCO), and other ministries. In the private sector health provider, major entities include nongovernmental organizations (NGOs) and private hospitals and pharmacies. Figure 6 shows the health providers as percentage of THE in Egypt, also illustrating the fragmentation in Egypt’s health care system (Nakhimovsky et al., 2011).
1.4 Egypt’s Human Resources for Health

1.4.1 Definition of Human resources for health (HRH)

Human resources for health (HRH), also known as “health workforce”, is defined as “all people engaged in actions whose primary intent is to enhance health” (WHO, 2006). Health workforce has been identified as one of six building blocks of the WHO Health Systems Framework (WHO, 2007). It is considered to be “at the heart and soul of health systems” (WHO, 2013).

HRH includes health service providers and health management and support workers in health sector and other sectors. Health service providers include professionals (e.g. doctor, nurse), associates (e.g. laboratory technician), and other
community providers (e.g. traditional practitioner); Health management and support workers include professionals (e.g. accountant in a hospital), associates (e.g. administrative professional in a hospital), support staff (e.g. clerical workers, drivers in a hospital), craft and trade workers (e.g. painter in a hospital) (WHO, 2006).

### 1.4.2 Overview of Health Workforce Supply in Egypt

Figure 7 shows the number of physicians and nurses supply in Egypt with the comparison to regional average, indicating that Egypt has significantly larger number of physicians and nurses comparing to regional average (WHO, 2013).

![Bar chart showing health workforce supply in Egypt with regional average comparison.](image)

**Figure 7: Health workforce supply in Egypt, comparing to regional average.**

Although the number of health workers is over the average level, the skill mix is not balanced and not matched to the population health needs. Figure 8 shows the skill mix of human resources for health in Egypt in 2010 (WHO EMRO, 2011).
The skill mix of HRH in Egypt is seriously imbalanced. The excess of physicians in Egypt is striking. In 2014, the number of physicians per a thousand populations was 2.83 (WHO, 2014); in 2010, this number was “about five times the number expected for countries of similar economic status” (WHO EMRO, 2011). At the same time, there is a severe shortage of nurses, and a lack of midwives and paramedical staff.

Moreover, the health workforce is distributed disproportionally over rural/urban areas. Table 6 shows the Egypt’s health care personnel by rural/urban in 2010. It indicates that the health personnel are concentrated disproportionally in urban area comparing with rural area. A gap between supply and demand of HRH has been seen in rural Egypt, where the area with the poorer health status tends to have lower health personnel to population ratios. Moreover, besides the disparity in the number of personnel, health workers who work in rural area tend to be less skilled than in urban areas.
area, which has further limited the access of health care in rural Egypt (WHO EMRO, 2011).

Table 6: Health care personnel by rural/urban in Egypt in 2010.

<table>
<thead>
<tr>
<th>Health Personnel</th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>11670</td>
<td>47969</td>
</tr>
<tr>
<td>Dentists</td>
<td>4067</td>
<td>6347</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>4119</td>
<td>11338</td>
</tr>
<tr>
<td>Nurses</td>
<td>38852</td>
<td>70996</td>
</tr>
<tr>
<td>Paramedical staff *</td>
<td>9859</td>
<td>21012</td>
</tr>
<tr>
<td>Midwives</td>
<td>469</td>
<td>552</td>
</tr>
<tr>
<td>Community Health Workers</td>
<td>7736</td>
<td>1272</td>
</tr>
<tr>
<td>Others* **</td>
<td>4010</td>
<td>15341</td>
</tr>
</tbody>
</table>

Paramedical staff* (lab technician, radiology technician, dental technician, assistant lab, assistant radiology, health inspectors and assistant pharmacist)
Others** (chemist, physiotherapy, nutritionist, medical record, maintenance technician, agricultural technician, assistant administrative, optics technician, anesthesia technician)


Table 7 shows that nearly 40% of the health workforce is employed by the MOHP. However, in fact, a substantial number of them are simultaneously employed by other entities in the public sector, such as the HIO, CCO, THIO, and by the private sector (WHO EMRO, 2011).
Table 7: Staff registered with syndicates in Egypt in 2010.

<table>
<thead>
<tr>
<th></th>
<th>Number of staff registered in MOHP</th>
<th>Total number of staff</th>
<th>(% of MOHP staff in total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>86,810</td>
<td>227822</td>
<td>38.1</td>
</tr>
<tr>
<td>Dentists</td>
<td>13,548</td>
<td>37579</td>
<td>36.1</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>22,329</td>
<td>127264</td>
<td>17.5</td>
</tr>
<tr>
<td>Total nursing</td>
<td>124,058</td>
<td>274691</td>
<td>45.2</td>
</tr>
<tr>
<td>Technicians</td>
<td>32009</td>
<td>36594</td>
<td>87.5</td>
</tr>
<tr>
<td>Total</td>
<td>278754</td>
<td>703950</td>
<td>39.6</td>
</tr>
</tbody>
</table>


1.4.3 Egypt’s Health Sector Reform Program

The governance of health system is challenged by a number of prominent issues with health financing, workforce, information and service delivery, which makes the action of reform imperative. As early as 1996, the Health Sector Reform Program (HSRP) was initiated by the Egyptian government in cooperation with the United States Agency for International Development. The HSRP aims to achieve the universal healthcare coverage with a basic package for primary health care, and also to improve the capacity of public sector through decentralizing health service delivery and administrative authority to lower level, rationalizing public investment and resource allocation, etc. (Gericke, 2005). After its initiation, pilot interventions have been implemented and evaluated, and the effects are in discussion.

In 1997, MOHP proposed six major aspects of HSRP as following (McEuen, 1997):
1). Rationalizing public financing and directing resources from curative care to primary health care (PHC).

2). Designing package of essential health services package, with a focus on maternal and child health and family medicine.

3). Optimizing health workforce recruitment and distribution.

4). Improving health information system and developing evidence-based policy making process.

5). Building up the capacity of MOHP in regulating medical practice.

6). Reforming HIO to a "purely financing organization” and removing other accountability of it.

The primary objectives and features of health sector reform are rephrased later, which are presented in Table 8 and Table 9 (WHO EMRO, 2010).

To integrate and better manage the financing flow in health sector, insurance agencies were designed and established, which include National Health Insurance Fund (NHIF) and its governorate-level divisions, the Family Health Funds (FHF). Using the form of contract, the Family Health Funds (FHF) collects funding from public and private providers and offer benefit package to the needy (World Bank, 2015).
Table 8: Egypt's Health sector reform objectives.

<table>
<thead>
<tr>
<th>Universal coverage with a basic package of primary health care</th>
<th>Develop and implement governorate primary health care insurance systems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Improve quality and efficiency of the governorate primary health care delivery system</td>
</tr>
<tr>
<td>Reform of the Health Insurance Organization (HIO)</td>
<td>Reform public health programmes</td>
</tr>
<tr>
<td></td>
<td>Assure financial solvency and sustainability</td>
</tr>
<tr>
<td></td>
<td>Improve management and contracting abilities</td>
</tr>
<tr>
<td></td>
<td>Begin divestiture of the HIO delivery system</td>
</tr>
</tbody>
</table>


Table 9: Important features of Egypt's health sector reform.

<table>
<thead>
<tr>
<th>Foundation of an efficient quality health care delivery infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention and promotion-oriented</td>
</tr>
<tr>
<td>Adopting the “family doctor” concept and encouraging his/her role in serving people and communities</td>
</tr>
<tr>
<td>Expanding health insurance to cover new population groups, especially vulnerable groups, the poor and underserved rural areas</td>
</tr>
<tr>
<td>Cooperation and integration with different ministries, agencies and organizations to face the challenges related to health and the most important environmental health issues</td>
</tr>
<tr>
<td>Paying more attention to and investing in human resources development through increasing the number of doctors and nurses trained in Egyptian institutes or sent abroad to study or to be trained</td>
</tr>
<tr>
<td>Encouraging the Egyptian and Arab pharmaceutical industry, and assuring availability at affordable prices</td>
</tr>
</tbody>
</table>


Pilot projects of Health Sector Reform Program (HSRP) were conducted in 1999 in the three governorates of Alexandria, Menoufia and Sohag. Family Health Model was
implemented with the aim of providing primary health care to family members across different ages. Family Health Units (FHUs) were established as the basic primary care service provider and human resources were trained. Till 2008, a total of 643 FHUs have been setup and effectively benefited the primary care of the country. MOHP has been scaling up FHUs and aimed to expand to all 26 governorates in Egypt (Haley & Beg, 2012).

The HSRP was initiated under the government of the President Hosni Mubarak. Concerns have been raised on the negative impact of recent political instability on the implementation of HSRP.

1.5 Aim and Objectives

The aim of this study is to contribute to the evidence in understanding the public private mix of human resources for health in Egypt health system, towards contributing to the national dialogue to address related issue with its governance and development.

The specific objectives of this study include: 1). To understand the institutional framework of public sector and private sector in Egypt’s health system; 2). To understand the situation and regulation of dual practice among health workers in Egypt; 3). To comprehend the reasons and impacts of dual practice in Egypt; 4). To provide suggestions for further research on dual practice in Egypt.
2. Methods

2.1 Study Design

This study uses qualitative method and literature review to approach the current situation and challenges of public private mix (PPM) of human resources for health (HRH) in Egypt. We visited 4 public hospitals and 3 private hospitals in Cairo, Benha and Fayoum in May to July, 2014. With the collaboration of WHO country office of Egypt, 45 in-depth interviews, 5 key-informant interviews were conducted. Document reviews were conducted from December 2013 to February 2015. Documents relevant to the country context and health profile of Egypt were retrieved through PubMed and Google Scholar. Government activity and personnel statistics were retrieved through openly published government report. We had to rely on interviews to get regulatory and salary information, as related data were considered as sensitive and could hardly be reached. A local research assistant from the American University in Cairo was chosen and trained to assist the research process, including document translation, interview and discussion facilitating.

2.2 Setting

This study was conducted in Cairo, Benha and Fayoum. The choice of locations was designed for a combination of capital city, the Upper Egypt and the Lower Egypt. The terminology “Upper” and “Lower” derives from the flow of the Nile. To the north
was Lower Egypt where the Nile stretched out with its several branches to form the Nile Delta. To the south was Upper Egypt, stretching to Syene.

Cairo is the capital of Egypt and the largest city in the Middle East and Africa, with the highest accumulation of population of around 2 million people, 1/5 of the total population of Egypt. Healthcare in the city of Cairo is considered the best in Egypt. It is the home to both well-developed public and private health sector services. Banha is the capital of governorate of Kaliobeya, located in the Nile Delta in the Lower Egypt, north of Cairo. It is populated, where Banha University and a number of central hospitals are located. Fayoum is the capital of Fayoum governorate, which is in Upper Egypt. It is 100 kilometers from Cairo, with one of the highest poverty and also highest density of population in Egypt.

In each location, we visited a public hospital and a private hospital. The chosen of the sites were decided by the Ministry of Health and Population, based on the willingness and representativity of the facility. We also visited Kasr Alainy Hospital for a special case study, as this is the oldest hospital in Egypt 1827, with a nationwide reputation of top-tier medical professionals, comprehensive specialties and large number of patients. It is a university hospital and mainly funded by Ministry of Higher Education. Table 10 shows the research settings.
2.3 Participants

We conducted in-depth interviews with facility directors, administrative and clinical staff, house officers, medical students in the facility. The key contacts were connected through the Ministry of Health and Population (purposeful sampling) and snowball sampling was used to reach other participants. We also conducted semi-structured interviews to key informants including technical experts on health policy and medical education, through the connection from WHO country office in Egypt. Table 11 and Table 12 show the research participants.

Table 10: Research Setting.

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Location</th>
<th>Type</th>
<th>Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cairo</td>
<td>Public (Teaching) Hospital</td>
<td>Matarya Hospital</td>
</tr>
<tr>
<td>2</td>
<td>Cairo</td>
<td>Private Hospital</td>
<td>Ganzouri Specialized Hospital</td>
</tr>
<tr>
<td>3</td>
<td>Fayoum</td>
<td>Public (General) Hospital</td>
<td>Fayoum General Hospital</td>
</tr>
<tr>
<td>4</td>
<td>Fayoum</td>
<td>Private Hospital</td>
<td>Fayoum Zahra Hospital</td>
</tr>
<tr>
<td>5</td>
<td>Banha</td>
<td>Public (General) Hospital</td>
<td>Nasser General Hospital</td>
</tr>
<tr>
<td>6</td>
<td>Banha</td>
<td>Private Hospital</td>
<td>Elkwuity Hospital</td>
</tr>
<tr>
<td>7</td>
<td>Cairo</td>
<td>Public (University) Hospital</td>
<td>Kasr Alainy Hospital</td>
</tr>
</tbody>
</table>

Table 11: Key Informant Interview Participants.

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Expertise</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Region Advisor in WHO EMRO</td>
<td>Health Policy Planning</td>
<td>English</td>
</tr>
<tr>
<td>2</td>
<td>Region Advisor in WHO EMRO</td>
<td>Medical Education</td>
<td>English</td>
</tr>
<tr>
<td>3</td>
<td>Professor in Ain Shames University</td>
<td>Pediatrics, medical teaching</td>
<td>English</td>
</tr>
<tr>
<td>4</td>
<td>Technical Officer at Ministry of Health</td>
<td>Health Human Resource</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Development</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Health Specialist of the World Bank office in Cairo</td>
<td>Pharmaco-Economics</td>
<td>English</td>
</tr>
</tbody>
</table>
### Table 1: In-depth Interview Participants.

<table>
<thead>
<tr>
<th>Site</th>
<th>Participants</th>
<th>Number</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manager</td>
<td>1</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Doctor</td>
<td>3</td>
<td>English-Arabic</td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
<td>3</td>
<td>Arabic</td>
</tr>
<tr>
<td></td>
<td>Administrative staff</td>
<td>1</td>
<td>Arabic</td>
</tr>
<tr>
<td>2</td>
<td>Manager</td>
<td>1</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Doctor</td>
<td>1</td>
<td>English-Arabic</td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
<td>3</td>
<td>Arabic</td>
</tr>
<tr>
<td></td>
<td>Administrative staff</td>
<td>1</td>
<td>English</td>
</tr>
<tr>
<td>3</td>
<td>Manager</td>
<td>1</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Doctor</td>
<td>3</td>
<td>English-Arabic</td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
<td>3</td>
<td>Arabic</td>
</tr>
<tr>
<td></td>
<td>Administrative staff</td>
<td>1</td>
<td>Arabic</td>
</tr>
<tr>
<td>4</td>
<td>Manager</td>
<td>1</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Doctor</td>
<td>2</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
<td>2</td>
<td>Arabic</td>
</tr>
<tr>
<td></td>
<td>Administrative staff</td>
<td>1</td>
<td>Arabic</td>
</tr>
<tr>
<td>5</td>
<td>Manager</td>
<td>1</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Doctor</td>
<td>2</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
<td>2</td>
<td>Arabic</td>
</tr>
<tr>
<td></td>
<td>Administrative staff</td>
<td>2</td>
<td>Arabic</td>
</tr>
<tr>
<td>6</td>
<td>Manager</td>
<td>1</td>
<td>Arabic</td>
</tr>
<tr>
<td></td>
<td>Doctor</td>
<td>1</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
<td>2</td>
<td>Arabic</td>
</tr>
<tr>
<td></td>
<td>Administrative staff</td>
<td>1</td>
<td>Arabic</td>
</tr>
<tr>
<td>7</td>
<td>Medical students</td>
<td>3</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Health officers</td>
<td>2</td>
<td>English</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>45</strong></td>
<td></td>
</tr>
</tbody>
</table>

### 2.4 Data Collection

All Documents have been reviewed from several sources including: journal literature, collected via PubMed and Google Scholar; local articles written in English or Arabic, including those unpublished; Egypt government document; health reports from World Health Organization, the World Bank, USAID and other international organizations. Local articles and government reports are collected with the help from
WHO Egypt Office and Egypt Ministry of Health and Population. The local research assistant assisted the document translation. As the research topic has been rarely explored, we try to include all the documents we have access to. However, when data from the source of local agencies is inconsistent with those from international agencies, we prioritize the international source as the deficiencies with Egypt’s health information system have been widely argued.

The in-depth interviews were taken place in a quiet mutually consented location, mostly offices. Interviews were conducted in English or Arabic. For participants who had difficulty with English, Arabic was used with the help of research assistant. Interviews lasted for about 30 minutes and were audio-recorded using two digital voice recorders. Verbal informed consents were obtained from all participants prior to the interviews and participants were not compensated. Research ethical review has been approved by the Duke University Institutional Review Board [Protocol #C0269; approved 6 May 2014].

An interview guide was developed and used based on consultation with experts, including Duke faculty, WHO Egypt officers and local research coordinators. The instruments were pretested to a convenient sample of health workers in Kasr Alainy Hospital. Pretesting interviews were held to find out whether the interview guide can function well. Respondents’ thoughts on the interview process were also asked. The guide includes discussion topics and specific probes. Topics of the interviews included:
1. Current situation of participants’ working condition in the public/private settings they are working, specifically include: 1). Workforce entry, i.e., training, accreditation, recruitment and retention; 2). Workforce performance, i.e., availability, competence, responsiveness, productivity; 3). Workforce exit, i.e., attrition and retirement; 4). Job satisfaction, motivation and professional ethic; 5). Delivery and quality of services.

2. Availability and effectiveness of regulatory and support system for participants’ work in the public/private setting they are working, specifically include: 1). Rules and regulations; 2). Supervision and evaluation; 3). Remuneration and payment; 4). Information and communication; 5). Infrastructure and supplies.

3. Need and expectations of the participants for the governance of their work within their specific working context.

Semi-structured interviews to key informants were taken place in a quiet mutually consented location, mostly offices. Interviews were conducted in English. Topics included the current challenges in PPM of HRH governance in Egypt, and reasons behind those challenges and strategy of solutions.

2.5 Data Analysis

Using a grounded theory approach (Charmaz, 2006), we reviewed the transcripts of interviews. Data analysis began while data collection was still ongoing. To assist with
interpretation of results, we presented the findings to WHO Egypt office before leaving the field.

Before fieldwork, background data on Egypt country context, health sector structure along with corresponding regional situation have been reviewed through database search; at field, national government reports have been reached and reviewed in terms of health workforce; after field, document review has been continuously conducted for data related to private sector regulation and HRH governance.

All interviews were transcribed within 48 hours of completion. We transcribed audio material into a computer file (Word). The transcripts were coded with a table of key words. Codes and transcripts were double-checked for accuracy. Relevant themes were decided based on the transcripts. We also compared the codes and transcripts among different stakeholders.


26
2.6 **Study strengths and limitations**

2.6.1 Study Strengths

In addition to understanding the current situation of PPM of HRH in Egypt, the qualitative approach used in this study allowed us to explore the dynamic of the reasons and impact of dual practice in Egypt’s context, which helps to analyze the challenges in the governance of PPM of HRH in Egypt’s health system.

This research has taken great efforts to depict the comprehensive picture of Egypt’s health context and to analyze dual practice within the context. Through careful selection of research sites in study design, the combinations of urban and rural, public and private have been taken into account. Different types of health workers (doctors and nurses) as well as other stakeholders (administrative staff and health policy experts) have been included and their perspectives have been collected.

2.6.2 Study Limitations

Several limitations of this study should be noted. Firstly, the recruitment of participants is mainly conducted by cooperators from Egypt’s government or facility director through purposeful snowball sampling, which can be beneficiary to gaining high response rate. However, the opinions of participants can be biased and influenced by the authority of the recruiter, which can be a threat to internal validity of this study. Secondly, as the sample of this study will derive from selected regions and setting, it may not necessarily represent the general HRH of Egypt and result in unsatisfying
transferability. Thirdly, the private sector comprises heterogeneous mix of agencies with widely varying sponsorships and value orientation. With little systematically gathered information, many of the Private Sector Providers (PSPs) are less visible, less identifiable and hard to reach. Due to limited research resource and time, we have to take into account the feasibility in designing and choosing our research targets, which will compromise some segments in unreachable private sector. Fourthly, limited by time and resource, for healthcare providers, we only focused on doctors and nurses, without looking at any other type of health workers, such as midwives. Additionally, we have not covered healthcare users in our study design. Fifthly, besides the Ministry of Health and Population, other public entities such as Ministry of Defense are also providing healthcare service, which constitute an unignorably proportion in the overall healthcare infrastructure. However, there is hardly any way for our study to approach this area due to political and administrative concerns.
3. Results

3.1 Egypt’s Institutional framework of health sector: Public Private Mix (PPM)

3.1.1 Institution Landscape

Egypt’s health system is highly complex and fragmented, within which healthcare is funded, managed and provided by both public and private sectors (WHO EMRO, 2011). In terms of the health service providers in public sector, major entities include the Ministry of Health and Population (MOHP), the Health Insurance Organization (HIO), the Teaching Hospitals and Institutes Organization (THIO), the Curative Care Organization (CCO), and other ministries. In terms of the health service providers in private sector, major entities include nongovernmental organizations (NGOs) and private hospitals and pharmacies (Nakhimovsky et al., 2011).

3.1.2 Public Sector Providers

In Egypt’s health sector, public providers include the Ministry of Health and Population (MOHP), the Health Insurance Organization (HIO), the Teaching Hospitals and Institutes Organization (THIO), the Curative Care Organization (CCO), and a number of other ministries. In addition, a number of other ministries also run facilities and provide health services, such as the Ministry of Defense, Ministry of Interior, Ministry of Transport, etc., which have constituted another part of public sector providers. Figure 9 shows public facilities expenditure by financing agent in Egypt in 2008/2009 (Nakhimovsky et al., 2011).
Figure 9: Public Facilities Expenditure by Financing Agent.
Ministry of Health and Population (MOHP): Under the umbrella of the MOHP, there is a network of facilities including 60 general hospitals, 135 specialty hospitals, 214 district hospitals, and 4,839 primary health care centers. The service provided in those facilities range from preventative and curative care services at the primary, secondary, and tertiary levels. In addition to providing health service, MOHP also takes the role of regulating medical practice and health policy planning. The health service MOHP provides is highly subsidized. MOHP is funded mainly by the government, OOP and external donors.

Health Insurance Organization (HIO): The HIO is the primary insurance provider in Egypt with 22 regional branches. Under the supervision of MOHP, HIO also takes the role of providing health service, with a network of 37 hospitals, 5,027 outpatient clinics, and 8,162 school clinics. The HIO is funded through premium and copayment collection from households, with the occasional funding from the Ministry of Finance to cover the operating deficits. In 2008/2009, HIO reported that 57 percent of the Egyptian population was covered by the health insurance it provided.

Teaching Hospitals and Institutes Organization (THIO) and Curative Care Organization (CCO): THIO and CCO also act as public sector providers in Egypt. THIO has a network of 11 general teaching hospitals and 20 research institutes, providing health services ranging from primary, secondary, and tertiary level, with a large amount of the service provided free of charge. THIO is funded mainly by the government, the
donors and OOP. CCO runs 11 urban hospitals and it is funded through HIO and MOHP contracts, private companies and OOP.

University Hospitals and other ministries: The University Hospitals are under the supervision of the Ministry of Higher Education (MOHE). With a network of 74 hospitals, university hospitals function as the major teaching and research institutions and also providing primary, secondary, and tertiary level services. The University Hospitals are funded mainly by the government, including MOHE and MOHP.

3.1.3 Private Sector Providers

In the private sector, some companies and professional syndicates provide private insurance, and major private health service providers include nongovernmental organizations (NGOs) and private hospitals and pharmacies (Nakhimovsky et al., 2011).

Private insurance and occupational syndicates: Besides the HIO, private companies also offer health insurance on a smaller scale to individuals or contract with employers to offer benefit package to their employees (e.g. Egypt Air, Arab Steel). In addition, some professional syndicates contract with private providers to provide coverage for healthcare to the employees and their families.

Nongovernmental organizations and private pharmacies and hospitals: The health service providers in the private sector are diverse and fragmented, including for-profit, non-profit, formal and non-formal entities. Among them, for-profit entities include private hospitals and pharmacies, and non-profit entities include NGOs,
mosques, and church clinics. As shown in Figure 10 and Figure 11, the health service providers in the private sector are mostly funded through OOP (Nakhimovsky et al., 2011). The private market of Egypt maintained a fast growth rate in recent years, however, till now there is little organized financing for the private sector (Gericke, 2005).

**Figure 10: Private Provider Breakdown in Egypt in 2008/2009.**

**Figure 11: Private Provider Breakdown by Financing Agent in Egypt in 2008/2009.**
### 3.1.4 Healthcare Service Use by the Type of Provider

Table 13 shows the outpatient service use by the type of facilities. The private sector (including private clinics, pharmacies and other private) is the primary provider of outpatient services, accounting for 77 percent of all visits. Private clinic is the biggest private providers, accounting for 44 percent (Rafeh et al., 2011).

**Table 13: Percent of Visits By Facility: All Outpatient Visits.**

<table>
<thead>
<tr>
<th>Percent of Outpatient Visits</th>
<th>MOHP Outpatient Facility</th>
<th>MOHP Hospital</th>
<th>HIO Facility</th>
<th>Other Gov.</th>
<th>Pharmacy</th>
<th>Private Clinic</th>
<th>Other Private</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>6</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>29</td>
<td>44</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>


Table 14 shows inpatient service use by the type of facilities. We can see both the public sector and the private sector are major providers for inpatient health service. While population in the lowest income percentile constitute the largest population for public sector service use while population in the highest income percentile constitute the largest population for private sector service use (Rafeh et al., 2011).
Table 14: Percent of Visits By Hospital Type: Inpatient Visits.

<table>
<thead>
<tr>
<th>Background Characteristic</th>
<th>Percent of Inpatient Care Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MOHP Hospital</td>
</tr>
<tr>
<td>Income Quintiles</td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>51</td>
</tr>
<tr>
<td>Second</td>
<td>45</td>
</tr>
<tr>
<td>Third</td>
<td>41</td>
</tr>
<tr>
<td>Fourth</td>
<td>36</td>
</tr>
<tr>
<td>Highest</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
</tr>
</tbody>
</table>


Compared with public healthcare service, private healthcare is generally considered to be more personalized and attentive, and private facilities are considered to be better equipped (Basu et al., 2012). Figure 12 shows the choice of provider for outpatient care by insurance status. We can see that among those who are insured, most of them still choose private outpatient care (41.9% for private clinic, 25.2% for pharmacies), while only 8.1% choose HIO facilities. However, the insurance status has more impact on the choice for inpatient care. Figure 13 shows that, among those who are insured, 21.2% choose HIO facilities, while only 0.5% of the uninsured make the choice of HIO facilities. Whereas the largest proportion of the insured still choose private service for inpatient care. Overall, the data indicates that the private care is the preferred choice for patients regardless of the insurance status (Nakhimovsky et al., 2011).
3.2 Public Private Mix (PPM) of Human Resources for Health (HRH) on Individual Level in Egypt: Dual Practice

3.2.1 Definition of Dual Practice

In this study, “dual practice” refers to the practice of a health worker simultaneously engaged in both the public and private sector. Specifically, dual practice
means that, in addition to their work in public facility, some health workers run their own private practice, or work for one or multiple private facilities.

### 3.2.2 Current Situation of Dual Practice

Of the 12 doctors interviewed in our study, 100% are conducting dual practice. Estimated by key informant in our study, the prevalence of dual practice in Egyptian doctors is above 90 percent. As a public hospital director said in our interview, “all the doctors, they work here (public) and they have private”

Of the 15 nurses interviewed in our study, 7 (46.7%) are conducting dual practice, among those who are dual practicing, none are married. This indicates that the prevalence of dual practice in doctors is different from nurses.

In Egypt, health professionals are permitted to work simultaneously for the government and in the private sector, i.e., conduct dual practice, implicitly or explicitly. According to a staff from MOHP interviewed, “we don’t have any regulation specifically regarding dual practice”.

In Egypt, medical students graduate after 6 years of college as Bachelors of Medicine and Surgery. After that, they must complete one intern year in a public hospital before receiving full registration. According to our interview participants, many of the medical students are recruited as professionals directly in public hospital after their internship. However, many public hospitals have neither capacity nor attractiveness to retain or motivate human resources. Thus, a large number of employees
choose to “leave without pay” in the public hospital, which means they are still counted as employees while they are actually not attending work in that hospital.

The working time of public and private facilities is arranged based on the silent acceptance of dual practice among stakeholders. The normal working hour in public sector is from 8am to 2pm, which leaves the afternoon time for health workers to conduct private practice.

“It is human right to live a nice life, you can work in anyplace, this is your job, 8-2pm, after 2pm, you can go anywhere. So why not, because you can be pleased, you can give; if you are upset, you will make mistakes.” [a public hospital director]

The referral system has also evolved into the acceptance of dual practice. There is designate referral system in public sector, but patients can choose to be referred to certain private hospital; patients in private hospital can also be referred to the public hospital through the personal relationship of doctors working in both places.

Among the 45 participants interviewed, 11 of total (24.4%) consider it necessary to regulate dual practice. However, among those, none have shown confidence in the prospect of effective enforcement even the regulation becomes available. Overall, the participants feel used to the paradigm of dual practicing and no strong desire to change has been expressed, as a private hospital director said, “doctors sought for their own system working in both public and private”. Some hospital directors even show welcome for dual practice, as a public hospital director said in the interview, “I will help
you find a job in private job, if you are satisfied, you will happy to work and do your job. I am open-minded.”

3.2.3 Reasons for Dual Practice

Dissatisfaction with the salaries of public facilities is widely considered as the main reason for dual practice. The public income can hardly support a bread earner, while private sector offers far more attractive income. According to a surgeon interviewed by us, "If the income in general hospital is X, educational hospital is 5X, HIO 6/7X, in private hospital, 15X". At the meantime, the peer pressure of comparing income also contributes to the epidemic of dual practice, as a doctor talked in the interview, "you earn 5X, your colleague earns 20X, you have to have multiple jobs to make more money."

While pursuing private practice, most people still hold their position in public sector. The reasons are various.

Firstly, public work is where health workers gain most experience and practice. Two major factors contribute to the abundancy of training opportunity in public hospital: one is the high flow of patients; the other is the lacking of regulation of medical conduct. According to a hospital director interviewed, the flow of patients in public hospital is extremely high, “here (general hospital), one shift (8am-2pm) is more than 60 patients”. At the meantime, speaking radically, the weakness of regulation and the limitation on capacity have resulted in medical misconduct largely tolerant in some public hospitals.
In contrast, in the private hospital, patients tend to have higher expectation to prognosis and low tolerance to medical negligence. According to a surgeon interviewed, "public hospital is the only place that can give us chance for training. In private hospital, the patients will not allow you to train, you cannot make mistake."

Secondly, public work is where doctors gain academic and professional titles and reputation. As a doctor said, "doctors become famous from public hospital." Moreover, many health workers consider public work as their “basic work”, which is “stable and cannot be fired” and provides “benefit package of insurance and pension”.

Besides, many public hospitals do not have the capacity to regulate working hours, so health workers can usually work less and more flexible hours. Thus some health workers, especially some females who take major family responsibility, may prefer public work to private work, as a nurse said in the interview, "I need time for my children”.

The emotional attachment and sense of loyalty play a role in Egyptians’ personal character and their attitude to public work regardless of the low payment and unsatisfying working condition. Several doctors working in public hospital told in the interviews, "there are things more than money", "we love this hospital and we want to help, this is where we get trained and become doctors."

The prevalence of dual practice in nurses is lower than in doctors. Nurses are less pertinent to conducting dual practice because of several reasons. Firstly, comparing
with doctors, nurses need to stick to their work for longer and more fixed time. As a head nurse said in our interview, “doctors are working in many places, as they are not required to stay there all day, but nurses are. If a nurse work in both public and private, that means they will be fully committed to work.” Secondly, the difference of salary between public and private is less significant. A nurse said that, “I earn X in public hospital, and earn 3X in private.” Additionally, for most female nurses, the choice of work will be largely influenced by marriage and responsibility for family. Some nurses will even prefer to work in public hospital to private hospital, “as the time is flexible and they can work in the morning” [a nurse working exclusively in public hospital].

### 3.2.4 Impact of Dual Practice

It is perceived that dual practice has both positive and negative impacts on the health system of Egypt.

In terms of positive impacts, the existence of dual practice helps retain skilled physicians in low-paid public positions. In Egypt, public facilities provide healthcare service almost free of charge, while at the same time, they offer extremely low payment (barely enough to make a living) to health workers; meanwhile, private facilities provide healthcare service with high charge but at the same time high payment for health workers. Within dual practice, most health workers rely on private sector for their income, while maintaining their service in public sector; on the user end, the poor still have the access to nearly free service while those who can afford are able to choose
private healthcare service. If dual practice is prohibited, it can be hard to retain health workers in public sector.

There are several negative impacts of dual practice, including: 1). public-to-private brain drain; 2). predatory behavior; 3). impact on work hours and ethos; 4). interaction with other HRH challenges in Egypt.

Public-to-private brain drain

As most health workers depend on private work for their major source of income, it is common that they prioritize their private work to public work. The normal working hour in public sector is from 8am to 2pm, which leaves the afternoon time for health workers to conduct private practice. Moreover, in public facilities, even during the limited working hours, the phenomenon of absenteeism is ubiquitous among health workers. Some doctors work only certain days during the week in public hospital, in other days, they work in private. According to a general hospital manager, "they (health workers) come later and leave early. I really suffer. Now it is 11 am, if I ask for an orthopedics specialist, they will tell me, he is not present. They came for 5 minutes and went."

Predatory behavior

Dual practice may lead to predatory behavior, i.e., behavior in which self-gain is pursued to the detriment of the interests of facilities and patients, such as, health workers may directly refer public facility patients to their private practice. According to
a surgeon, “many just use their personal relationship to refer patients from public hospital to their own private clinic.”

*Impact on work hours and ethos*

By holding multiple positions under dual practice, health workers frequently need to work for more than 8 hours/day. Extra working hours cause fatigue of health workers. A physician said in interview, "After the job in public, I needs to do the private job till midnight, I should do this for better salary. I feel very tired." The working ethos in public sector is significantly different from that in private sector. In public sector, health workers tend to be less patient or gentle to patients. These differences have been reported to be caused mainly by external factors including workload, working environment and patients’ attitude, other than internal factors including negligence or irresponsibility.

At the meantime, however, the weakness of regulation and the limitation on capacity have resulted in medical misconduct largely tolerant in some public hospitals. In contrast, in the private hospital, patients tend to have higher expectation to prognosis and low tolerance to medical negligence. According to a surgeon interviewed, "public hospital is the only place that can give us chance for training. In private hospital, the patients will not allow you to train, you cannot make mistake."

Monetary incentive and punishment is used as the lever for managing in private sector. With profit-driven principle and over emphasis on the satisfaction of patients,
healthcare service in private sector can sometimes challenge the working ethics of the health workers. A private hospital director said he would "deduct the salary or fire them" if a health worker makes mistake. A nurse working in private hospital told, "we have to show good attitude to please patients." Moreover, to maximum the profit, the private facility sometimes can pay overly attention to the visual appears other than the actual quality. According to a doctor working in private hospital, "The private hospital looks beautiful but the device is very cheap. The quality of this devise will influence the quality of medicine but will not influence what patients see. Patients just see very good room, air conditioner, but actually the device is poor. That is why, in some cases, we (doctor) suggest patients to go to governmental hospital than private hospital."

Adjusting themselves to the differences of working ethos in different posts can make health workers feel uneasy, as a doctor said, "The different working mood in public and private make me (nurse) feel imbalanced."

*Interaction with other HRH challenges in Egypt*

The existence and prevalence of dual practice are related to the weakness of public sector regulation and capacity. In public sector, there is lack of overall management or performance evaluation mechanism, especially concrete incentive or punishment scheme. As a doctor said in the interview, “In general hospital, there is no difference between hard worker and who does not work”, "The salary is not dependent on performance, they use a salary from the government rules." According to reviewed
literature (Ferrinho et al., 2004), health workers in public sector are labelled as “unproductive”, “poorly motivated”, and “inefficient”. Additionally, some public hospitals are suffering from lack of support, regarding maintenance, security, and funding. As a nurse talked, “in public hospital, if something is broken, we will wait for one week/month for it to be fixed, and this will make work difficult.” Reporting and documenting in public sector are formality and inefficient. The policy maker is not responsive to the requests on operational issues from hospitals. This situation has influenced the quality of service and the working satisfaction of health workers.

On the other side, dual practice contributes to the difficulty in public sector strengthening. As a doctor told, ”what a doctor gets for an operation outside, he gets one month here (public hospital). So he doesn’t care here and he doesn’t care punishment. Take it all, I will get it in one case outside (private hospital).”

Moreover, the prevailing shortage of nursing staff is interacting with the impact of dual practice. On one hand, the shortage has made managers more conservative in firing health workers, as a head nurse said, “if I have enough staff, I will not let people work double shift (dual practice). But what can I do, nothing I can, because of the shortage.” On the other hand, dual practice has intensified the shortage of nurses as nurses need to stay on a shift for fixed time while doctors have more flexibility to conduct clinical visits in different facilities.
From our interviews, we found that, there is a shortage of nursing staff in most private and public hospitals, which is caused by several factors including: 1) the lack of production of nurses; 2) most nurses are female and their working productivity will be severely influenced by marriage and family responsibilities; 3) the significant income difference drives many nurses emigrate abroad to gulf countries to work.

3.3 Other findings

Patients’ attitude is one of the major complaints from health workers in public hospital. The security condition of public hospital is challenged by the revolution, which has influenced the working attitudes of health workers. Following quotes are from public hospital health workers. A public hospital director told us, "(patients’ attitudes) become much worse after the revolution, the reception department has been destroyed many times. Two nights ago, three people carrying weapons here, shooting firearms in the hospital. All doctors and nurses were feeling unsafe."

In both sectors, there is lack of functional Human Resource management entity or system. In most public hospitals, there will be human resource department, but their work is actually regarding operational issues rather than HR. The management scheme is to certain extent centralized to the hospital manager/director, with some extent of authority left for the head of department. In general hospitals, the management is further centralized to the MOHP. Additionally, emigration to gulf countries, especially
KSA, is a dominant phenomenon in health workers, driven by significant difference in income.

In our interviews, many health workers considered it to be "easy to find many places to work", "as long as you want to work for that many hours", which is out of our expectation due to the reported high unemployment rate (CAPMAS, 2014). Besides the possible embarrassment in front of the interviewer, there could be two main possible explanations for this "perceived" sufficiency of job positions: 1) the large amount of workforce emigrating to the gulf countries may ease the pressure of labor force within Egypt; 2) the booming of private sector has offered a variety of positions, which could compensate excess of the workforce.
4. Discussion

Dual practice not only concerns Egypt, but also many other countries around the world. Within different contexts, the prevalence and impact of dual practice vary, and so do the availability and effectiveness of relevant regulation. In Egypt, the governance of dual practice is very challenging due to several problems with its current health system.

4.1 International Perspective on Dual Practice

Outside Egypt, dual practice is a prevailing phenomenon and a regulatory challenge in many other countries around the world. International experience indicates that, the policy option is largely context-based and there is no uniform recipe to deal with dual practice. Table 15 summarizes some of the policy options and country examples (Araújo et al., 2014).

According to relevant studies, the prevalence of dual practice is 50% in Chad, 47% in Jamaica, 42% in Sri Lanka, 41% in Zimbabwe, 29% in Côte d’Ivoire, 21% in Mozambique and 80% in Bangladesh (Gupta & Dal Poz 2009; Gruen et al., 2002). In Thailand, it was estimated 69% of public sector physicians had private practice (Wibulpolprasert et al., 2003). In the UK 63% of public hospital consultants and specialists maintain a private practice alongside their public job (European Observatory on Health Systems Policy, 2004). In Spain, 20% of public sector physicians have a second job (Bentes et al., 2004).
<table>
<thead>
<tr>
<th>Policy</th>
<th>Country</th>
<th>Rationale</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete ban</td>
<td>Canada, Greece (1983-2002), Portugal (before 1993), some states in India, Turkey</td>
<td>Avoids adverse effects of dual practice</td>
<td>Difficult to enforce; Increase in informal payments to health workers in public hospitals; Brain drain of qualified/senior physicians to the private sector; Extra cost to monitor activities; Increase in waiting time for treatment</td>
</tr>
<tr>
<td>Licensure restrictions</td>
<td>Kenya, some states in India, Indonesia</td>
<td></td>
<td>Difficult to monitor; Violation of policy</td>
</tr>
<tr>
<td>Restrictions on physicians’ earnings</td>
<td>France, United Kingdom</td>
<td>Reduces profit maximization intention of physicians</td>
<td>Only practical in countries with efficient systems to monitor private sector; Physicians might quit public practice if private sector revenue is very high;</td>
</tr>
<tr>
<td>Exclusiver contracts and perks in public sector</td>
<td>Spain, Portugal, Italy, Thailand, some Indian states</td>
<td>Discourage physicians from private practice</td>
<td>Only works when dual practice is for financial purpose and if the increase compensates for revenue loss from non-practice in private sector; Governments in low income countries cannot offer wages that compensate for loss of private sector earning; Creating resentment across other health workers</td>
</tr>
<tr>
<td>Increased public sector salaries</td>
<td>Studies in Norway and Bangladesh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private practice allowed in public hospitals</td>
<td>France, Germany, Ireland, Austria</td>
<td>Efficient regulation and monitoring of private health provision</td>
<td>Appropriate policies must exist to avoid misuse of public resources and determine the types of private practice interventions to be allowed; Conflict of interest for physicians is a possibility; The difference in price and possibly treatment options in the same hospital can be seen as socially discriminatory</td>
</tr>
<tr>
<td>Experimented in Spain, Portugal, Ethiopia</td>
<td>Bahrain, Nepal, Ghana</td>
<td>Synergies between public and private sector; Adds revenue to the public sector</td>
<td></td>
</tr>
<tr>
<td>Limitations on types of services offered in private sector</td>
<td>Canada</td>
<td>Discourage people from using the private sector for services available in public hospitals</td>
<td>Only works in countries with universal health coverage and efficient financial monitoring systems</td>
</tr>
<tr>
<td>Self-regulation (unrestricted allowance)</td>
<td>United Kingdom</td>
<td>Ensure high quality of care and discourage ill effects of dual practice</td>
<td>Does not work in developing countries with low salary, low morale and weak or absent monitoring systems and not as empowered professional bodies and civil society</td>
</tr>
</tbody>
</table>

Table 15 shows that there are various policy options regarding dual practice from country to country. The design and enforcement of the policies are context-based. These policies range from complete ban to complete allowance, specific measures including restrictions on physicians’ earnings, regulation on exclusive contracts for public sector, increase of public sector salaries, allowance of private practice in public hospitals, limitations on the types of services offered in the private sector, etc.

To increase income has been generally recognized as the major reason for conducting dual practice in developing countries. In terms of the impact of dual practice, consistent with the situation in Egypt, it is argued in many countries that dual practice has negative impacts on health service in the public sector, including decreasing public service quality, “undermining the ethos of public service”, “creating grounds for absenteeism” and “diverting resources and patients to private practice” (Berman & Cuizon, 2004). Meanwhile, it is also commonly agreed that dual practice serves as a coping mechanism for retaining health workers in “low-paid public posts” (Ferrinho et al., 2004). However, inconsistent with what we found in Egypt, an argument in the literature points out that dual practice might contribute to the improvement of public service quality, the reason given is that health workers may “seek to establish the reputation for their private practice through their public service” (Gonzalez, 2004).

The regulation of dual practice challenges many low- and middle-income countries. The first question policy makers should answer is whether or not to regulate
dual practice at all, considering the positive impacts of dual practice which may outweigh its negative impacts. If the answer is yes, the second question would be to what extent dual practice should be regulated and how. Complete ban can hardly be enforceable due to limited government capacity in most of these countries and the low salary of public positions. In fact, even in countries with strong government capacity and dual practice is legally banned, it still exists that doctors who work in public hospitals conduct private practice for extra income.

Turkey has provided a successful case for regulating dual practice. The most important lesson from Turkish is that they adapt a two-step strategy. In 2003, the government largely increased the public hospital salary and introduced performance-based evaluation in the public health sector. After this policy was implemented, more and more health workers were lured to work full-time in public sector work. In 2010, when the majority of health workers only engaged in public sector work, the government issued a law completely banning dual practice (Tatar et al., 2011).

From above, we can see that the negative impact of dual practice has been recognized by most countries, although the extent may vary. However, positive impact has also been indicated in different contexts, which actually contributes to different levels of acceptance of dual practice in many developing countries. However, we can also see that the establishment and enforcement of regulations regarding dual practice
are severely dependent on the government capacity. For those governments with limited capacity, sometimes they have no other choice but to accept dual practice.

### 4.2 Major challenges faced by governance

In Egypt, the governance of Public Private Mix (PPM) of Human Resources for Health (HRH) is very challenging. The difficulties are mainly related to three aspects: 1) political environment; 2) private sector management; 3) public sector management.

Firstly, Egypt’s health sector operates in an environment of political instability, undermining effective system governance. High turnover of the Ministers and decision makers at MOHP hinders the design and enforcement of health policies (WHO EMRO, 2011).

Secondly, effective coordination and integration with the private sector is a major concern of Egypt’s health sector. The private sector is growing fast but largely unregulated. The private sector bears the expectation to provide high-quality care, but there is no formal mechanism in place to monitor and evaluate the quality of the health care service offered by different categories of private providers (Nakhimovsky et al., 2011).

Thirdly, public sector is under supported and lacking of capacity.

Egypt is a low health care spender compared to countries of similar levels of economic development. The percentage of OOP spending within the THE is the highest among all the middle-income countries in the region, and public health spending as a
percentage of the total government spending in Egypt is comparatively lower than in other middle-income countries in the region (World Bank, 2015).

MOHP is the payer, provider, and regulator of the health sector. MOHP is taking charge of planning, budgeting, financing, resource allocation, regulation, monitoring, evaluation as well as health care service delivery, with limited capacity to handle any of those actually. This lack of differentiation of roles is leading to inefficiency. MOHP has very weak management mechanism for HRH, in terms of supervision and evaluation of working performance, workforce entry and exit, etc. (WHO EMRO, 2011).

The overall institutional framework of the health sector is complex. The MOHP has relations with more than 29 ministries and public sector agencies. The organizational accountabilities are redundant and ambiguous. The lack of coordination and communication among sectors, especially MOHP and Ministry of Higher Education (MOHE), has caused further disconnection in managing HRH (Nakhimovsky et al., 2011).

The administrative structure is over-centralized. The MOHP decision-making process is mostly subjective and rarely information-based. This has led to lack of responsiveness from policy makers to local needs. In addition, health information system is under-developed. Reporting and documenting are formality and inefficient. Data missing and redundancy are prevalent. Data quality considerations in health
information system have limited the reliability of reported data and further challenge the ability to manage HRH (CAPMAS, 2014).

Lastly, Egypt has been the epicenter of higher learning in Arab speaking countries and there is a large amount of doctors emigrating to Gulf countries where salaries and working conditions are much better. This has further challenged the management of domestic health workers in Egypt and has led to the Government of Egypt having a very light touch on regulating dual practice.
5. Conclusion

Based on our findings, we can conclude that a vast majority of doctors in Egypt has been involved in dual practice, while the prevalence of dual practice is much lower in nurses than in doctors. Dissatisfaction with public salary is recognized as the main reason driving Egyptian doctors to conduct dual practice. While pursuing private practice, most of them still hold their public posts, with various reasons including to gain clinical experience, academic titles, professional reputation, etc.

In our study, all the doctor participants have engaged in dual practice while less than half of the nurse participants have done so. This gap of prevalence is caused by several reasons. Comparing with doctors, nurses need to stick to their work for longer and more fixed time, and the difference of salary between public and private is less significant. Additionally, most nurses are female, and therefore their choice of work will be largely influenced by family responsibility.

The qualitative approach used in this study allowed us to explore the dynamic of the impact of dual practice in Egypt. Perceived as a mechanism to compensate the low salary in public sector, dual practice is accepted in the current Egyptian health system despite well-recognized negative impacts on the quality of care, including public-to-private brain drain, predatory behavior, impact on work hours and ethos, and interaction with other HRH challenges in Egypt.
Our study also concludes that there is lack of rigorous regulations being implemented to govern the dual practice in Egypt. The weakness in health workforce management in public sector, especially in retention and performance evaluation, has created ground for dual practice in Egypt. Meanwhile, dual practice has affected the retention and performance of Egyptian health workforce, in both positive and negative ways. In terms of retention, on one side, dual practice intensified the public-private brain drain; on the other side, it helps retain skilled health workers in low-paid public sector. In terms of performance, on one side, dual practice makes the government have an even lighter touch on performance evaluation; on the other side, dual practice helps improve the satisfaction of health workers in public positions by allowing them to pursue private income. Globally, the policy option is context-based. The international experience indicates that definitive answer to cope with dual practice is not available and there is no uniform recipe to deal with the issue of dual practice. Overall, the solution for PPM of HRH issue in Egypt is dependent on accompanying reforms that address deeper issues related to overall health system. Increasing health expenditure and government capacity should be at the root of changing.

Current knowledge on the governance of dual practice in Egypt is mainly based on anecdote, and global evidence related to the effectiveness and enforcement of dual practice regulation is also patchy. Further research is needed for the design of the approach to break the vicious circle of weak public capacity and unregulated dual
practice, and to make use of HRH as a potential component to bridge public and private sector. Our research findings also indicate the necessity to quantify and evaluate the impact of dual practice on social welfare from the perspectives of different stakeholders. Additionally, structural interventions are sorely needed in strengthening public sector and integrating private sector into the overall health system reform.
Appendix A

In-depth Interview Guide
Healthcare Provider

1. What work do you do? Are you working in public/private/both? Why? Could you please describe a typical working day?
   (probe): Why do you work only in public?
   (probe): How many patients a day/hospital?
   (probe): Do you do some prevention?
   (probe): How often do you have meetings/workshops?
   (probe): How is your work evaluated and supervised?
   (probe): Is there any continued/in-service training for you?
   (probe): Salary every month the same?
   (probe): Is there any specialized scheme to manage the human resource?
   (probe): Overall, are you satisfied/happy with your work? What aspects are you satisfied and what parts are not?
   (probe): Do you feel unsafe in work?
   (probe): have some of your friends/fellow classmates gone abroad to work? Where? What kind of work? Why?

2. In general, what do you think is the main difference between public and private?
   (probe): difference in your feeling/attitude towards your work?
   (probe): difference in workload? the number of patients? the type of diseases?
   (probe): how about salary? If you earn X in pub, what will you earn roughly in private?
   (probe): when you need to refer patients, where will you refer?

3. For people who have dual practice in both public and private, can they manage well? Specifically how? Have you experienced conflict working hour?

4. Is there any regulation for dual practice? How is it enforced? Do you feel there is a need to better regulate or support dual practice?

5. What other difficulties/need/suggestion do you have for the hospital or management of human resource for health?
Appendix B

In-depth Interview Guide
Administrative Staff

1. Could you please give brief information about the hospital?
   (probe): How many patients a day/hospital? What kind and number of health workers are there? Do you do some prevention? What about their working hour?
   (probe): how is the fee charged?

2. Could you give me a brief idea of how your facility is managing the HRH?
   (probe): how often do you have meetings/workshops?
   (probe): how is your work evaluated and supervised?
   (probe): Salary every month the same? Incentive/punishment scheme?
   (probe): is there any specialized scheme to manage the human resource? HR department/ syndicate?
   (probe): are there any people who given up their work here to other places? Where will they go? Pub, pri, going abroad? Where? What kind of work? Why?

3. In general, what do you think is the main difference between public and private?

4. For people who have dual practice in both public and private, can they manage well? Specifically how? How do you deal with people who got conflict working hour?

5. Is there any regulation for dual practice? How is it enforced? Do you feel there is a need to better regulate or support dual practice?

6. What other difficulties/need/suggestion do you have for the hospital or management of human resource for health?
References


