

The evolution of human resources for health policies in post-conflict Cambodia: findings from key informant interviews and document reviews



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The ReBUILD Research Programme Consortium is an international research partnership funded by the UK Department for International Development.

ReBUILD is working for improved access to effective health care for the poor and for reduced health costs burdens in post-conflict and post-crisis countries. We are doing this through the production of high quality, policy-relevant research evidence on health systems financing and human resources for health, and working to promote use of this evidence in policy and practice.

ReBUILD is implemented by a partnership of research organisations from the UK, Cambodia, Uganda, Sierra Leone and Zimbabwe.

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- Institute for Global Health & Development, Queen Margaret University, Edinburgh, UK
- Cambodia Development Resource Institute, Cambodia
- College of Medicine and Allied Health Sciences, Sierra Leone
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Acronyms

ACC	Accreditation Committee of Cambodia
ADB	Asian Development Bank
AFD	Agence Francais de Developpement
AusAID	Australian Aid
BTC	Belgium Technical Cooperation
CAR	Council of Administrative Reform
CBHI	Community based health insurance
CDC	Council for the Development of Cambodia
CDRI	Cambodia Development Resource Institute
CEDHP	Centre for Educational Development for Health Professionals
CI	Contracting in
CMAC	Cambodian Mines Action Centre
CO	Contracting out
CAR	Council of Administrative Reform
CDC	Council for the Development of Cambodia
CEDHP	Centre for Educational Development for Health Professionals
CHF	Charter of Health Financing
CPA	Complementary packet of activities
DDF	Department of Essential Drugs and Food
DHP	Department of Health Prevention
DHR	Department of Human Resource
DIA	Department of Internal Audit
DIC	Department of International Cooperation
DfID	Department for International Development
DPHI	Department of Planning and Health Information
DPS	Department of Hospital Services
ERW	Explosive remnants of war
GDCC	Government-Donor Coordination Committee
GDP	Gross domestic product
GMIS	Government Midwifery Incentive Scheme
HC	Health centre
HCP	Health coverage plan
HEF	Health equity fund
HP	Health post
HRDD	Human Resource Development Department
HRH	Human resources for health
HS OAP	Health Sector Operational Annual Plan
HSP1	Health Sector Strategic Plan 2003-2007
HSSP	Health Sector Strategic Plan
HWDP	Health Workforce Development Plan
IDA	International Development Agency
KII	Key informant interviews

MAG	Mines Advisory Group
MBPI	Merit Based Performance Incentive
MMR	Maternal mortality rate
MPA	Minimum packet of activities
MoEF	Ministry of Economy and Finance
MoEYS	Ministry of Health and Ministry of Education, Youth and Sports
MoH	Ministry of Health
NGO	Non-government organisation
NIPH	National Institute of Public Health
OD	Operational district
OOP	Out of pocket
PHC	Primary health care
PHD	Provincial health departments
PMAS	Performance management and accounting system
POC	Priority operating cost scheme
PRC	Provincial Revolution Committee
PRK	People's Republic of Kampuchea
PTC	Provincial training centre
RGC	Royal Government of Cambodia
RH	Referral hospital
RINE	Rehydration, immunisation, nutrition and education programmes
RTC	Regional training centre
SDG	Service delivery grant
SOA	Special operating agency
SUBO	Government subsidy scheme
SWAP	Sector-wide approach
THE	Total health expenditure
TSMC	Technical School of Medical Care
TWG	Technical Working Groups
UHS	University of Health Sciences
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
UNTAC	United Nations Transitional Authority in Cambodia
USAID	United States Agency for International Development
WB	World Bank
WHO	World Health Organisation

Executive summary

Introduction

The ReBUILD programme has been examining the evolution of health worker incentives in four post-conflict contexts (Cambodia, Sierra Leone, Uganda and Zimbabwe) in order to understand how to establish equitable access to quality health care in these health systems. This report presents the findings from Cambodia of two research tools – the document review and key informant interviews. It examines the post-conflict challenges for human resources for health (HRH) in Cambodia, how HRH policies responded and why, and what lessons can be learned about policy effectiveness, particularly focused on under-served areas of the country. The objective is to inform HRH policies going forward in this and similar contexts.

Methods

The project protocol was approved by the National Ethics Committee for Health Research in February 2012. The key informant interviews (KII) were carried out in six provinces: Phnom Penh, Kandal, Kompong Cham, Battambang, Kompot and Stung Treng. They were selected purposively to obtain a range of conditions – urban and rural, with high and low external support, and representing the different ecological regions of the country. The KII were conducted with 19 health managers of provincial health departments (PHDs), operational districts (ODs), referral hospitals (RHs) and health centres (HCs) between August and December 2013. A semi-structured KII interview guide was used. The interviews were thematically analysed, using codes which mirrored those used the document review, allowing the findings to be triangulated. Documents relating to HRH in Cambodia from 1979 to 2014 were reviewed. Findings of HRH data analysis and in-depth interviews with health workers are reported separately.

Findings

Challenges and responses

Cambodia faced an extreme shortage of all health workers in 1979, and initial efforts were focussed on training core cadres and extending basic services under a socialist model (1979-89). The peace agreement of 1993 paved the way for more intensive external support for reconstruction of the health sector, which included gradual modernisation of the training curricula for health staff. Staff were integrated from areas still under Khmer Rouge control and students from rural areas were bonded to return to serve in their home areas. However, conditions remained difficult, especially in rural areas which remained insecure and poorly connected.

Through the 1990s, as the economy and health markets grew, staff were attracted into the growing private sector and work for NGOs, as well as dual practice in the public sector to augment meagre salaries. Full peace across the country was achieved by 1999 and the following decade saw a number of innovations in management of health services and health financing, all of which had implications

for staff remuneration, management and performance. Alongside this, HRH policies shifted emphasis to raising the quality of staff, which included centralising recruitment.

Drivers of policy change

In the past 25 years, the Cambodian government has developed its capacity to lead on policy and regulation of the health sector, but remains dependent on donors, particularly in terms of financing. Policy feedback between research findings and policy is often missing, probably because of poor engagement between policy-makers and researchers. Donors are influential in shaping policy making and prioritising actions because of the significant amount of funds they provide. Among those donors, WHO has played a leading role in providing technical support to the Ministry of Health (MoH) for policy formulation on HRH since 1993.

The 1990s saw considerable fragmentation and multiple directions for external support but there has been greater harmonisation since 2005 and the sector-wide approach. However, concerns over weak financial management means many donors have continued to channel most of their funds through NGOs. Many continue to use inflexible guidelines, which constrain MoH action. The MoH can however veto any proposed policy measures that do not come with additional financial support, or where policies have been put in place but the Government has to provide additional budgetary commitment.

Policy effectiveness

Training quality has improved but there were still concerns about staff lacking practical skills. In-service training is common but poorly coordinated with managers' priorities and staff plans and reflects external programmes more than local need.

Recruitment is based on requests from managers, but only 50% of requests are reported to be filled, leading to overall gaps, which also contributes to distribution problems. Central HR databases are also unreliable, as staff may not take up posts or may leave early and this is not reflected in the records. Recruiting and retaining staff in rural areas remains a challenge. Factors motivating staff to work in rural facilities has moved from social status, recognition, and personal relationships in the 1980s/early 1990s to a new comprehensive set of socioeconomic factors such as the ability to make extra income to cover the cost of living and children's education. Policies such as sharing user fees with staff increase the attraction of working in high density areas. The centralisation of recruitment has also disfavoured students from rural areas. There are inadequate financial and non-financial incentives associated with rural jobs, such as low pay, limited opportunities for private practice, poor educational services for children, lack of housing and other amenities, limited professional support, and distance from family. Shortage of supplies from the government, including drugs, basic medical equipment, water and electricity are a common complaint, as are poor infrastructure (e.g. roads) and transportation. In addition, staff report concerns about security, which has improved but remains difficult in some areas. In order to address the shortages of midwives and nurses in rural areas, the MoH introduced a Service Delivery Grant in 2008 which allocated 20 % of this budget for the PHD and OD to hire short-term or contracted staff to fill vacancies in public sector facilities, especially in rural areas. By 2013, all health centres reported to have at least one primary midwife. The midwifery incentive scheme introduced in 2008 helped to motivate staff.

Since 2002, there has been low staff turnover in the public health sector, but high rates of dual practice. One approach adopted by managers is 'sympathetic management', in which a blind eye is turned to staff working limited hours in order to make a living from private practice or other activities (such as farming in rural areas) as long as the team can provide a core service. This is done because it is recognised that the public remuneration does not cover a family's living costs.

Despite nearly a decade of salary increases and a plethora of incentive schemes, public health worker remuneration remains low. A study of 2013 found that health workers in rural areas could earn half the income of those working in urban areas – the difference being largely driven by informal earnings. One factor underlying this is low government spend on remuneration, which amounted to 18% of government expenditure on health in 2013 (an exceptionally low level).

There are also a number of gender disparities evident in the sector. Women make up a very small proportion of the top cadres, and report barriers to accessing training, especially in rural areas. These relate in part to domestic roles and cultural barriers. Male health staff earn significantly more than women on average.

Although performance appraisal was found to be helpful by local managers, the provincial and district managers have no control over the wages budget, the numbers of staff and financial awards. They are also unable to dismiss under-performing staff. Promotion systems are said to be weakly linked to performance and based mainly on years in service and patronage networks. New regulatory bodies have been set up but are not yet effective at influencing professional practice.

Conclusions

Cambodia has made considerable progress in rebuilding its health sector and human resources for health since 1979. The journey has been long for a number of reasons, including the two decades which it took to reach full peace, the destruction which had been wrought on the entire national system, and the extent of dependence on external support. The trajectory of HRH policies, which are closely linked with wider health sector policies, shows a high level of innovation with promising results, but also the challenge of moving from pilots to national schemes under government leadership. Enduring gaps between urban and remote areas remain to be addressed, alongside the need for adequate public remuneration which will allow vacant posts to be filled and the high levels of dual practice to be addressed.

1. Introduction

Cambodia is a low income country in South-East Asia with a population of 13.3 million according to the 2008 census. More than 80% of the population live in rural areas and rely on agriculture for their household income. The Human Development Index ranked Cambodia at 129 out of 177 countries (UNDP, 2007:9). The Khmer Rouge regime affected human resources and social infrastructure throughout the country between 1975 and 1978. An estimated 2 million people, including educated and skilled persons, were killed during this period (Walque, 2004:p6). After the civil war ended in the late 1998, all public sectors have been rebuilt with a particular emphasis on the health sector.

The development of human resource for health (HRH) has been placed at the top of government policies for reconstruction, strengthening and development of the health system. The conflict in Cambodia ended fully in 1998. However, shortages of key health professionals, especially midwives and nurses, remain to be addressed to increase the availability and quality of health care services in rural areas.

The government health system has three levels: primary (health posts and centres); secondary (referral hospitals); and tertiary (national hospitals). Health post/centres are mostly located in rural areas and are equipped with a few nurses and midwives to provide basic health care, also known as the minimum packet of activities (MPA). Referral hospitals are operated with a few doctors, nurses and midwives to provide a complementary packet of activities (CPA). At the national level, there are five Ministry of Health (MoH) hospitals in Phnom Penh that offer a range of specialist services. There are two non-profit hospitals in Phnom Penh, one in Siem Reap and 3 Kantha Bopha Group hospitals.

The private for profit health sector has grown considerably since 1993. There are 2,457 clinics without beds and 274 clinics with beds throughout the country covering only 9.5% of the population. Phnom Penh houses the majority of these private facilities including two private hospitals (MoH 2006a). In addition, other organisations such as the Centre for Hope Hospital and NGOs provide health care outside the government health system.

Objectives of the study

The Health Strategy Plan 2008-2015 calls for health systems research in order to develop a package of evidence-based, comprehensive, implementable policies that conform to the laws and regulations of the Royal Government of Cambodia. Included in the key areas for research were:

- Contracting for services delivery (covering Special Operation Agencies (SOAs), internal and external contracting);
- Decentralisation in the health sector;
- Social health protection, including Health Equity Funds and Social Health Insurance;
- Staff management and staff remuneration, including performance based incentives, merit based pay, facilities based salary supplementation, per diems, and contract work (MOH, 2008, p.44).

The overall objective of the study is to analyse human resources for health policies from the post-conflict period to the present in order to feedback into more effective policy responses, particularly relating to the last objective above. The research also fed into a wider international ReBUILD study to develop the currently limited evidence base on HRH challenges and policies in post-conflict countries and how they can contribute to rebuilding the health sector (Witter et al. 2012). This involved focussing on the following questions:

1. How has HRH policy evolved in the post-war period?
2. What have been the drivers of the policy changes?
3. What have been the implementation challenges for the HRH policies?
4. What have been the effects, intended and unintended, of the policy changes?
5. Given the context and the available evidence, what strategies might be adopted in future to improve health worker attraction, retention and productivity, especially in relation to the most disadvantaged sections of the community?

The report starts with an overview of the research methods, followed by evidence on the post-war situation, including the health system and HRH challenges. This is followed by a description of the policy responses which were adopted, structured by HR domains (such as training, recruitment and retention, motivation, and management). We then examine the drivers of change in policies (factors and actors), and how they were financed. The final section brings together conclusions about policy effectiveness and lessons for HRH policy-making in Cambodia.

2. Research methods

Conceptual framework

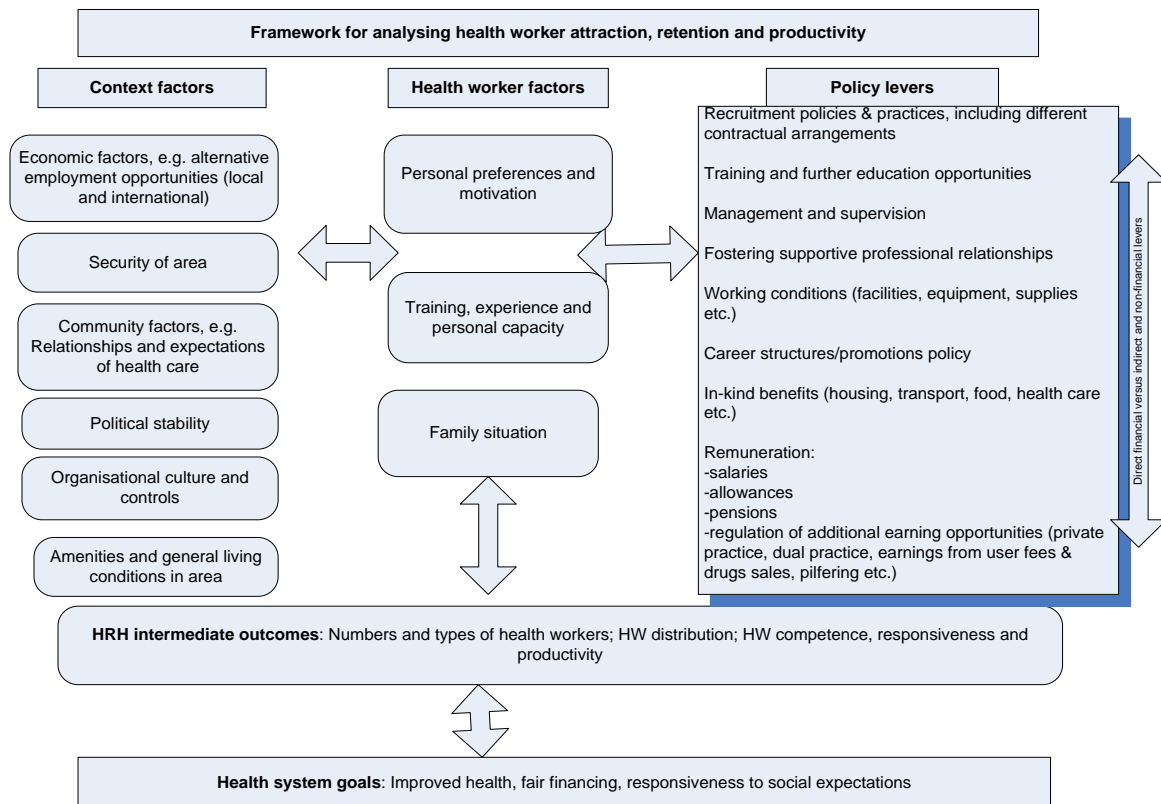
The conceptual framework for this study was drawn from ReBUILD project 2 protocol developed by Witter et al, (2012:10) (Figure 1). Although it is generic (not specific to post-conflict settings), it can be used to generate questions specific to post-conflict settings. In particular, the absence of actual or perceived security, the fragility of political settlements, the possibly fractured relationships with the community (or conversely, the strong ones developed during a period of loss of central control) and the breakdown of organisational controls are all hypothesised to call for different responses in the post-conflict setting. These will affect the design, implementation and impact of the general policy levers on the right (and hence the outcomes for HRH and the health system outlined at the bottom).

All of the factors are interconnected and have a potential to impact on attraction, retention and performance. The 'policy levers' on the right represent a range of ways in which the incentive environment can be actively engineered. They include financial and non-financial measures, but this is represented as a continuum as some 'non-financial' activities such as training also have knock-on potential income effects e.g. in the form of increased future earning potential.

Although the conceptual framework is presented as a cross-sectional picture, it is recognised that past experiences influence present expectations and behaviours. In addition, external factors will play an important part in influencing developments in relation to these various nodes. The fiscal situation and

the investment strategies of donors, for example, will be an important factor enabling or constraining the different policy levels.

Figure 1: Conceptual Framework: health worker incentive research



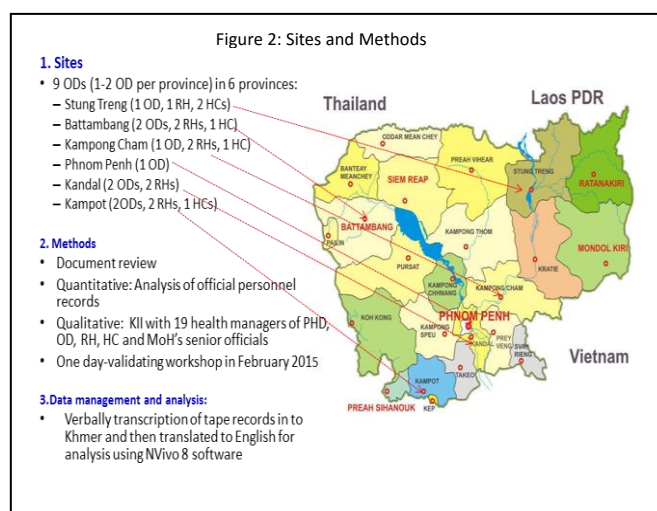
Source: Witter et al (2012:10)

Research tools

The findings for the overall study are drawn from four sources:

- analysis of routine HRH and health services output data;
- life histories with health workers;
- a document review; and
- key informant interviews (KII)

It was carried out in six target provinces including Phnom Penh, Kandal, Kompong Cham, Battambang, Kompot and Stung Treng (Figure 2). The data analysis is written up in Ensor et al. 2016. This report presents findings from the document review and KII. All findings were validated at a workshop in Phnom Penh in 2015.



Document Review: A total of 59 documents, including 15 donor and government reports, 8 national policies and guidelines, 16 research reports, 16 journals and 4 bulletins and/or policy briefs were

reviewed by the country research team for this study. These documents were received from an online search, the Cambodia Development Resource Institute (CDRI) library and WHO office in Cambodia, the annual workshops organised by the Ministry of Health and networking with relevant NGOs working in health sector and focused on the period of 1979 till the present. These documents provided background of health sector and human resource development and evolution in response to the needs for rebuilding of health care services in the country after the destruction of health system by Khmer Rouge regime; and the challenges that Cambodia has faced particularly in human resource development since 1979 to present.

Key Informant Interviews: The KII were conducted with 21 managers, all male. One was based at the national level, in the Ministry of Health; four at provincial health departments; four in referral hospitals; 8 at operational district (OD) level; and 4 in health centres. By province, the break-down was: two in Phnom Penh; four in Stung Treng; five in Kompot; five in Battambang; three in Kampong Cham; and two in Kandal. These purposely selected KI were conducted between August and December 2013. A semi-structured KII tool was developed and tested as part of the research protocol of REBUILD project 2 (Witter et al., 2012), and approved by the National Ethics Committee for Health Research in February 2012 and the Research Ethics Committee at the Liverpool School of Tropical Medicine in March 2012. Written consent was obtained and interviews were recorded, transcribed, translated from Khmer and analysed using a thematic framework approach.

Characteristics of study areas

This study was conducted in six provinces across four regions. Provinces were selected purposively to obtain a range of conditions – some were urban, while most were rural; they included provinces with high external investment and low; and representing the different ecological regions of the country. Each district contains one referral hospital that was visited by the research team. In addition, we sampled one or two health centres (HCs) per district, ensuring remote and more accessible areas were covered (Table 1). The research team used the updated administrative records from the MoH to assess the characteristics of selected provinces, ODs and RHs.

Table 1: Characteristics of selected areas

Region	Province	Total ODs	Total RHs	Total HCs	Total population*	Characteristics***	Sample Site		
							OD	RH	HC
Plain	Phnom Penh	4	5	17	1,327,615	Urban; external support and fast growing area	1		
Plain	Kandal	8	6	94	1,265,280	Rural with long period of security; supported with health equity fund (HEF) in 2 ODs; user Fees & Government Midwifery Incentive Scheme (GMIS) for all ODs	2	2	

Plain	Kompong Cham	10	11	136	1,679,992	Rural; supported with vouchers in 9 ODs; user Fees & HEF and GMIS for all ODs; contracting-in and-out in 2 ODs, Special Operation Agency (SOA) in 5 ODs	1	2	1
Tonle Sap	Battambang	5	4	76	1,025,174	Rural; supported with vouchers in 3 ODs and User Fees & HEF for all ODs	2	2	1
Coastal	Kampot	4	4	50	585,850	Rural; supported with vouchers and HEF/Community based health insurance (CBHI) for 3 ODs, User Fees & HEF for all ODs	2	2	1
Plateau and Mountainous	Stung Treng	1	1	11	111,671	Rural; supported with user Fees and HEF	1	1	2
Total of the six provinces		32	31	384	4,315,590		9	9	5
Total for the Country**		77	90	1,004	13,395,682				

Source:

* National Institute for Statistics, 2009:p165, General Population Census of Cambodia 2008

** WHO (2012:p4), Health Service Delivery Profile Cambodia

*** MoH Updated Administrative Records

Note:

- In Battambang, delivery vouchers started in 2008 in three ODs and HEF experiences started in 2006 for some HCs in three ODs to scale up the implementation for all five ODs in 2011.
- Two ODs in Kampot (Angkor Chey, Kompong Trach and Kampot) started HEF in 2006/2008 and Two ODs (Kscha Kandal and Takhmao) in Kandal since 2006/7 are supported by MoH while the rest are supported by donor funds; and the starting data of the HEF is between 2005 and 2011.

Study team

The country project leader was responsible for adapting the tools, obtaining ethical approval from the relevant national institutions, liaising with stakeholders, data collection and analysis, and report writing. Two research assistants assisted with data collection and logistical arrangements. The country study team was supported by an international researcher who provided guidance and support for the design of the study, research methodology and tools, and data analysis and who contributed to writing up of findings and final reports.

Analysis

The qualitative findings of this study were drawn from a thematic framework analysis. Tape recordings of KII were transcribed into Khmer and then translated into English. The English transcripts were then imported into NVivo8 software for thematic coding and analysis. The thematic coding frame was designed in accordance with the research protocol of project 2, but was extended according to the themes identified in the transcripts.

The preliminary observations then were cross-referenced with information from the review of documents, which used a similar initial coding structure.

Study limitations and gaps

Six provinces including Phnom Penh were selected to include this study. The original plan was to take north, south and west ODs of Phnom Penh as urban areas and one or two ODs from each other province as rural areas. For Stung Treng province, a remote area of country, three health centers (HC) were originally selected for the study. The director of one referral hospital (RH) and (HC) from each OD were selected for key informant interviews (KII), along with a representative of the provincial health departments. The plan was to have 28 KIIs. However, the interviews were disturbed by the labour unrest occurring after the national election on 28 July 2013. Many health managers hesitated to participate in the KII interviews even though we had ethical approval from the NIPH. Only one OD manager in Phnom Penh was willing to participate but did not allow the interview to be recorded. The other managers of the PHDs and two other ODs in Phnom Penh refused to meet the research team or declined the interview after reading the consent form. Signing the consent form was not a problem for the health managers in other provinces because they were often approached for interview by other researchers. Nonetheless, most key informants felt uncomfortable with the recording of the interview.

Participants were happy to discuss the challenges in staff recruitment, deployment, retention and management they have faced during the conflict and post-conflict era. However, they were quite cautious to share their experiences and knowledge about financial issues. Evidence of the challenges in financial management was confirmed by informal discussions with key informants, comments from participants in a national workshop in 2015 and the document review.

3. Background and HRH challenges

Legacy of conflict

Cambodia received full peace and political stability after almost three decades of civil war and armed conflict. Pol Pot died in 1998 and all Khmer Rouge soldiers defected to the government. War and political instability from 1970 - 1998 had resulted in the deaths of millions of people, with the biggest loss occurring during the Khmer Rouge genocide regime between 1975 and 1979 (De Walque, 2004:p6). Public and private institutions were abolished to turn Cambodian into an agrarian society,

with forced labour on collective farming for agricultural production. This led to the deaths of two million people from starvation, diseases, execution and institutional destruction (Mysliwiec, 1988).

The Khmer Rouge regime was defeated in 1979 by the Vietnamese who formed the People's Republic of Kampuchea (PRK) and helped reconstruct state institutions based on a socialist ideology. Most intellectuals, including midwives, nurses and doctors, died of diseases, starvation, violence and torture. Only 45 of the 450 doctors before 1975 survived and of those 20 left the country. Only 26 pharmacists, 28 dentists, and 728 of the 3,400 medical students returned in 1979 (Mysliwiec, 1988:p42). Most returned to their villages and were struggling to earn enough food for their living. There was widespread malnutrition, malaria, tuberculosis, dengue fevers and diseases mostly associated with water and sanitation. Lack of clean water, sanitation, education, transportation, and communication as well as landmines caused huge problems for the reconstruction of the state and health system.

Armed conflict was continued by the royalists and other factions to destabilise the Vietnamese PRK. However, the PRK controlled most parts of the country whereas other factions controlled the areas with less population density along the northwest area bordering with Thailand. The PRK government started to reconstruct state administrative institutions based on the Vietnamese's style of development and governance. Demand for health services was increased by a large-scale plan called '*Kor Pram*' (K5) scheme, which was implemented between 1984 and 1988 to defend the western borders. This was to detain the remaining Khmer Rouge forces, other resistances and refugee groups along the Thai border and prevent them from penetrating the rest of country. The total number of conscripted workers, estimated to be between 380,000 and 1 million, were recruited from over the country to construct a deforested and mined field barrage that was 2km wide and 800km long (Oversen and Trankell, 2010). Those workers were recruited by the local authorities according to the quotas set for each commune, district and province in the country and had to serve for three to six months. The working conditions were very poor with no sleeping quarters, and insufficient supplies of food, medicine, blankets and mosquito nets. There were only a few doctors but no quinine and hospitals for the workers. Many conscripted workers reportedly died from mine explosions and malaria. About 80% of those who returned to their villages had malaria. This had caused a spread of malaria and tuberculosis (TB) and added to the burden on the health care system. 2.5 million people were infected with malaria and around 200,000 with TB at that time (Mysliwiec, 1988).

International sanctions were removed when the Vietnamese withdrew from Cambodia in 1988 and all political factions signed the Paris Peace Accords on 23 October 1991. Along with the peace negotiation, a process of political and economic liberalisation started to take shape within Cambodia and international aid helped to reconstruct the country. Various donor agencies such as the European Commission and USAID started to fund Non-governmental Organisation (NGO)-led work inside Cambodia. The Phnom Penh government allowed those NGOs to move out of the capital city and into the regions to provide both humanitarian assistance and development support to rural communities. At the same time, the United Nations Transitional Authority in Cambodia (UNTAC) was formed for peace keeping and assisting the national elections. With assistance from the UNTAC, Cambodian people enjoyed the first national election in 1993. However, the leaders of Khmer Rouge refused to participate in the national election, moved back to their controlled areas and continued to oppose the elected government. Thus the conflict continued until 1997/8 when all Khmer Rouge soldiers defected

to the government under the government's strategy of power sharing. Therefore, 1999 was the year that armed-conflict ended and Cambodia has since had peace.

History of health system development post-conflict

The health system in Cambodia has experienced several periods of change from the rudimentary system of Prince Norodom Sihanouk in the 1960s to the Vietnamese model adopted in the 1980s. It was not until the first national election in 1993, when the first Royal Government took office, that the healthcare service in Cambodia began to improve. The Royal Government reformed the health sector by establishing a Ministry of Health (MoH) that aimed to improve and extend primary health care through the implementation of a district based health system. In addition, the first Health Sector Strategic Plan 2003-2007 (HSP1) was formed to help health system development. The processes by which the health system developed are shown in Figure 3.

1979-1990: Period of reconstruction of health system

After the collapse of the Khmer Rouge in 1979, there was an urgent need to re-establish social and economic institutions in the country. The United Nations blockade until 1991 meant that this reconstruction was supported by the Vietnamese government based on a socialist development ideology (Mysliwiec, 1988). The health system was reconstructed when remaining doctors assumed responsibilities as clinicians, trainers and administrators with technical support from the Vietnamese advisors (Hill and Moe, 2007:p631). In the 1980s, health facilities equipped with a few staff were rehabilitated only in the areas controlled by the People's Republic of Kampuchea (PRK), and where there was relative security.

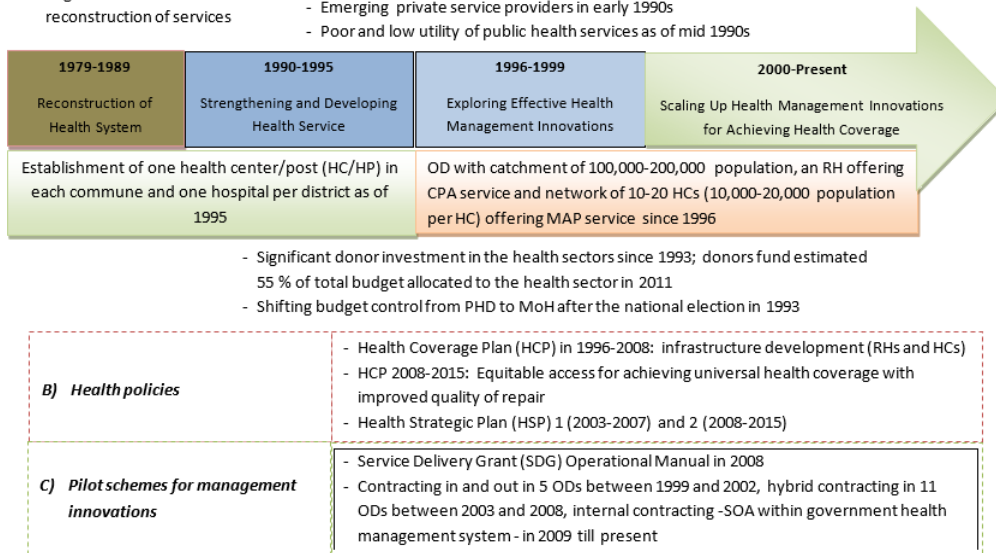
The initial efforts between 1980s and early 1990 emphasised quantity of production of human resources and reconstruction of public facilities (Oversen & Trankell, 2010). A senior health manager recalled that:

“...the central government ordered the Provincial People Revolution Committee to reconstruct one HC and/or HP in each commune and one hospital in each district. We could apply this policy only in the areas controlled by the government and with relative good security...” [PP_KII1]

Figure 3: Summary of Health System Development, 1975 – Present

A) Challenges

- No functioning health system after Khmer Rouge Regime in 1979
- International sanction until Paris Peace Accords on 23 October 1991
- Urgent need for reconstruction of services
- Armed conflicts continued in North-West provinces until 1997
- Emerging private service providers in early 1990s
- Poor and low utility of public health services as of mid 1990s



Since many areas were cut off by persistent armed conflict and poor roads, re-establishment of health care services was very challenging before the national election in 1993.

“...We could establish a few HPs in the main districts. There was almost no road connecting this province to Phnom Penh after Pol Pot regime. The travelling to Phnom Penh was made possible and relatively safe through taking boat, and it took us for a few days to reach Phnom Penh...” [STKKII1]

Only a few national and provincial health facilities and/or hospitals were rehabilitated by the national authorities and were equipped with inadequate numbers and kinds of health professionals, equipment and drugs (Mysliwiec, 1988). Many established HCs and HPs were not able to provide basic health services due to a lack of staff, infrastructure, drugs and medical equipment.

“...We had only one or two health agent(s) working at the HP/HCs. Those health agents had completed grade 5-10 years of general education and were recruited by the local authorities and sent to the PHD for 3-5 months’ training on basic health care for providing vaccination, sanitation and hygiene education. Besides this role, they also issued the letter for referring the patients to district hospital for basic treatment. Many HPs almost had no function because there was no bed for the patients and only located in a fragile building or commune office...” [KPL-KII1]

The government received very little external aid to rebuild the health system, which came mainly from Cuba, the former Soviet Union and Eastern Europe. Only a few international NGOs who offered humanitarian assistance were allowed to work in Cambodia. The International Red Cross, Oxfam, and a few other NGOs along with UNICEF were allowed to provide humanitarian assistance (Lanjouw et

al., 1999:p230). Their activities were strictly controlled by the PRK to work only on emergency assistance. However, they played a critical role in providing alternative health initiatives including development of maternal and child health clinics and rehydration, immunisation, nutrition and education programmes (RINE). These initiatives were then later picked up by the PHDs' health service, including responsibility for training (Mysliwiec, 1988).

1990-1995: Period of donors' investment in strengthening and development of health system

All political factions signed the Paris Peace Accords on 23 October 1991. Cambodians had their first national election in 1993. The government then received an influx of foreign aid to rebuild the country. Financial and technical support was channelled through NGOs. In 1998, there were 23 international NGOs working and no local NGOs. The number of NGOs rose to 164 in mid 1990s (Lanjouw et al., 1999). The assistance from donors and NGOs in this period was uncoordinated and unevenly distributed by specialisation and geographical area (Godfrey et al. 2000).

The MoH took advantage of technical support from the World Health Organisation (WHO) to develop health policies, plans and institutional mechanisms to coordinate external assistance from bilateral and NGO programmes (Hill and Eang, 2007). The senior health managers indicated that:

“... We, the Ministry of Health, were the first government institutions after the national election in 1993 that immediately started to make the reform by transferring the authorities and budget control for development of health facilities and human resource development from the PHD to the MoH. The aim was to have better coordination and implementation of the national health development programmes, and effective financial distribution and trainings...” [MoH_KI1]

However, the coordination of development assistance was constrained by limited managerial capacity, shortage of health workers and low levels of government funding for health care (ibid).

Most community clinics were non-existent, had been demolished, or were equipped with poorly skilled health workers. Most provincial hospitals could only function as clinics and offered limited services. Medical, surgical and obstetric emergencies could only be handled in the provincial or national hospitals. There were no clear differences between the first level of care and the referral level. The size of population covered by clinics and hospitals was often too large or too small.

1996-present: Exploring health management innovation for effective service delivery

In 1996, the government decided to change its focus from having a clinic per community, a hospital in each district and a provincial hospital in each provincial capital to establishing a district based health system known as operational districts (OD) to increase primary health care delivery for the population (Figure 3). The health system was restructured within the MoH with a broad mandate that included the development of policies, resource mobilisation, monitoring and evaluation, human resource planning and training (Table 2). Health care service delivery aligns departments within the MoH, provincial health departments (PHDs) and ODs. The reforms aimed to centralize authority and budgets for the improved coordination of national health development programmes (Asante et al., 2011), to

increase coverage (HCP: 1996-2008), and to enhance health services to ensure equitable access to health care for all Cambodians (HCP 2008-2015 and Health Strategic Plan- HSP: 2008-2015).

The establishment of ODs was guided by the first Health Coverage Plan (HCP), implemented between 1996 and 2008. The aim of HCP was to increase health infrastructure development and improve basic services at the district level through the establishment of ODs. The HCP also provided the first guideline for staffing at public facilities. Table 2 shows an overview of the staffing requirements and government structures of each level of the health system in Cambodia. Under this system of health governance, the public health care services can be divided into three levels of operation: primary (HC), secondary (referral hospitals) and tertiary (national hospitals).

The HC/ HP has no doctor but has a few staff, including primary and secondary midwives, who are the first point of contact for a population of 10,000-20,000. The HCs are mostly located in rural areas and provide a Minimum Package of Activities (MPA) of basic health care. MPA includes basic curative, preventive and promotional services provided both in the facility and through outreach. The ODs, RHs and CHs are under management and supervision of the PHD.

Table 2: Public health system governance

Level of Operation	Management and governance	Service delivery
National level: Ministry of Health	- Overall responsibility of the health sector development and performance including policies, legislation, strategic planning, resource mobilisation and allocation, monitoring, evaluation, research, providing trainings to support PHD and coordination of financial and technical assistances and national health programmes (WHO, 2012)	National hospitals - 5 MOH hospitals in Phnom Penh with a range of specialist services ¹ - 2 private non-profit hospitals in Phnom Penh and 1 in Siem Reap ² - 3 Kantha Bopha Children’s Hospitals, funded by donors to provide services to children free of charge ³
Provincial Health Department (PHD)	- Implementation of health policies, ensure equitable distribution and effective use of resources, managing provincial HR and supporting the development and performance of ODs	RHs (CPA 3) located in provincial town (100-250 beds): - Highest level of RH - Usually located in provincial centre - As well as general surgery and anaesthesia services, provide specialist services

¹Five national hospitals include National Maternal and Child Health Center, National Pediatric Hospital, Calmatte Hospital, Preah Kossamak Hospital, and Norodom Shihanouk Hospital.

²Ang Duong Hospital specialising in ear, nose and throat and the Tuberculosis Center provides services to people with free of charge as of mid-2000s (Uy S et al., 2007).

³Kantha Bopha Children’s Hospital was re-established by Dr. Beat Richner with support from the Zurich Foundation in 1992. Dr. Richner was sent by the Swiss Red Cross to work at the Kantha Bopha Children’s Hospital in Phnom Penh 1974/5 and was forced to return to Switzerland during Khmer Rouge Regime. He was asked by the Cambodia Government to rebuild the Kantha Bopha Children’s Hospital in 1991.

Operational District (OD) (100,000-200,000 persons)	<ul style="list-style-type: none"> - OD is accountable to PHD for translating national policies into local actions, equitable distribution and effective use of resources and mobilising additional resources from NGOs to providing health services according to the community's needs, and working with the local community and authorities for outreach activities. - HR planning, deployment and staff needed by RH and HCs; and monitoring performance and function of RH and HCs under its catchment - Compiling the request for staff and capacity building from RH and HCs into OD human resource planning and reporting it to PHD for support 	<p>RH (CPA 1 and 2), mostly located in the district and under OD management:</p> <ol style="list-style-type: none"> 1. CPA1 (40-60 beds): <ul style="list-style-type: none"> - Doctors, nurses, midwives - Do not provide surgery or anaesthesia services <ol style="list-style-type: none"> 2. CPA2 (60-100 beds): <ul style="list-style-type: none"> - Doctors, nurses, midwives - Provide general surgery and anaesthesia services
Health Centres 8,000-12,000 persons	<ul style="list-style-type: none"> - Management of staff and reporting staffing needs to the OD for support 	<ul style="list-style-type: none"> - First point of contact - Mainly in rural areas - 1 or 2 staff – nurses and midwives to provide the MPA

The Referral Hospitals (RH) offering CPA are equipped with a doctor, nurse and midwife and are the second point of contact for referral services to a total 100,000-200,000 population. The RHs are classified into three categories based on number of skilled staff, number of beds, medicines, medical equipment, and clinical services (Table 3):

- CPA 1 RH, the lowest hospital level, has no surgical activities (without general anaesthesia) but at least it should have an obstetric service
- CPA 2 RH has emergency care services and surgical activities (with general anaesthesia)
- CPA 3 RH also have various specialised services including ENT, Ophthalmology (Table 2). The CPA 3 RH is the highest level of RH and is usually located in the provincial town and managed by OD operation.

The number of health facilities has increased over time as part of the reforms to increase primary health services in rural areas. To improve the effectiveness of health service delivery, the government introduced a policy to have one health centre (HC) in each commune and one hospital in each district under the Operational Districts (ODs) in 1996. In 2007, the government launched a second HCP 2008-2015 to speed up the establishment of health facilities in the ODs to improve access and to achieve universal health coverage. The government also wished to improve the quality of service and resourcing available.

The number of health facilities has increased from 76 in the late 1990s to 81 ODs in 2013. This includes 86 referral hospitals providing basic health care services and 1,088 health centres (HC) mostly located in rural areas (Department of Planning and Health Information, 2014). However, only 43% of HCs provide a full package of services because of a lack of key health workers, drugs, medical supplies and inadequate management of the rural government facilities (Chhea et al., 2010).

(Uy S et al., 2007) suggested that public facilities in Phnom Penh are better equipped, having well-educated and highly-skilled staff compared with facilities in provincial towns and rural areas. However, those facilities in Phnom Penh have also had many problems with poor performance. The public facilities in Phnom Penh are not first choice for many; the first option for urban people is to go pharmacies and/or private providers for a quicker, cheaper service (ibid).

Despite adoption of the 1995 HCP, health service delivery was, in practice, poor at the district level until peace was established in 1998. A year later, the MoH supported donor initiatives to pilot the contracting of district health service delivery to NGOs through a competitive bidding process. They used two approaches (contracting-in and out) with different degrees of management autonomy.

Implementation of contracting helped to improve the management and performance of service delivery at the OD if they were linked to financial incentives to increase staff performance. However, the model was not affordable to scale-up. Following 30 months of contracting-in and out, the MoH adopted a hybrid contracting arrangement with a mix of both approaches that was implemented in

Table 3: Different services provided by each CPA - Referral Hospitals

Type of Services	CPA1	CPA2	CPA3
1. Clinical Services	X	X	X
2. Emergency care	X	X	X
3. General medicine for adults	X	X	X
4. Surgery		X	X
5. Gynaeco-obstetrics	X	X	X
6. Pediatrics	X	X	X
7. Tuberculosis	X	X	X
8. Referral consultation and Kinetic therapy	X	X	X
9. Operation theatre and ICU		X	X
10. Oral and Dentist	X	X	X
11. Infectious diseases: TB, HIV/AIDs, Malaria	X	X	X
12. Medical audit for deaths	X	X	X
13. Specialized services			X
14. Laboratory	X	X	X
15. Blood bank			X
16. Blood depot		X	
17. Pharmacy	X	X	X
18. Imagery	X	X	X

Source: MoH (2006a), CPA Guideline for Implementation, 2006-2010

11 ODs during 2004 and 2008. Only partial responsibility for health management was delegated to the OD managers since the external contracting agencies (international and local NGOs) were held accountable for fulfilling contractual obligations (Vong et al. 2016).

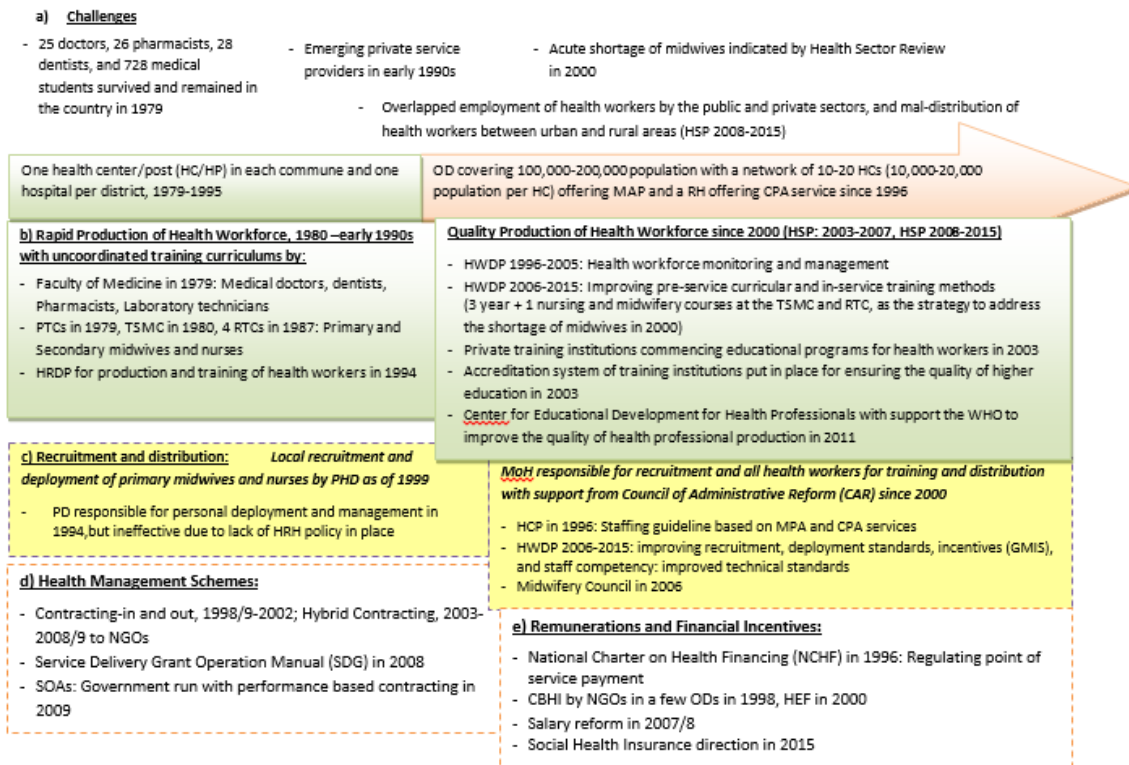
Drawing lessons from these models of health service delivery, the MoH has moved to adopt internal contracting in form of Special Operating Agencies (SOA). The SOA is the semi-autonomous management of service delivery within the MoH. It was scaled up from 11 ODs in 2009 to 22 ODs in 2010. The effectiveness of SOA adoption in terms of better service delivery remains the subject of debate among donors, international agencies and government. However, it is perceived by the government that it is the only model that improves stewardship and national ownership of resources to achieve universal coverage and equitable access to health care for people in Cambodia.

Human Resources for Health challenges

Having adequate health workers in public health facilities remains a critical challenge, as highlighted in the Health Strategic Plan (HSP) 2008-2015. These challenges include a shortage of skilled health workers, inequitable distribution, and difficulties attracting and retaining health professionals in rural areas. Health workers are often employed by both public and private service providers making it challenging to improve the quality of public services (Figure 4).

These challenges in HRH development and management are seen as the legacy of the Khmer Rouge genocide regime, where health professionals were targeted. This led to an HRH crisis which required the rapid production of health professionals to rebuild health care services.

Figure 4: Human Resource Development, 1975-2013



Increasing the production, recruitment and deployment of health workers at public facilities, especially in rural areas, has been a top governmental priority since the 1980s (Figure 4). This section discusses the challenges faced in the training, recruitment, distribution and retention of health workers.

Training of health workers

Starting in 1979, initial efforts were focused on increasing the numbers of health professionals, especially midwives and nurses, to support the reconstruction and development of health care services. All doctors, medical students and former secondary and high school students that survived were called to reconstruct health care services and training institutions (de Walque, 2004). All senior managers consulted agreed that:

“...In pre-1993, the health services in each province were governed and managed by the Provincial Revolution Committee, who paid salary and was responsible for recruitment, deployment and promotion of all health workers. Only a few of doctor, nursing and midwifery students survived after Khmer Rouge in 1979. They were all recruited for completing their training at the Faculty of Medicine, PTCs or RTCs or encouraged to work for the government by both provincial and national authorities. Each staff was asked to fill in their personal profile including name, age and level of education and background of their spouses, children and other dependents...” [PP_KII1]

In response to the urgent need to establish one HC/HP in each commune, the students with 7-12 years of general education were also welcomed and recruited by the local authorities and/or Provincial

Revolution Committee.

“...Only a few health workers survived. We had to recruit the former students with 7 -12 years of schooling to place for attending midwifery and nursing courses for 6 months at the PTCs started in 1979 or 9 month training courses at the RTC started in 1987. Each student signed the agreement letter to go back to work at the HP or HCs where they were from after the training...” [KD_KII3]

Local recruitment was an effective way to immediately increase the number of health workers. The government, with support from development partners, continued to establish public health services in the reconciliation process of Khmer Rouge Zones. As part of the peace building process, all former military medical practitioners of Khmer Rouge troops were welcomed and integrated by the government into the HRH management and governance system of the MoH.

Pre-1998, many areas were cut off by persisting armed-conflict, inadequate roads and poor communication. At that time, the local authorities were encouraged by the central government to recruit and train health workers for their respective provinces. One health manager recalled that:

“... We, as the PHD, were responsible for recruiting the primary midwives and nurses for attending RTC and deploying them to areas where they were from. The MoH was responsible for recruiting higher levels of cadres for training and distributing them to us for further placing them at the HPs/HCs...” [KC_KII2]

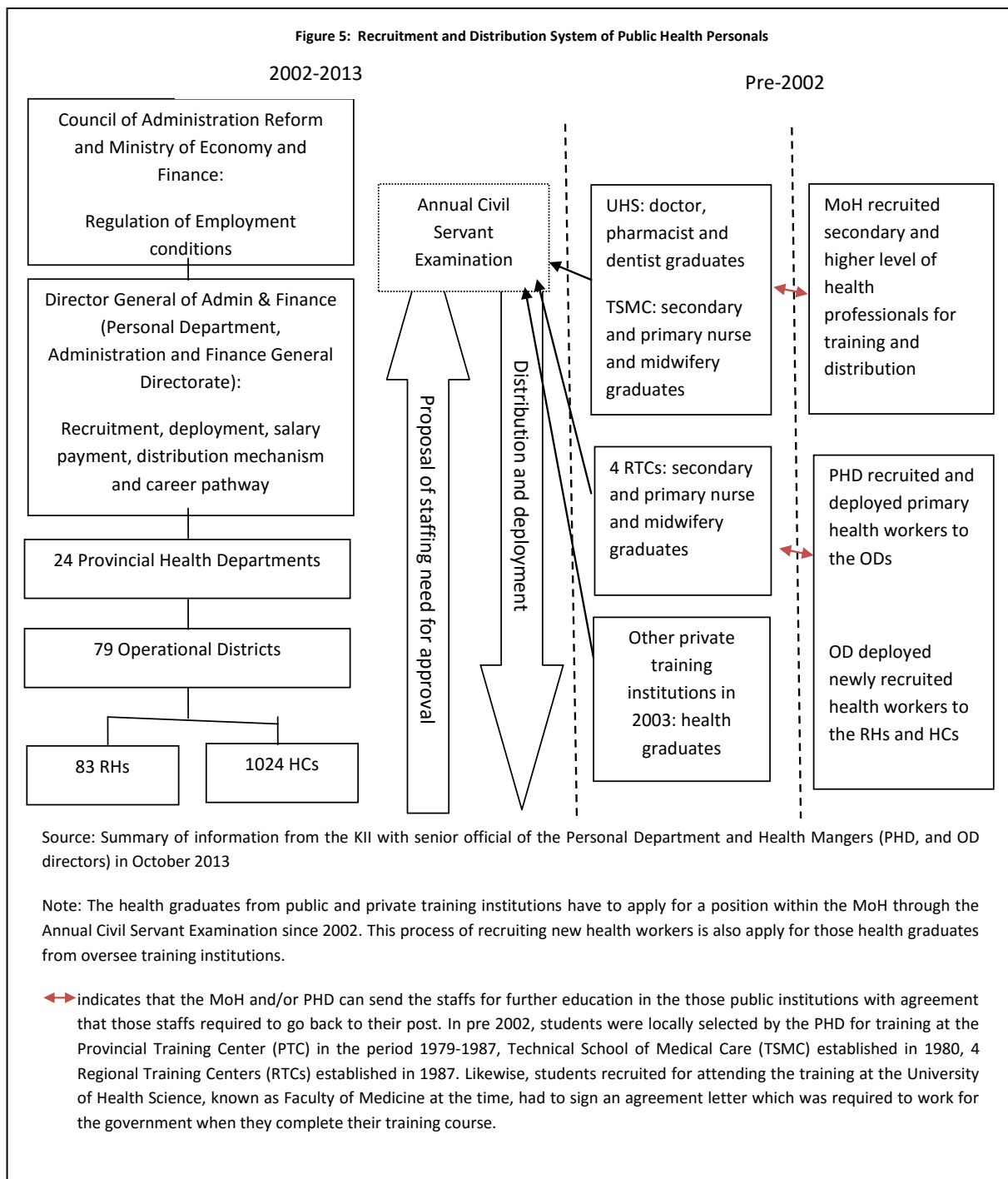
In this process of local recruitment for training, all students were required to sign an agreement that they would go back to work in the area where they were from after they completed their training courses. This was put in practice for primary and secondary midwifery and nursing students at the RTCs. Those students agreed to work for the government for three or five years after graduating (Bundeth et al., 2011 and Fujita et al., 2013).

Despite having increased the numbers of health workers through this local recruitment, the students selected from the resource-poor schools could often not fully learn what was taught at the RTCs and TSMC because of their lower level of education. In 2002, the government decided to develop a more coordinated recruitment system for health graduates aligned with the human resource planning (Figure 3). The senior managers have witnessed the change in practice that:

“...because of the concerns of poor quality of primary midwives and nurses who were locally recruited by us (PHD), the MoH then decided to take a full control of recruiting process of all cadres; but we, as the PHD, make and submit our annual personnel planning and staffing need and request based on MPA for HCs and CPA for RHs to the MoH and then wait for its response. This practice of recruitment was put in practice since early 2000s...” [K_KII2]

Recruitment challenges

Since 2002, all health personnel, except primary midwives, were recruited by the MoH (Figure 5) in order to improve the quality of health workers placed at public facilities. The managers of the HCs and RHs make the annual staffing request, the managers of the ODs consolidate the requests and submit to the PHD managers, who further consolidate the requests from the ODs, and then submit to the MoH for recruitment.



Under the new staff recruitment system, all candidates have to go through a number of screenings. Candidates were required to have a high school certificate with high scores to attend the RTCs, Technical School of Medical Care (TSMC) and University of Health Science (UHS). All candidates are required to pass a national exit exam and apply for a post within the MoH. They are then required to pass the civil service examination for recruitment and posting by the MoH.

Staff employment is regulated by the Council of Administrative Reform (CAR) (established in 2002), and the Ministry of Economy and Finance (MoEF). Personnel performance is managed and supervised by the directors of operational departments under the control of the Director General of the MoH. Within the MoH, the personnel department and the administrative and financial general directorate are directly responsible for administrative management and operations including recruitment, deployment, salary payment, distribution and career progression. In the recruitment process, the personnel department works together with other two departments to consolidate new staff requests from all PHDs into an annual personnel recruitment plan, which is endorsed by the Minister of the MoH. The annual request for recruitment of additional personnel is submitted to the CAR and MoEF for final approval.

Having adequate health workers is defined according to the staffing standards of the Ministry of Health for the HCs and CPA for the RHs (Table 3). Each HC should have at least 8 health workers, including two primary midwives, two secondary midwives and nurses. A doctor is not needed at HC level.

The focus of current recruitment is to have enough midwives to serve rural areas. As the result, all HCs are equipped with at least one midwife.

“... In 2013, about 75% of 1045 HCs have at least one secondary midwife. We should have 85% of HCs in 2014, and all HCs with secondary midwives afterward based on our recruitment ability...”. [PP-KII1]

Since the HCP was implemented in 1996, the MoH has increased the overall numbers of health professionals (Table 4). This has been possible through the increased budget available to the health sector and an increasing pool of the health graduates in the labour market (WHO, 2014).

Table 4: Health workers by category, national, 1999-2013

	1999	2008	2009	2010	2011	2012	2013
Medical Doctor	983	2,173	2,162	2,139	2,180	2,178	2,021
Medical Assistant	1,309	1,220	1,147	1,087	1,052	1,018	962
Dentist	N/A	172	177	189	212	214	226
Pharmacist	N/A	427	435	564	474	486	529
Secondary Midwife	1,568	1,806	1,825	1,863	1,994	2,432	2,734
Secondary Nurse	3,847	5,084	5,098	5,155	5,366	5,662	5,534
Primary Midwife	1,368	1,439	1,616	1,815	1,997	2,164	2,332

Primary Nurse	3,847	3,407	3,404	3,359	3,381	3,366	3,387
Secondary laboratory technician	N/A	428	420	424	442	454	460
Total		16,156	16,284	16,595	17,098	17,974	18,185

Source: Annual Health Statistics, 1999 and 2014

The MoH has not been able to sustain the numbers of medical doctors in public posts. The number of medical assistants has gradually declined from 1,309 in 1999 to 962 in 2013. This is due to the pre-service training course for medical assistants being stopped in 1995 (WHO, 2014). Table 4 also shows the decline in the number of primary nurses from 3,847 in 2008 to 3,387 in 2013. The government is more likely to allocate resources towards increasing the numbers of midwives and secondary nurses to meet staffing targets at the HCs.

In addition, for human resource planning the MoH set staffing norms by defining cadre to population ratios i.e. 1 doctor per 3,800 persons, 1 nurse per 1,750 persons and 1 midwife per 4,700 persons. To reach these targets the MoH needed to recruit an additional 621 doctors and 724 nurses in 2013 (Bundeth et al. 2011). Based on these staffing norms, the HCP 2006-2015 has projected the number of health staff needed to address staff shortages (Table 5).

Table 5: Projected numbers of staff and staffing gaps, 2006-2013

	2006	2007	2008	2009	2010	2011	2012	2013
Population (millions)	14	14.3	14.6	14.9	15.2	15.5	15.8	16.1
	Projected Numbers of Key Health Workers required							
Medical Doctor	2284	2332	2381	2431	2482	2534	2587	2642
Medical Assistant	1415	1445	1475	1506	1538	1570	1603	1637
Midwife	3000	3038	3127	3193	3290	3329	3398	3470
Nurse	8340	8515	8693	8876	9062	9253	9447	9645
<i>Source: Health Workforce Development Plan 2006-2015 (Secondary Draft)</i>								
	Numbers of Key Health Workers Employed by the MoH							
Medical Doctor	1114	1143	2173	2162	2139	2180	2178	2021
Medical Assistant	1006	1007	1220	1147	1087	1052	1018	962
Midwife	2547	2900	3245	3441	3678	3991	4596	5066
Nurse	6592	7069	8491	8502	8514	8747	9028	8921
<i>Source: MoH 2013</i>								
	Staffing Gaps							
Medical Doctor	1170	1189	208	269	343	354	409	621
Medical Assistant	409	438	255	359	451	518	585	675
Midwife	453	138	-118	-248	-388	-662	-1198	-1596
Nurse	1748	1446	202	374	548	506	419	724

Challenges in staff distribution

In the 1980s, medical doctors, experienced nurses and midwives were posted to the national and provincial MoH hospitals. The health centres and health posts were equipped with only one or two health workers with limited training (6 months at most) to provide very basic services, including vaccination, first aid and the promotion of sanitation and hygiene practices. There was a higher concentration of health workers in urban areas as security was the main problem in posting staff to rural areas.

“...we had almost no problem for deploying the primary midwives and nurses at the health centre since they were recruited with agreement to go back to the area where they were from...” [ST_KII1]

Most health centres were established in urban areas or on the compounds of the district and/or commune. A few well-experienced nurses and midwives were posted to district hospitals pre-1997/8. The fear of armed conflicts and poor road connections meant that midwives and nurses were placed in public facilities located in urban areas where there was good security.

“...Many areas in this Kompong Cham province still faced with high risks of life before the end of armed conflicts in 1998. At that time, we only had the military medical practitioners and I was one of them to provide basic medical services dealing with surgical operation and malarial treatment in Dambe district...”[KC_KII3]

Since 1999, insecurity has become less of a concern for deploying staff. However, it is still difficult to post doctors, secondary nurses and midwives to the remote rural facilities. There were inadequate financial and non-financial incentives associated with rural jobs, such as low pay, limited opportunities for private practice, poor educational services for children, housing and other amenities, weak management regimes, limited professional support, and distance from family (Ros et al 2011).

Table 6a shows the staff distribution across the six selected provinces. This review used the cadre-population ratios defined by the MoH to calculate differences between the official records of doctors, nurses and midwives over time. Doctors were in shortage across all provinces, nurses and midwives in Phnom Penh, and nurses in Kandal and in Kompong Cham. However, the distribution of midwives met the target staffing norms in 2012. Understaffing of doctors seems to increase, except for Stung Treng Province. Marginal improvement is made in the distribution of nurses. There is also a shift in midwifery distribution from Phnom Penh towards the other target provinces (Table 6b).

Table 6a: Population per Doctors, Nurses and Midwives, 1999-2012, by province

	Doctor			Nurse			Midwife		
	1999*	2008**	2012***	1999*	2008**	2012***	1999*	2008**	2012***
MoH's Staffing Norms	3,800 persons			1,750 persons			4,700 persons		
Phnom Penh	10,524	9,620	15,788	3,154	5,010	6,436	6,895	7,335	8,452
Kandal	12,080	9,103	11,925	2,155	2,909	2,925	5,403	6,730	4,350
Kampot	12,581	10,652	13,390	1,550	1,518	1,426	4,003	3,662	2,053
Kompong Cham	14,238	14,365	17,279	2,263	2,349	2,232	4,951	5,915	3,422
Battambang	8,813	8,093	16,406	989	1,131	1,648	2,240	2,253	2,204
Stung Treng	5,405	12,408	6,588	787	901	808	1,398	1,530	1,170

Source: * MoH 2006, **National Health Statistics 1999-2008 and *** MoH (2013), Health Sector Performance, 2008-2012

Table 6b: Factor Differences in Population: Staff compared to the MoH's Staffing Norms

	Doctor			Nurse			Midwife		
	1999	2008	2012	1999	2008	2012	1999	2008	2012
Phnom Penh	2.8	2.5	4.2	1.8	2.9	3.7	1.5	1.6	1.8
Kandal	3.2	2.4	3.1	1.2	1.7	1.7	1.1	1.4	0.9
Kampot	3.3	2.8	3.5	0.9	0.9	0.8	0.9	0.8	0.4
Kompong Cham	3.7	3.8	4.5	1.3	1.3	1.3	1.1	1.3	0.7
Battambang	2.3	2.1	4.3	0.6	0.6	0.9	0.5	0.5	0.5
Stung Treng	1.4	3.3	1.7	0.4	0.5	0.5	0.3	0.3	0.2

Note: 1 means that population per staff meet norms; otherwise, higher values indicate staffing deficits. For example, in Phnom Penh the number of population per midwife was 1.8 higher than the norm in 2012.

These staff distributions do not take into account of the number of doctors, nurses and midwives employed by the private service providers. Official records do not allow disaggregated analysis of the distribution of cadres by ODs, facilities and between urban and rural areas.

However, most of the PHD and OD managers said some new staff are not willing to go to their assigned posts. If they do, they are just waiting to complete their probationary period and ask for a transfer to work elsewhere. However, they remain recorded in their original posts in in the official records of health personnel. Evidence suggests that the MoH has limited capacity to fully implement rural postings. One ODs located in Phnom Penh reported receiving more midwives and nurses than the number put forward in their annual personnel plan.

“...We just established two additional HCs, one in Boeng Thom commune and another in Kop Srov commune about 20-30 kilometres from Phnom Penh city. For these two new HCs, we need a total of 16 health workers. Combining with the replacement of retired health workers for other HCs under this OD, I requested for 20 additional midwives last year. Fortunately, I received up 29 health workers including nurses and midwives who are being transferred from other provinces such as Oudor Meanchey and so on. It is good for our OD because I could deploy 2-3 health workers to the HCs in our OD. We now have more than 30 HCs, and each has at least 2-3 midwives. For many HCs, now, we have placed one or two Doctors working there. In late 1990s, I was only one doctor working here in this OD. Today, Pochentong HC has 30 staff including 4-5 doctors...”
[PP-PHP1]

Such generous cases rarely happen for the PHD in the other provinces. The number of new health workers received by those PHD or ODs varies and rarely reaches 50% of the number requested. Informants agree that official records do not tend to reflect the reality of the number of health workers who are working at the facilities under the OD operation.

“...For all HCs in our 5 ODs according to the MPA and CPA standard of staffing, we need have more than 100 staffs. We requested 100 to the MoH last year bit we knew the MoH will offer us only 50 staff from the total number it received from the CAR and Ministry of Economy and Finance...”
[BB_KII1]

“...unlike the local recruitment and distribution system that we practiced in 1980s and 1990s, many newly recruited midwives and nurses that we received from the MoH often are not willing to go the work in rural area. We often receive only the list of name from the MoH...” [ST-KII1]

“...We have 18 HCs under this OD; and number of in those HCs varies from 4 to 7 health workers. We cannot fully follow the MPA standard of staffing. Some HCs have 3 secondary midwives and 1 nurse; and some HCs with 3 nurses and one primary midwife or 1 primary midwives and 3 secondary midwives and 3 nurses. We received only 2-3 midwives or nurses in response to our request for 20 additional staff to the PHD in last year. I don’t really know when we can have enough midwives and nurses working at our HCs...” (KC_KII2]

Many midwives and nurses working in rural areas also lack practical experience. For example, a health centre in Stung Treng is equipped with four midwives who were not able to provide delivery services because they were new and had limited experience. During a visit to this HC, a woman had difficulty giving birth and faced a high risk of death after staying for two nights at the HC. Three midwives (2 secondary and one primary) were working together to help her but she still could not give birth to the baby. She had to be sent to the RH in Stung Treng province.

These chronic problems are associated with low wages, no accommodation and no motivating factors to encourage health workers to go and work in rural area.

“...we have a flat salary scale, limited opportunity for staff promotion for increasing salary and position and lower opportunity for extra income generation activities in those rural health facilities. In addition, each individual health workers has to heavily rely on the financial support from their family until they complete their probation period of one year to receive salary...” [BTB1]

Health workers often wish to go and work in urban area or their hometown instead of rural facilities. They get support from a high ranking official to have them posted in the area where they wish to go.

“..It’s really a big challenge for me since mid-1990s. Some staff do not want to work in rural area. Some raised poor accommodation with relatives while some complain about it’s hard for them to stay away from their family because they are female. Also, there is no special incentive for them to work in rural area; thus, no one is willing to work there. If we force them to work in rural area, they would ask for suspension from their position or intervention from high ranking official...” [BTB-KII1]

This has not been effectively addressed by the changes in the recruitment and distribution system. Health managers seem to favour local systems of recruitment and deployment. The new recruitment and deployment system has not yet enabled health managers of the PHDs and ODs to have dedicated staff with clinical competence working in rural areas.

A number of challenges are echoed by the health managers interviewed. Firstly, despite having better human resource planning in place since mid-1990s and an increasingly large pool of health graduates in the labour market, the number of health workers annually approved by the CAR and MoEF to be

recruited rarely reaches 50% of the staffing request put forward in the annual HR planning due to budget constraints. Secondly, the MoH restarted the midwifery course (3+1 year training course) to address the shortage of midwives in rural areas, however only a few students applied for the course, at least initially. A senior official suggested that:

“...We, ‘MoH’ planned to recruit an additional 120 midwifery students for the four RTCs between 2007 and 2008. Only a few candidates applied for the courses because of the fear of HIV/AIDs infection during provision of birth delivery service...” [PP-KII1]

Thirdly, the majority of the graduates wish to find employment in Phnom Penh (Bundeth et al. 2011). However, the senior official from the MoH argued that preference is given to rural candidates to offset this:

“...we, the MoH, give priority of the recruitment to the rural candidates if he or she receives the same scores of the national recruitment examination as their colleagues from Phnom Penh or developed provincial town...” [PP_KII1]

Fourthly, graduates from rural areas are often reported to have a lower education level. They often receive lower scores in the entry exam and in the national civil servant examination for recruitment. Health students are required to sit entry exams to undertake the midwifery and nursing courses at the RTCs. Through this process, the students from the resource-poor schools in rural areas are often screened out. For example:

“...the students from Stung Treng province cannot compete with the urban students for joining the health services. Unlike the urban student, those rural students have limited access to learning facilities including text books in English or French training materials. According to our past experiences they are willing to go back for working in their home village or commune. In contrast, those new staff from other urban area just come and they are not willing to go their post at the remote or least developed areas which are away from their home town...” [ST_KII1 and 2]

Fifthly, with inadequate support or incentives in place, rural positions are less favourable for health graduates.

“...Oudor Mechey province, one of the least developed provinces, requested for 30 health workers (midwives and nurses), but only 22 graduates applied for the position; but for other provinces, when the MoH made announcement to recruit only 50 health workers, hundreds of the applicants applied for the post...” [PP-PHP1]

The overall effect is that the current recruitment system is not adequately addressing the shortage of health workers in rural facilities.

“...I don’t really know when we can have enough health workers placed at the HCs and RHs based on the MPA for the HC and CPA for the RHs. We at total 203 staff working in this OD and 50 health workers were already retired; and I always keeping report the need for replacing

those vacancies to the MoH. So far I got only the names of new staff from the MoH but I rarely see their faces. Some of them came to work here for a while and when they completed their probations; they then asked me to move to other working place..." [BTB-SKII3]

In order to address the shortages of midwives and nurses in rural areas, the MoH introduced a Service Delivery Grant (SDG) in 2008 which allocated 20% of this budget for the PHD and OD to hire short-term or contracted staff to fill vacancies in public sector facilities, especially in rural areas. By 2013, all health centres reported to have at least one primary midwife.

Retention challenges

From 1979 to the early 1990s, health workers were reportedly very poorly paid and almost no midwives or nurse were willing to stay working in areas with a risk of armed conflict.

"...In 1980s, no primary midwife or nurse wish to work in Banan Health Posts located in the area with high possibility of attacking from Khmer Rouge. We had only one or two health agents who and a few months of training working there; and they were living close to the health centre and know the area very well. Most of those health agents later were encouraged to undertake the primary midwifery or nursing courses at the RTC. They then were placed back to their posts and remained working there since then..." [BTB_KII1]

Placing and keeping the health workers in the areas where there was relative good security was not a problem. Despite poor road conditions and a lack of infrastructure, the health workers were reportedly more than willing to stay and work in their assigned posts. Getting government employment status, social recognition and a sense of helping people were cited as motivating factors to remain working in rural areas. In addition, there was reportedly little difference in living conditions between urban and rural areas before the mid-1990s.

"...I and other three colleagues have been working in this district as medical assistant since 1980 after receiving a number of trainings. I was from Kandal province. Working condition as of mid-1990s was very terrible, no proper building, bad road and lack of medicines and equipment. We almost worked for food at that time. However, we were happy to work here because we can help our people. At that time, many people died of malaria, TB, Typhoid and so on. People suffered from lack of health care access. Things have rapidly changed after 1998 when the arm conflict ended..." [KC_KII3]

Social connections and receiving respect from society for being government employees were reported by the health managers as motivating factors for health workers to stay working in their assigned rural areas in the 1980s. This reflects the advantages of the local recruitment and deployment system. However, local recruitment and deployment worked particularly well when health workers were placed in areas close to their hometown.

"...Like other government official, we received meagre payment (food allowance and plus 10-15 USD per month) from the provincial revolutionary committee in the 1980s. At that time,

most people were poor. The living conditions of people were almost the same. Almost all adult members of the family had to work for making a living. We as the health workers could often get the supports and take care of our parents or family..." [ST-KII1]

"...We had difficulty to keep the doctor and medical associates in the rural post in the 1990s. Getting employment with government is important for them, but many doctors or medical associates often asked for transfer when they completed their probation period at that time or after a few years of working here..." [KD_KII1]

After the national election in 1993, health managers reported greater challenges in posting and retaining health workers in rural areas. Insecurity was then replaced by a more complicated set of issues including social and economic development, especially with emerging private health service providers (WHO 2012:1). Many health workers, regardless of their level of training, preferred to work in areas where there was an opportunity to do private practice.

"...Only a few midwives or nurses asked to change their working place after they got married with their husband and wife in other district or province in 1980s. After the national election in 1993, some started to look for alternative working place or post where there was a high demand for health care services, mostly in urban area that they can generate extra income from their private practices..." [MoH_KII1]

The 1990s was a difficult period to keep well-trained health professionals working in public facilities. There was an influx of external financial and technical assistants to support the reconstruction and development of the health sector. There was concern about the capacity drain from the public services to the NGO sector or to development programmes (Godfrey et al., 2000). Given the scarcity of well-educated personnel and in order to ensure the success of development interventions, NGOs employed health workers from public services to run their development programmes and/or projects. The advantages viewed by some health managers were:

"...We, the MoH and PHD managers, took advantage from those NGO health development programmes to deploy the health workers in the remote areas where there was acute shortage of health workers or health services..." [MoH_KK1]

However, a lack of coordination of the health development interventions, higher pay from the NGOs and private sector, and the flow of experienced staff from government led to a distortion in the capacity of the public sector. There were overlapping health development interventions in the fast developing areas which left the remote areas, often with difficult access, understaffed.

"...It was difficult for us, as PHD or RH managers, when some of our staff ask for leave without pay to work for the NGO who come to help our people. We could not stop them from going to work for NGO because they could not survive with the low salary from the government, but when we allow one to go, others feel jealous and took their own means to look to get support for leaving us or not fully commit to work full time at the HCs or RHs..." [KC_KII1]

Given the shortages of health and medical staff, the remaining health workers had greater workloads in the six provinces captured by this study. However, the health managers found it difficult to ban unofficial charges or informal practices in order to keep the remaining health workers working full time at the public facilities.

Since 2002, there has been low staff turnover in the public health sector according to official records. Staff attrition is estimated at around 1-2% per year across the total workforce and around 4% for primary nurses in the public health sector (Annear et al 2015). In five of the study provinces, the PHD and ODs faced great challenges to meet MPA standards of staffing for rural HCs in 2013. Many HCs are not yet able to provide full MPA services.

“...We received a number of doctors and medical associates from the MoH over the past five or seven years. Majority of them already have transferred to go back to the workplace located in their hometown after completing their probation period of one year or staying with us for a few years. There is limited opportunity for private practice. Most doctors or medical associates stay working with us because they got marriage with local son or daughter. For keeping primary midwives and nurses in rural area is less problematic for us...” [ST_KII1]

Retaining newly recruited health workers is however a problematic issue in the least developed areas or where there are poor roads, especially for female workers. It was echoed by all health managers that:

“...It was very difficult for us as the PHD managers to keep secondary midwives in the newly established HC located in the poor district. Many often try their best to get support from high ranking official for transferring them to work in the HC or RH of their own choice...” [KP_KII1]

Lacking opportunities for private practice is often cited as a demotivating factor for health workers in rural postings.

“...Unlike in the urban centre, most people are poor in the rural area; which is almost no opportunity for the staff to earn additional income from informal practices to support their family. With inadequate salary (about 50 USD per month for the primary midwives and nurse or 70-90USD for doctors), many staff find it difficult to make a living. They often search for support to transfer them to the place where they have informal practice for earning extra income...” [BTB_KII5]

Our key informants agreed with (Bundeth et al. 2011) that rural posts are less attractive for health workers. There are inadequate financial and non-financial incentives, including limited career development. With low salaries and no specially incentive package, the health managers often face great challenges in staff turnover. For example,

“...I think that about 300USD per month should be enough for a new staff to cover the cost of living and hiring accommodation for stay in the rural area. Unfortunately, my staff on average received the base salary about 50-100USD per month. It is not enough to cover the cost of living. Hiring accommodation cost each staff about 100-150USD per month...” [BTB-KII1]

In addition, the lack of access to quality education for their children also deters health workers from staying in rural areas.

“...Many staff here in this province have to send their children to take Bachelor course in Phnom Penh. I, director of the OD, had experience myself in supporting schooling of my sons studying at the university in Phnom Penh; I and my wife spent about half of our income, 500-1,000USD per month. I don’t think my staff in rural area can earn that much...” [KP-KII2]

Capacity building for the remaining health workers in rural areas is highly needed. KI report that primary midwives and nurses tend to take this opportunity to get promoted or to go and work elsewhere, especially in areas where there are opportunities for private practice to generate more income.

“...Four or five years ago in this RH, a few secondary nurses took further training to become medical doctor and then leave us when they completed their training...” [KC-KII3]

By law, staff are permitted to take a leave without pay from their post within the government for a maximum of four years since the mid-1990s⁴. Getting employment within the public services is reportedly preferable for health workers. However, some well-experienced doctors, secondary midwives and/or nurses take advantage of this by-law by leaving to work for the NGO sector for higher pay. Some returned to their posts, while the rest did not.

“...before my time as the director of this RH in 2000, four or five staff including doctor and medical assistant, unit head or management of this HR took leave without pay. Only two came back to work here after four or five of their leave without pay. The rest decided to work for NGO or private service provider...” [KC_KII1]

All health managers understand that staff are not allowed to take other jobs while working for government services. However, ignoring dual practice done by staff helps to keep them working in public facilities, particularly in rural areas. This is illegal but it is cited as an effective coping strategy for staff to cover the cost of living and offering their children proper schooling.

“...Our staff rely more on private business for making a living. Many staff just come to work at their post to get the name registered in public service. They set up their private clinics and spend some times in their post. I think it is very good for the MoH to enforce its policy that public health workers are not allow to set up their own clinics; and if they do they should leave public health sector; so far many staff have both for making a living. It is not good but that we accept for keeping the staff in their post...” [K-KII1]

⁴Anu-Kret on the legal framework of leave without pay dated October 19, 1995. <http://www.opendevelopmentcambodia.net/download/law/Anu-Kret%20on%20the%20legal%20framework%20of%20leave%20without%20pay%20%281995%29.pdf>. Accessed on June 2014

In summary, factors influencing the ability to retain health workers in rural facilities has moved from social status, recognition, and personal relationships in the 1980s/early 1990s to a new comprehensive set of socioeconomic factors such as the ability to make extra income to cover the cost of living and children’s education. However, low pay, lack of accommodation, influence from high-ranking officials, and limited opportunities for career development remain critical challenges to be addressed. Current human resource development and management policies have not yet been effective in addressing all of these factors. The mid-term review of the Health Workforce Development Plan 2006–2015 carried out in 2011 suggested a focus on rural recruitment and retention, increasing the number of recruits and improving the quality of workforce training. This challenge is reflected by a concern about the mal-distribution and deployment of health professionals noted in the HSP 2008-2015.

Challenges for motivation and management

Pay and remuneration

In the 1980s, all civil servants were offered a salary and a monthly remuneration such as milled rice, gasoline and soap. The package of remuneration was converted into cash in 1993. Pre-1996, public health services were free of charge for all. However, the fundamental constraint to effectively implement this policy was the low level of state funding and the low salary of the staff. To make a living, health workers had to find alternative incomes such as informal practice and/or taking informal fees in the public facilities. It was estimated that 45% of the facilities revenues came from out-of-pocket payments that benefited individual staff but did not cover the operational cost of the public health facilities. This often resulted in poor quality public health services (Bigdeli and Ir, 2010).

In 2008, the government reformed salaries to improve the performance of civil servants. Health workers received an annual salary increase of 10-15 %. The government further committed to have an annual 20% increase in basic pay for civil servants. However, only about 15% of the health budget is allocated to the salaries of 17,000 MoH employees (WHO, 2014:p15). On average, health staff receive a base pay of around 90 USD per month, ranging from 55 USD for vocational/enrolled/practical nurses to 153 USD for specialist medical practitioners (Table 7). No study has been conducted to analyse the standard cost of living for health workers, but contemporary studies tend to suggest that an average wage of US\$ 120 USD (WHO, 2014:P15) to 300 USD per month (Uy et al., 2007) is enough for an ordinary family living in the city in Cambodia.

Table 7: Average monthly salary levels, public health professionals, 2011

Professional category	Average monthly salary (US\$)
General medical practitioners	135
Specialist medical practitioners	153
Physician assistants/health officers	122
Graduate/registered/professional nurses	79
Vocational/enrolled/practical nurses	55
Secondary midwives	79

Primary midwives	55
Dentists	134
Dental assistants and therapists	122
Pharmacists	134
Pharmaceutical assistants	122
Physiotherapists	79
Radiologic technology and therapeutic equipment operators	79
Laboratory technicians	79
Skilled administrative staff and accounts	106

Source: Ministry of Health (2011) quoted in WHO, 2014:p15

Note: Public sector salaries range from 25-75USD per month with annual salary increase of 10-15 %. The state salaries started with 5USD and other packets (rice, cloth, sugar, cigarettes, soap, and petrol) in 1979; then in mid 1980s changed to 15USD per month for lower administrative officials, as noted in Korn, 2011. While salaries have increased in absolute terms every year to an average of about 80 USD per month in late 2000s, these salaries are far below the level required to maintain a suitable quality of life in Cambodia or subsistence level for a family. (Ibid).

Most health managers agreed that 300 USD per month would be adequate for individual staff in rural areas. However, this would not be enough to support children's education and/or family. Inadequate salaries often create an incentive for different forms of the private practice or high staff turnover in rural areas (Uy et al. 2007).

Staff management

Career progression

All staff are eligible for career advancement every two years. This occurs through a performance-based appraisal system and can lead to regular salary increments and promotions within a category. Within the MoH, the Director General for Inspection is responsible for this work. The PHD committee consists of five members, usually a director or deputy director, head of administration and personnel and two other staff. This committee is responsible for doing appraisals and giving scores based on performance. Seniority and length of work experience are not factors that are taken into consideration. Staff fill in the assessment form and submit it to the committee for review. The OD managers also make a list of staff that have had outstanding performance and submit to the PHD. However, this work is often reported as paper-processing. The outcome is determined centrally by the state secretariat and/or CAR. Many staff do not take it seriously because it will not translate into salary increments or promotion.

“...Our individual staff expected to have the career step advancement every 2 years. The MoH set a target of 70% of staff to be promoted for this year. The priority is given to those who haven't got any step advancement or have missed it for 2 years. It is not biased; and in principle, if any staff haven't got any step advancement for 3 or 4 years, they will be granted automatically. Some staff receive faster advancement than the others. He or she may be in the same category of midwife or nurse, but have higher step up to 14 while other reach step 5 of the salary scale...” [BTB-KII1]

Basic pay and allowances for civil servants are centrally defined according to category, rank, function, work experience, and salary grade. They are not based on performance, which means that the higher the rank of civil servant, the higher the salary (Netree and Craig, 2004). It is not applied to contractors or short-term staff who are employed by the OD or facility managers as they are not government employees. The allowances for civil servants are divided into four sets for monthly pay such as functional benefit, risk benefit, zone benefit and family support.

1. Basic pay is given to all staff apart from those who are retired or who have resigned. Each unit of basic salary is worth 300 Riels or \$ 0.075, which is used to calculate the total salary.
2. Functional allowance is allocated to all staff in categories A-C. The payment for each position is classified into five grades according to time and experience in the public service. Level 5 is for less than 3 years' service, Level 4 for 3-6 years, level 3 for 6-10 years, level 2 for 10-16 years and level 1 for more than 16 years. Financial benefits are based on these levels.
3. Risk benefits are for all staff who work in locations that have potential health-related risks, such as in remote areas. The amount is 1500 Riels per month, which is the equivalent to \$0.375 (ibid).
4. Family benefits are for all staff. This amount is 2500 Riels per month for each child and 3000 Riels per month for spouses.

Health workers also get paid for overtime work, which is known as stand-by. Increasing the level of pay within the category level is often considered as career advancement and used as management tool for staff motivation. However, it often takes time in the current process of performance assessment and/or reporting channels.

"...We review our staff performance in every 6 month based on the MoH formula of career advancement and make the proposal based on the results of the staff performance to the PHD for final decision. We give a range of scores for staff performance scores: 30, 50 and 70 based on a set of performance indicators such as presence at work and performance including provision of services, attending meetings and training workshops compared to individual plan of performance indicators and targets. If the staff get average score below 30 is fail to get career step advancement. For our RH, 50%-60% of our staff got approval for increasing their salary step or scale..." [KP-KII1]

The PHD managers confirmed that they received advice from the MoH to have a maximum of 70% of the total staff that should be granted salary increases.

"...Before doing staff performance review, we often consult with the MoH in advance for a maximum number of staff that we will receive approval from the MoH for making advancement. Those numbers should not exceed 70% of the total number of staff we have in the province. We also pass this information to the director of OD, RH and HC for their reference of sending the list of their staff to be promoted to next level of salary..." [KP-KII2]

The priority is to give career advancement to staff in rural posts, however in practice this is not always the case:

"...I don't want to talk about this issue of career advancement. Some of my midwives have been working here since the late 1980s. They still receive the same salary scale or in the same

ranking Kor 3-14⁵. I don't know about other staff in other HCs. One of our midwives will retire next year; and she has just received a two-step salary increase up to level Kor 4 a few days ago..." [ST-KII4]

PHD and OD managers also are able to award a letter of appreciation to motivate staff. The PHD and/or OD managers reportedly give award letters to a few staff every year to recognise staff commitment and performance. Health managers believe it helps staff motivation, but is not as effective as financial rewards.

"...For staff who had a good performance, we motivate them by giving them a Letter of Appreciation or increasing the level of their salary..." [BTB-KII2]

On the job training

On-the-job training is important for building clinical skills, particularly for new staff in rural areas. All managers in the PHDs and OD reportedly received around 10 clinical trainings per year for their staff since 1996. Current short courses and/or tailored-made trainings are made available to health workers through the national health programmes or NGO health care promotion projects. The focus of those trainings is to improve maternal and child health care, as well as HIV/AIDS prevention and care. The training or workshops often come at short notice to the managers of PHD and ODs, which makes it difficult to plan for capacity building. Most managers complain that:

"...with shortage of technical staffs, It is often difficult to release some staff to attend the trainings, especially when they often came at short notice. We had about 8 training workshops on HIV/AIDS for our staff at the HCs here in this province. I, as the OD manager, was informed one or two weeks before the trainings took place. There were no staff available for those trainings because they came at short notice and in conflicting schedule of the OD to undertake the priority actions based on the OD planning. Thus, I had to nominate some staff from other HCs and RHs to attend in those trainings, regardless whether they were dealing with people living with HIV/AIDS or not...." [ST-KII10]

Some managers rotate staff to attend the training courses. Besides gaining new knowledge and skills, staff also receive per diems. For some participants, the new knowledge gained from the training may not be relevant to their role.

"...it is often difficult for keeping on-going operation of HCs because we had only a few technical staff who also had completed their priority actions of their individual work plan..."[KC-KII3]

There are different views from health managers about rotating staff to attend training programmes organized by the NGOs. For example,

“...there are many NGOs working here in this Battambang Province to promote health care access. They often organised the training courses for their counterparts. We cannot allocate or rotate other staff to attend their training courses...” [KP-II2]

It seems that upcoming opportunities have not been well integrated into individual staff planning or management. The PHD and OD managers often reported that they received information about training opportunities just one or two months before the training is due to take place and that the load of training was sometimes excessive.

“...we have around 10 specific trainings for some staff a year. For some training courses, I just know when we have monthly meetings and it is already time for me to select my staff to attend those trainings. In some years, I feel there are too much trainings compared to other tasks that my staff have to complete according our priority. It is good for some of my staff but they also have to also fulfill their work performance. Yes, we do count the attendance in those training workshops as one of the outputs of staff ...” [KC-KII3]

Most health managers demanded further capacity building to improve clinical skills and competencies as well as ethical standards. Study tours are also requested by the health managers for their staff, especially for the new and inexperienced midwives and nurses and other key health personnel. However, there is a need for a more coordinated capacity building plan or better communications about the training opportunities well in advance. Without advanced notice about training opportunities it is difficult for managers to nominate the right staff to attend courses, which often leads to ill feelings and jealousy among the health workers who are working in rural posts.

Management training

All directors of the PHD and OD are medical doctors or hold an equivalent qualification, such as a Master’s degree and/or Bachelor of Public Administration (RGC, 2010). They have gained confidence in their respective clinical skills and accumulated experience in leading and managing specific units or health departments. They are then promoted to take a leadership role as a director or deputy director of the PHD, OD or RH. Most health managers have received training on hospital and/or health system management. However, they felt a need for further training on HRH management to improve the management of staff performance.

“...I received a 6-month training course on health management for managing staff performance in this OD. It was quite general including institution/agency management, staff management, drug management, and infrastructure and/or facility management. In addition, I also learned some management approach from meetings and workshop as being organized by the development partners and/or MoH for improving my RHR management skills...”[KC-KII2]

“...managing staff performance requires different or more advance managerial knowledge and skills to ensure that whole structure of the workplace are working well. HR management is about motivating and monitoring staff performance and make sure that my staff follow the working ethics...”[BTB-KII5]

The managers acknowledged that hospital management is different from HRH management. However, it still does provide some basic knowledge of staff management, which can be used for managing staff performance at OD and RH. Management skills have been improved over time through experience, self-reflection and attending management meetings and workshops.

“...In 2000, I thought that I had never learn how to manage people but I used to attend an OPERACY [leadership] course for a week or two and I picked up some ideas from that short course to apply and deal with problem in my management. From my working experiences, I have gained some useful skills to deal with all kinds of problems associated with staff motivation and management. I have applied my experiences to lead people; but never use any specific formula to run the entire hospital. Just get to know the root causes of the problems and try to find appropriate way to solve those problems for getting people’s participation and motivation to work. However, this is a big hospital for leadership in my professional life. I have never had any chance to study management technique per se, experiences can help me to manage this hospital; the questions that how can I persuade others to comply with the ways that I manage thing here? Frankly speaking, I am proud of being long term staff here. The advantage is that I know everything because I have worked under various management and leadership styles. I always put to myself to the problem: ‘if I was the staff, what would I feel and what I want in term of family needs and working performance’? After a year under my management, the percentage of use of hospital beds rose from less than 50 percent to 60-70 percent. This achievement was not the results of me alone but everyone’s efforts, participation and commitment to work. My staff keep all documents of staff attendance at work...” [KC-KII1]

Besides gaining knowledge and skills from various trainings, the health managers reported using the annual operation plan based on MPA and CPA standard of activities to manage staff performance. HRH management has reportedly improved output based planning and promotion.

Summary of challenges and how they have changed

Table 8 summarises the challenges in staff recruitment, distribution, retention and management experienced by health managers since 1979.

Changes in recruitment challenges: The focus of staff recruitment has changed from increasing quantity to improving the quality of health workers since 2002. It aims to increase the number of midwives to address the shortage of staff in rural areas via a coordinated planning process that was introduced in 1996. The number of staff recruited is largely influenced by the projection estimated by the HCP in 2006. The decision-making authority on staff recruitment has changed from the PHD to the MoH since the early 2000s. The MoH is able to achieve less than 50% of its annual recruitment plans due to the limited government budget allocated for human resource development and employment.

Changes in distribution and deployment challenges: Maldistribution of health workers still persists as of 2013. Contributing factors changed from conflict insecurity (1979-1997) to a lack of appropriate

incentive packages since 1998/9, including a lack of opportunity for private practice, education of children and limited career development in rural areas. The PHD and OD managers have positive views of local recruitment as an effective way of distributing, posting and retaining staff in rural posts.

“...we have no problem for distributing and posting the primary and secondary midwives who were locally recruited for the training at the RTCs. It was put in practice for midwifery students until 2006/7. With government scholarship, they were willing to go the place in or close to their hometown...” [PP-KII2]

Until the 1990s, there was little difference in the living conditions between urban and rural areas. Like other government officials, health workers reportedly received meagre pay. Since almost all health workers were posted in or close to their hometown they were willing to stay working at their assigned posts.

The new centralised recruitment and distribution system meant the PHD and OD managers received a number of new staff every year from different parts of the country. Most of them lived in urban areas and often refused to go and work in the rural regions. The health managers have mixed views on the quality and technical competency of those new staff.

“...to me, they may have better trainings in theory from their pre-service training courses, but those new midwives or nurses or even doctors are not yet competent to provide good service or perform their duty. They often need support from the old staff with low training certification but long experiences in doing their task here in this province...” [ST-KII4]

Table 8: Challenges of staff recruitment, distribution, retention and management 1979 – 2013

Timeline	Recruitment	Distribution	Retention	Management & Incentives
1979-1993	<ul style="list-style-type: none"> - Only a few health professionals survived - Local recruitment to support the rapid production and employment of health workers - MoH responsible for secondary and higher level of cadres for training 	<ul style="list-style-type: none"> - PHD responsible for primary midwives and nurses 	<ul style="list-style-type: none"> - Insecurity and bad road conditions - 1 – 2 health agents in HP/HC - A few midwives and nurses at district hospitals - Doctors at the PHD, MoH or provincial/national hospital - No problem with staff retention 	<ul style="list-style-type: none"> - Meagre pay in the form of food allowance from the provincial revolutionary committee - No standard management practices
1993-1999	<ul style="list-style-type: none"> - Local recruitment of primary midwifery and nursing students for RTCs - MoH responsible for higher level of cadres 	<ul style="list-style-type: none"> - Concentration of health workers in the urban areas - Very few health workers with 6-10 month training at most in the rural areas 	<ul style="list-style-type: none"> - Insecurity and bad road conditions - Difficulty in keeping doctors and other well-experienced staff in public posts, especially in rural areas 	<ul style="list-style-type: none"> - Institutional framework for distribution, retention and management since 1996 - Overlapping employment of the health workers in the

			- Brain drain from public sector to NGO sector for better pay	government and private sectors
2000-2013	<ul style="list-style-type: none"> - MoH responsible for recruitment of all health students - Lack of midwifery graduates for recruitment as of 2008. - Only a few students apply for midwifery courses - Screening out of most students from rural resource poor school through national entry exam and civil servant recruitment exam 	<ul style="list-style-type: none"> - Maldistribution of new health workers - Acute shortages of midwives in the rural areas as of 2009/10 - Most new graduates prefer a post in the urban areas, especially in Phnom Penh 	<ul style="list-style-type: none"> - Continued flow of health workers, except primary midwives, from rural to urban posts - Influence from some high ranking officials over postings - Unattractive rural posts due to inadequate pay, poor working conditions, shortage of drugs and medical supplies, limited opportunities for private practice, lack of career development and poor quality education for children 	<ul style="list-style-type: none"> - Managers overlook private practice to keep key health workers in rural posts - Limited ability of PHD to influence human resource management practice, including no control over the wages, budget, or staffing numbers, offer of financial rewards or discipline for under-performing staff - High administrative burden in managing and reporting on the various financial incentive schemes to different donors

Posting health workers to rural areas became a big concern that was intensified by the brain drain from the public health sector to the NGO sector that occurred in the late 1990s. This was not viewed as an overall loss of health workers because these well-trained staff still worked in the health sector through NGO health development programmes. The NGO programmes were reportedly working in the rural areas or urban poor areas where there was limited access to health care and a lack of competent staff. Godfrey et al. (2000) warned that the NGOs programmes operated with no coordination, often overlapped in the areas with road access and left the remote areas without support.

After the national election in 1993, the socioeconomic differences between the urban and rural areas became bigger. Posting health workers involved complex issues associated with inadequate incentive packages and weak management regimes (Bundeth et al., 2011). The students and candidates from the resource-poor schools who wished to join the health profession are largely screened out of the entry exam and the national civil servant recruitment exam. Since 2002, the new recruitment and distribution system means most newly recruited staff prefer to work in public facilities that are close to their hometown or in the urban areas where there are more opportunities for private practice.

Changing retention challenges: Informal practice generates extra income and so health managers adopt sympathetic management practices to keep health workers in public facilities, especially in the rural posts. However, this practice has not been effective for posting and retaining health workers in newly established HCs in remote regions. At same time, the chance to run their own clinic or provide private services attracts well-trained or experienced health workers from the rural areas to urban areas.

Official staff distribution records also reveal a mismatch between the numbers of health personnel officially recorded and actually working in their assigned posts.

“...it is difficult now day, some secondary midwives, nurses, medical associates or doctors from other provinces do not come to their post very often as other health workers after their names were deployed to work at the facilities in this province...” [ST-KII1]

The names of those health workers are reportedly kept in the official list of staff while they are working elsewhere.

“...I cannot blame my colleagues who are the managers of health CH or RH; and it is not only happening in this province. We often reported this situation to the MoH and often wait for the decision to take their names from our official lists of the staff record for a while; and in some cases up to a few years...” [KP-KII1]

This rarely happened in the 1980s when the HRH management was under the responsibility of the PHD or provincial revolutionary committee.

“... with our local recruitment, we never faced such problem...But I did agree that those staff were lacking of technical ability to perform their dusty...” [BB-KII1]

Unequal deployment of health workers persists as of 2013.

“... some HCs in this OD have only one primary nurse or midwife compared to the MPA staffing requirement of 2 each of this category. For example in [name] Health Center, there is only one primary nurse and three primary midwives. In [different name] Health Center, there are 7 health workers: one primary nurse, 2 primary midwives and 4 secondary level health workers. You see that is what we received from the PHD/MoH...” [KC, male, KII3]

4. Policy responses

Pre-service training

Improving the quality of pre-service training is prioritised in the Health Workforce Development Plan Strategy, 2006-2015. With technical support from development partners, especially WHO, the government committed to:

- Strengthen pre-service education of health personnel to improve the quality of new health graduates
- Establish a mechanism to regulate the production of the health workforce through national exams
- Strengthen existing RTCs to boost the production and quality of health workers to service their communities, including strengthening the mechanism for financial and technical support

- Strengthen the role of the Center for Development of Health Professions (CDHP), initiated by WHO, to develop and review competency-based curricula, build the capacity of faculty members and create other training materials for quality education.

Since 2002, the Council of Ministers is the ultimate authority for managing and regulating health education institutions. The Ministry of Health and Ministry of Education, Youth and Sports (MoEYS) control and ensure the quality of education for health professionals. The Human Resource Development Department (HRDD) of the MoH is responsible for the provision of pre-service training as well as monitoring and coordinating activities related to the further training of health professionals employed by the government agencies. Private health training institutions are growing in numbers and are under the regulatory authority of MoEYS but hold technical accountability to the MoH (WHO, 2014:p7).

In 2003, the Accreditation Committee of Cambodia (ACC) was established and is responsible for the accreditation of all higher education institutions. Its mission is to ensure the quality of education and improve the management structures, duties and obligations for all institutions providing bachelors and higher degrees. The ACC provides two accreditation processes: assessing foundation year programmes and assessing education quality based on nine minimum quality standards. In 2009, the ACC issued two further directives: one on the accreditation procedure for higher education institutions and another on the accreditation process for assessors. Nine minimum standards and two directives are the only legal instruments used for accreditation of higher education institutions. However, they do not cover the clinical quality standards necessary for health. The national entry exam was established by the Prime Minister through sub-decree 21, and is the national examination for health regulation. Limited capacity and resources means the ACC only accredits foundation year programmes (ibid).

The pre-service training of health professionals moved from ad-hoc activities in the 1980s, to a standardized curriculum and coordinated training system in mid-1990s, to having a better quality of health professionals trained since 2000 (Table 9). This change is confirmed by the increasing length of primary midwifery and nursing courses from 9 months in the 1980s (McGrew, 1990) to 12 months in the late 1990s to starting nursing-midwifery courses (3 years + 1) since 2002 (Fujita et al, 2013). This was largely driven by development partners in mid-1990s and from a mid-term review of the health workforce plan in 2000. The MoH took actions to rationalise 56 categories of health workers into 29 categories for training institutions and career progression management (ibid). To ensure the quality of health workers trained, the ACC was established to accredit all institutions by assessing foundation year programmes (WHO, 2014:P7-8). In 2008, the second HSP 2008-2015 provided policy direction to revise the training content, increase student intake, and improve the quality of training and trainers. At the same time, the government set the basic requirement of a high school diploma for all health and/or medical courses, including primary and secondary midwifery and nursing and national entry examination for doctors, pharmacists and nurses. All health students are required to pass the national exit examination to get their license to practice in the health profession.

In practice, the change in focus of pre-service training from quantity to quality hindered the capacity of the MoH to attain staffing standards at the RHs and HCs, especially to address the shortage of midwives in the rural areas (Fujita et al., 2013). The government decided to decrease the number of

the students, except midwives, attending those RTCs since 2008 (Bundeth et al 2011:p207). Following a situation analysis of the HRD in 2000, the primary midwifery courses at the RTCs restarted in 2003. The government continued to use local recruitment with students signing individual agreements to go back and work in rural areas. All students at the RTCs received government scholarships and agreed to work for the government for three to five years (ibid).

To address the shortage of midwives and nurses in rural areas a senior official of the MoH confirmed that:

“...special condition was offered for direct entry of primary nursing and midwifery students (1 year-training) from the remote northeast region with local recruitment and deployment mechanism. ...” [MoH_KII1]

Training Institutions

Table 9: Number of public and private training institutions in 2011

Type of Training Institution	Public	Private	Total
Medicine	2	2	4
Dentistry	1	1	2
Pharmacy	1	2	3
Nursing	6	5	11
Midwifery	6	5	11
Laboratory Technology	1	1	2
Imaging and therapeutic equipment operation	1	0	1
Physiotherapy	1	0	1
Public health	1	0	1
Sources: MoH quoted in WHO, 2014:p13			

Private training institutions emerged in the early 2000s and have grown in number, offering pre-service training (Table 10). Coordinated data for admissions and graduates from both public and private institutions is needed for systematic monitoring of the quantity and quality of health workers produced by these private training institutions. Improving the quality of health personnel

through reforming the human resource development system is set out in HSP1: 2003-2007, HSP2: 2008-2015, HWDP: 1996-2005 and 2006-2015.

For training health professions, there are three types of public institutions including:

- 1) The University of Health Sciences (UHS), the successor of the Faculty of Medicine which provides scientific and vocational trainings for health personnel and consists of three faculties: medicine, pharmacy and dentistry. Under the UHS umbrella, the Technical School of Medical Care (TSMC) offers diploma courses in nursing, midwifery, laboratory technology, physiotherapy and radiologic technology.
- 2) Four regional training centres (RTCs) established in 1987 and located in Battambang, Kompong Cham, Kompot and Stung Treng provide training for primary and secondary nursing and midwifery.
- 3) Institute of Health Sciences of the Royal Cambodia Armed Forces also trains several categories of health professional such as nurses, midwives, medical doctors, pharmacists and dentists to serve in country's armed forces. It also provides a fee-paying training to members of the public who are not necessarily in the armed forces when they complete their trainings.

Increasing the number of health graduates

The number of students that are admitted and graduated from UHS, TSMC and RTCs has significantly increased, the quality of pre-service education has been strengthened, and school management has improved (WHO, 2014). The total number of health professionals trained and graduated from three public training institutions is about 6,700 or on average around 967 graduates per year between 2005 and 2011. The Personnel Department has increased annual civil service recruitment to absorb those new graduates. However, only 61% of the new graduates have been recruited to work for public health services while the rest has to find their employment in the private sector (Table 11). Many vacancies are in health facilities in rural areas. It is uncertain whether the new graduates will be happy to apply for unattractive posts in those rural areas given the limited motivation and incentives.

Table 10: UHS, TSMC and RTC graduates entering MoH employment, 2005-2011

Professional category	Number of graduates		Employment by MoH		
	Total	Annual average	Total recruitment	Annual Average	% of graduates in public employment
Primary nurses	706	101	738	105	105%*
Secondary nurse	2606	372	1478	211	57%
Primary midwives	1282	183	1132	162	88%
Secondary midwives	1055	151	460	66	44%
Laboratory technician	269	38	139	20	52%
Physiotherapist	173	25	107	15	62%
Medical doctors	609	87	244	35	40%
All categories	6700	957	4298	614	61%

Source: WHO, 2014

*Note: The total number of primary nurses recruited by MoH outnumber the graduates from public institutions, suggesting undocumented graduates from private trainings institutions come into increasing pool of health graduates in the labour market available for recruitment and employment by MoH.

The HCP 2008-2015 projected the number of health personnel required for the period 2008-2020 based on cadre-population ratio. The recruitment and distribution plan is largely influenced by this projection. Nonetheless, the results have not been used to regulate the numbers of health students trained at private training institutions (Bundeth et al 2011). There are no records of the number of health graduates from the private training institutions since they emerged in the late 2000s.

Ensuring quality of health graduates

The quality of pre-service training is still limited by content and hospital-based trainings, limited technical quality of teaching staff, language, computer skills, and poor quality monitoring (MoH, 2008). There is not enough incentive for the instructors to improve their teaching materials and methods since most of them are also running their own clinics and/or private business. WHO (2014) also suggest that many teachers in the TMSC and RTCs do have sufficient knowledge in midwifery or teaching methodology; more than half do not have any clinical experience. While there is great need for continuing education, there are often limited opportunities for teachers or trainers to attend capacity building courses since they have to fulfil many other duties and responsibilities apart from teaching such as management and administration. In 2011, the Centre for Educational Development for Health Professionals (CEDHP) was established and twinned with the University of the Philippines, Manila, to improve the quality of the health education system; including the development of a competency based curriculum, lesson plan formulation and examination construction. However, challenges remain, including language skills to access teaching materials.

“...Upgrading curriculum is one of priorities for improving competency-base courses of the UHS. We do have new and update curriculum; and we encourage the teachers to develop the teaching plan but it is very difficult for those professors to upgrade the teaching materials. Many of them still used traditional teaching methods because they don't have English and are not competent in access the internet...” [feedback at CDRI Annual Development Research Forum in February 2015]

Recruitment and retention policies

Table 12 shows the key policies and actions taken to improve recruitment and retention of health workers in the rural areas. In 1996, the MoH introduced the first health coverage plan (HCP: 1996-2005) which provided the first guideline for recruitment and staffing at the Health Centers and Referral Hospitals based on MPA and CPA service delivery. In 2008, a second HCP (2006-2015) documented the number of health professionals needed by category to address the shortages of health workers, especially midwives and nurses in the rural areas. Strengthening recruitment and distribution are also highlighted in the Health Strategic Plan (HSP) for 2003-2007 and 2008-2015.

To improve staff distribution and retention of health personnel in the rural areas, the MoH designed three strategic directions (MoH 2006:p39). The first was to align HR planning and personnel management with health sector planning, the HCP and sector development plan. Second was to develop HR management ability to deploy staff in underserved areas through the contracting of health service delivery. The third strategy was to increase and retain midwives in public sector facilities by offering them attractive remuneration and benefits packages.

In response to acute shortage of midwives in the rural areas, the Health Strategic Plan 2003-2007 provides direction to increase the number of midwives recruited, deployed and retained in the underserved areas. The MoH was concerned that there has been little change in MMR over time, as indicated by Demographic and Health Survey 2005. The MoH, with support from WHO and other development partners, mapped out the number of staff required by category in the second health coverage plan, 2006-2015. The MoH also established a midwifery deployment task force to prepare

strategies to reallocate midwives to meet the targets. As of 2009, all HCs were equipped with a midwife, but about 60% of HCs only had primary midwives (Fujita et al. 2013) (primary midwives are supposed to operate under the supervision of secondary midwives).

Table 11: National health policies with implications for HRH

Policy	Implications for HRH	HR management changes
HCP 1996-2005	Improving health infrastructure and establishing staffing guidelines for CPA of RH and MPA services at HC to increase health coverage Limited ability to keep qualified staff and high staff turnover	- Local HRH management planning and centralized decision-making for staff recruitment and distribution to address the shortages of staff in rural areas
Health Financing Charter 1996	- Increasing per capita expenditure on health and reducing out-of-pocket expenditure - Introducing and scaling up of financial protection schemes, HEF, vouchers, government delivery incentive schemes - Sector wide funding coordination mechanism (HSSP)	- CBHI in 1998, HEF in 2000, Vouchers in 2007 are managed by NGOs - Government midwifery incentive schemes in 2007 are managed by the MoH, PHD, ODs and facility level operation - Using a large portion of the income from these schemes to increase income and motivate staff
HSP: 2003-2007,	- Increasing the number of midwives through basic training and strengthen the capacity and skills of midwives already trained through continuing education. - Strengthening HR planning to reduce maldistribution of the numbers and type of workforce through identification of posts and the reallocation of staff. - Enhancing the management, technical skills and competence of all Ministry of Health workforce through quality, comprehensive training, education, retention and support measures.	- Midwifery courses (3+1) in 2002 for addressing shortage of midwives in the rural areas - Shifting the recruitment of midwifery and nursing students from PHD to MoH for better coordination and quality of in service training in 2005 - Accreditation Committee for Cambodia to ensure the quality of higher education in 2003
HCP 2006-2015	- Health workforce projection for HRH planning to achieve universal health coverage - Comprehensive plan to improve availability, recruitment, deployment standards, incentives (GMIS) for midwives	- Hiring short-term staff with one year contracts to fill gaps in recruitment but with no authority to retain them - Absence of staff in post and staff transfers are a critical challenge in staff retention and HR management

	<ul style="list-style-type: none"> - Improving staff competence: technical standards, pre-service training curricula, in service training methods 	
HSP: 2008-2015	<ul style="list-style-type: none"> - Staff distribution and retention: Aligning HR planning and personnel management with health sector planning and HCP, developing and implementing HR management policies to deploy staff in underserved areas through contracts, increasing the number of midwives placed and retained in public sector facilities through effective implementation of midwifery incentives 	<ul style="list-style-type: none"> - Center for Education Development for Health Professional set up in 2011
HSSP (HSSP) Phase I: 2004-2008 and II: 2009-2015	<ul style="list-style-type: none"> - Phase 1: support from ADB, DFID, UNFPA, IDA, WB; Phase 2: AFD, AusAID, BTC, DFID, UNFPA, UNICEF, IDA/WB - Providing mechanism for improving coordination of pooling fund - Technical working groups for health (national and provincial); sub-technical working groups 	<ul style="list-style-type: none"> - Contracting in-out: 1998-2000 - Hybrid Contracting: 2003-2008 - SOA:2009-present - Service Delivery Grants introduced in 2008 <p>All provided increased varying degrees of increased autonomy in paying and managing HRH at local levels</p>

Hiring short-term staff

In 2008, the MoH launched a Service Delivery Grant (SDG) and operation manual. This SDG is funded from HSSP phase 2. 80% of this SDG fund is used for staff incentives and 20% is allocated for other priority activities (WHO, 2014:15). The managers of HCs and/or RHs are allowed to use the SGD grant and revenue collected from user fees to employ contracted staff.

“...We have 5 ODs and lack of 100 health workers. We received only 50 new cadres from the MoH...”Thus, I have hired 37 additional staff including 35 nurses and 4 doctors, but 2 doctors have already left us. I use the incomes of facility generated from health financing (user fees) to pay them based on their individual contract made on yearly basis...” [BTB-KII1]

Getting government employment is preferable for health workers because of job security. In addition, recognised qualifications and work experience in the public system was important for staff pursuing private work. Seniority was attractive for health workers to stay working with public services. Community people preferred to go to private clinics to seek help from senior health providers who had worked at public services (Chhea et al., 2010).

“...No one wishes to leave government services. Between 1980s and 1990s, it was easy to get employment within public health sector for the new health graduates. Unlike in 2007/9, it is even tougher for midwives nowadays to get a post within the public health sector. All newly recruited staff had to pass the national recruitment exam...” [MoH, male, KII1]

The health staff had no concern about losing employment after completing their probationary period, according to KI. Like other government officials, they have a secure job if they get sick. In addition, they are allowed to have a minimum of four years leave without pay, which was not available in the private sector. The main concern was about the retention of well-experienced health workers in rural posts.

“...about half of midwives surveyed in 2007 said they did not want to change from their current site of work in 1-5 years. Working place closed to their family or they also reach the age of retiring were main reasons for them to continue working in their assigned post...” [MoH, male, KII2]

Continuing employment within the MoH system is an option for well-experienced health workers. Those with technical competency may choose to leave the government service to work with NGOs or private sector for better pay.

“... One of my doctors had left us to work for NGO programme in 2009. He got about 3000USD per month from the start. His leave with pay already exceeded four years. He had not come back to his post...” [KC, male, KII2]

Financial incentives

Salaries

Inadequate remuneration contributes to the maldistribution and poor retention of health workers in rural areas and the inability to ban informal practices among health workers in public sector. This challenge is well acknowledged by all stakeholders including policy makers, donors and health managers. In order to address this, the government has undertaken a number of financial reforms i.e. the formalisation of user fees in 1996 and a salary reform for civil servants in 2002. As the result of salary reform, salaries increased from about 24 USD (IMF, 2002) to about 33 USD per month⁶. The government also committed to an annual increase of 10% -15 % between 2005 and 2008, a further 20% increase between 2009 and 2014 (World Bank, 2013), and a salary system reform which was yet to come in 2015.

“...the low salaries civil servants currently get paid, they often must take second or third jobs that leave them little time to devote to their public posts. With only 10 % or 20 % raises a year, it is not going to help because we are still going to have poor services. It will not change the

⁶<http://unpan1.un.org/intradoc/groups/public/documents/un/unpan023231.pdf>, accessed on June 10, 2014

system...” (Quote of a senior government official in Cambodia Daily, November 28, 2013.)⁷

The government has announced that the minimum salaries for civil servants will increase to 250 USD by 2018⁸. World Bank, (2013:p1) noted that despite more than a decade of across-the-board increases in basic salary, the public sector pay remains low, creating major difficulties in attracting, motivating and retaining public servants.

Health professionals can earn income from at least two main sources by working at a public facility and doing informal practice and out-of-office hours work. The amount of basic salary is categorised and each category has three grades as shown in Table 14. In addition, staff also receive functional allowances which range from 23 to 40 USD for the OD directors to 10 USD to 17 USD for primary midwives (RGC, 2010, p.38). In 2013, health workers received an average monthly basic pay varying from 63USD for category D to 151 USD per month for C. This has gradually increased from the average range of 15USD for category D and 100USD for category A in 2004. These basic salaries are relatively lower than the average salary for garment workers reported in 2004. According to the health managers, this salary can only cover a very basic living cost for junior health workers.

Table 12: Monthly Salary of Civil Servants Compared with Local NGOs and Private Sectors (USD)

Category	Civil Servants				Local NGOs			Private Sectors		
	2004*			2013**	2004*			2004*		
	Min	Max	Av	Av	Min	Max	Av	Min	Max	Av
D	10	20	15	63	74	98	84	52	81	68
C	20	45	30	80	108	217	187	87	154	130
B	30	50	40	104	208	257	225	104	230	163
A	50	200	100	151	276	520	390	217	1192	700

Note: * the figures are reproduced from the Netree and Craig 2009. ** The figures are drawn from HR Inc. Cambodia, (2013), Cambodia Public Health Compensation and HR Review.

Since the mid-1990s health workers received supplements on top of their salary that were implemented to increase staff motivation and income. In 2012, the average amount of incentives received by health workers is estimated to be around 126 USD per month or 22% of total income. The income from government salary and incentives is estimated to be around 42 % of total monthly income that health workers can earn from dual practice. It is apparent that the health workers in rural areas could earn half the income of those working in urban areas (HR Inc Cambodia, 2013). It is also important to notice that non-SOA staff earned more on average, driven by dual practice (Table 15). Men also earn significantly more than women on average. For skilled professionals, the government pay varies from 170USD for primary midwives to 320USD for specialist doctors.

⁷<https://www.cambodiadaily.com/archives/government-prepares-civil-service-pay-overhaul-48063>, available on May 28, 2015

⁸<http://www.phnompenhpost.com/post-weekend/gov%E2%80%99t-announces-wage-raise-civil-servants>

Table 13: Average Earnings in USD by Rural and SOA Classification and Gender of Health Professionals in 2012

	Rural Area (N=1074)	Urban Area (N=1634)	SOA (N=784)	Non SOA	Total Health Workers (N=2708)	Male (N=1574)	Female (N=1135)
Gov. Salary & Allowance	100	126	117	115	116	125	103
Incentives	107	139	170	108	126	126	126
Dual Practices	148	456	244	370	334	425	207
Total	356	720	531	593	576	676	436
Percentage of comparing with total monthly income from all sources							
Gov. Salary & Allowance	28%	18%	22%	19%	20%	18%	24%
Incentives	30%	19%	32%	18%	22%	19%	29%
Dual Practices	42%	63%	46%	62%	58%	63%	47%
Total	100%	100%	100%	100%	100%	100%	100%

Source: HR Inc. Cambodia, 2013

Informal/Dual Practice

According to article 35 of the common statute of civil servants, a number of practices are not allowed, such as:

- Undertaking work for personal purposes during hours of service
- Using the authority of their position for personal profits or to threaten or violate the rights of citizens
- Undertaking an activity that undermines the honour and integrity of their position
- Being a member of board of directors or managing a private company or enterprise
- Publishing information related to their position or the functioning of the institution without the prior authorization of the head of institution
- Working in a profession forbidden by the particular statute of their body (RGC, 2010).

In this regard, all health managers know that taking a second or third job is illegal by law. Health workers recognise that dual practice is banned to improve the performance of staff at public facilities. However, health managers cannot enforce these regulations and often informally accept their violation. It as a management strategy called '*Sympathetic Management Practice*' to keep key health workers working at public facilities.

"...we never want to violate the regulation or rule of the government but if we strictly obey the laws to ban the informal practices, we may lose our staff because they cannot make a living. We all wish to have our dignity and recognition. We don't want to get blamed from our department director. I, as the manager, have to close one eye and open another for making sure that we sure that we can have staff working at the health center or RH for 24 through rotation arrangement of staffs..." [KC-KII1]

HR Inc Cambodia (2013) found in their survey that about 50% of health professionals undertake dual practices. 68% of Category A are believed to have another job compared with 22% of Category D staff. In informal practice, they can earn on average around 84 USD per month for a primary midwife to 1,099 USD for a specialist doctor as long as they respect working hours, abiding by internal regulations and avoid any informal charges or payments or prescriptions for private pharmacies while in their public roles. This practice was strengthened by contracting arrangements. However, it became loosely controlled by the SOA model (see above). The increases in Government pay are not yet large enough for health workers to cover the cost of living or support their family. This often results in weak performance and an inability to improve productivity and the quality of public health services (HSP 2008-2015).

Many studies indicate there is limited opportunity for informal practice in rural areas and that most health graduates wish to stay and work in the urban areas (Bundeth et al. 2011). Dual practice also leads to the transfer of clients from public services to private service providers, which can reduce the income and reduce the efficiency of public facilities (HR Inc Cambodia, 2013).

Other financial incentives

In regard to strengthening staff motivation and retention in rural areas, the health managers often refer to the financial incentive package policy introduced in 1996. Action plans have been proposed to boost resources, management and incentives to improve staff commitment.

- In 1996, user fees (UF) were introduced as part of overall health financing reforms to improve access to health services. It was piloted in the National Maternal and Child Health Centre and then scaled up across almost all public health facilities since 2008. However, the user fees act as a barrier for the poor to access health care (Bigdeli and Ir, 2010).
- In 2000, the government launched the health equity funds (HEF), which are operated by a third-party to subsidise poor patients who cannot pay (Annear et al., 2008). Targeting the poor was piloted and has been gradually scaled up across 48 ODs, covering 70 % of RHs and 45% of HCs in 2013. Available evidence suggests hospital-based HEF effectively addresses financial barriers to access and reduces out-of-pocket health expenditure (MoH, 2014). In 2012, in a further 11 ODs, the MoH operated a government subsidy schemes (SUBO) without third party management and featuring a more restricted benefit package (MoH, 2012).
- In 2005, the government, with support from WHO, developed a master plan for Social Health Insurance after a pilot test of community-based health insurance (CBHI) by NGOs. As of 2011, a total of 18 CBHI schemes have been implemented in 17 ODs, covering 170,490 members (Kimball et al., 2013).
- In 2007, government midwifery incentive schemes (GMIS) paid 15 USD per delivery in HCs and 10USD in RHs. This was designed and funded by government for nationwide implementation. It boosts institutional deliveries to reduce maternal mortality by offering cash incentives to midwives and other trained health personnel for deliveries attended in public health facilities. In addition, the first voucher scheme for safe motherhood services was introduced in early 2007 in 3 rural ODs. Evidence shows the vouchers were effective when implemented together with HEFs and contracting management. As of 2003, the vouchers have been scaled up across

27 ODs, but there are concerns about sustainability since it is funded by external subsidies (MoH, 2014).

All of these schemes generate facility revenue which are passed on in part to staff as incentive payments. With these incentive schemes, the utilisation of public health facilities and staff performance has increased over time. By 2014, user fees were practiced in all public facilities. In 2012, HEFs and SUBOs were implemented together across 56 of 77 ODs, covering at least 78% of the poor population in Cambodia. Around 99% of the revenue from user fees are retained at the facility level. It is used for staff motivation and to improve facility management e.g. 60% is for paying staff, 39% for operational costs and 1% for tax to the national treasury (Bidgeli and Ir, 2010).

The six study provinces are operating different mixes of these financial incentives schemes. Apart from the GMIS, those financial schemes are operated by different donors and various NGOs and are used to increase staff remuneration. Financial incentives are reported to be one, but not the only, factor encouraging staff deployment and retention in rural areas:

“...Although some de-motivating factors such influence from high ranking officials and taking leave without pay policy remains challenges for us here in this province ‘Battambang’, Let me recap the contribution factors to help us in staff deployment and retention in the rural areas. Those contributing factors are: 1) having good security since 2000, 2) construction of national and rural road connection in the past few years, 3) increasing school building for our children, 4) increasing availability of electricity supply, especially in rural health facility, and 5) ability of get 60 % of user shared and distributed among staff as the result of health financial policy...”, [BTB_KII1, male]

However, there are concerns about the operation and ownership of these health financing schemes. Those schemes have been implemented by various actors and often result in high overhead costs, and an administrative and coordination burden for the MoH. The senior officials from the MoH in the CDRI validation workshop in February 2015 highlighted that the health managers at the OD, RHs and HCs have to spend a lot of time filling in different forms, writing and submitting different reports to different operators and funders. They discussed the need to pool these different schemes into a social health insurance to enable more effective resource planning, monitoring and evaluation. For effective coordination and the sustainable management of those financial incentives, the government has taken a further step to launch the social health insurance scheme by consolidating existing financial incentive schemes in September 2013 (Kimball et al., 2013).

Health workers are encouraged to develop their individual activity plan, which the health managers can use to distribute income collected from the user fees based on their performance. Staff are paid based on their performance by the ODs. This is a similar model to the contracting arrangement, which was paid from SDG funds (government and donor pooled funding) based on the 2010 priority operating cost model of SOA facility management. This new initiative tends to have mixed results for HRH management and motivation.

“...We will receive SOA next year for this referral hospital. It is difficult for us to have staff’s commitment to work in this big provincial RH. I receive 160,000 USD for staff performance

based incentives from user fee for 270 staff and some portion for administrative purpose. As the director, I got 90USD a month; because it is quite small incentive for staff, I cannot strictly force my staff to work for 8 hours a day. I cannot strictly prohibit my staff from other possible income generation activities. My doctors should be paid 1500 or 2000USD and 700USD for the nurses like Kantha Bopha Hospital..." [BTB-KII4]

Staff often reported having a low work commitment in the health centers that cover small populations. The commitment of health workers is relatively high in the health centers located in highly populated areas.

"...In Rovieng Health Center, there is only 7,000-8000 people living in 16 villages, has low demand for health services; which is not many midwives or nurses wish to go and work in that health center because they receive smaller amount of additional income from user fees for example if we compared with Kor HC with larger population of 15,000-16,000..." [KC_Male KII3]

This encourages a concentration of health workers in high-density areas. Despite most health managers appreciating the importance of health financing and/or user fee policies, the challenges in deploying and retaining health workers in rural areas have not yet been fully addressed by the health financing policy. Although pay increased in recent years, health workers were forced to work for more than 8 hours a day, 7 days a week, to cover living costs.

"...Besides working at the RH or HCs for about 5-6 hours a day, my staff had to do other things for making extra-income from running their own Clinic, laboratory, pharmacy or taking part time job at the private service providers. Some health workers in rural remote areas also do farming for supporting their family..." [BB, male, KII1]

Working long hours to seek alternative sources of income was common, and had not changed since the early 1990s. Unlike those working in urban areas, opportunity for private practice become more competitive and limited in rural areas. The health workers in the former Khmer Rouge Zone farmed to earn extra income to support their family. Most health workers in those areas reported to demine land by themselves.

"...I and my staff got some forest land from local authorities for clearing and farming. There were many mines and/or ERW (explosive remnants of war) in those lands. Because we need land for farming and demining done by CMAC and others was very slow, we demined those land by ourselves. Just for your information, we also demined the land for building this OD or RH in 1997..." [BB, male, KII3]

There was no report of health workers who lost their life to de-mining in those areas. The health workers seemed to have good skills in de-mining. Taking a second job meant health workers were often absent from work to get their farming done in time. The health workers may have been exhausted when working at public facilities.

“...Because of low and irregular salary, we have to work harder to get both jobs done, at public facility and farm work. Some staff were absent or come irregularly to work during farming or at harvesting time...” [BB, male, KII4]

“...We don't wish to have such long working hours as we have now. I experienced quite demanding energy and become exhausted, but have to keep my job going when I am at my office. I feel sympathy of the hardship that my staff faced with this unhealthy working conditions because of over-work that we have...” [KC, male, KII2]

Career progression

Promotion can occur through a career pathway or via promotion to leadership positions in the civil service. This system of promotion was put in place after the first national election in 1993. Pre-1993, promotion was under the authority of the provincial system of governance.

Career Pathway Promotion: Each health professional is eligible for promotion in steps within the civil service career grades (RGC, 2010). He or she should be promoted every two years. Promotion to the next grade is saved for exemplary staff with appropriate position and rank. This can be obtained through:

- Placement on a promotion list
- Certificate of long-term training (continuing education programs and initial training programs)
- Examination

“...Each individual staff got automatic promotion to a higher status or pay if they got higher degree of formal education. For example, from the primary midwife to secondary midwife or secondary nurse to doctor when they continued and completed the training course to get higher degree of profession, and passed the quality control exam of grading cadres organised by the MoH...” [PP, male, KII1]

Any promotion is subject to prior inclusion on a promotion list made in January. Any health worker is entitled to apply for promotion. They have to complete a professional evaluation form signed by his/her direct supervisor or head of department. The secretary of state in the Ministry of Health proposes a list of staff to be promoted by April each year.

Despite having a clearly defined pathway of promotion, the number of staff moving to higher steps is constrained by budget availability (see above). Getting higher pay was considered one of the main benefits of promotion, but this was often slow to materialise and was not always applied as outlined in the promotion policy.

Opportunities for further education or training for promotion was opened to all staff as of 2013. It was also used to improve the technical competency of key health workers and to assist the deployment and retention of midwives in rural area e.g. via the 3+1 midwifery course. Staff had two options for training – they could take study leave or a part-time training course on the weekend. For study leave,

they could ask for permission from their direct supervisor. They received basic pay from the government under the condition that they would go back to their post when they had completed their training course.

“...With certificate of primary nurse, I worked at the provincial hospital in Prey Veng Province in 1980. I then moved to work here in the Children Emergency Unit in 1985 after getting marriage with my wife lived in this Battambang Province. In 2000, I got permission for study leave to get doctor degree at the University of Health Science. After I completed it, I moved to work in General Disease Department in 2005/6 in Batambang RH and got promotion to be the director this RH in 2010...” [BB, male, KII3]

Part-time weekend training courses were made available at private training institutions since mid-2000s. Health workers had to cover the cost of training by themselves. There was no government scholarship, except for associated midwifery course (3+1), for any staff who decided to undertake further education. Study leave seems less preferable than part-time training. During study leave health workers might lose the opportunity to earn extra-income from their private practice in order to take full time training courses. By contrast, for weekend training courses staff were still working in their post and were able to earn extra income.

There were no staff who took study leave in 2013 in the ODs covered by this study. Only a few male staff in rural areas were reported to take weekend training courses at a private institution. The challenge for rural health workers is the distance to the training institution from their workplace or hometown. It was reportedly difficult for female staff to take advantage of this opportunity for career path development because of family responsibilities. Moreover, undertaking further education was considered a sign that staff were preparing to transfer from his or her post to work elsewhere when they received their certification.

Pre-2000, staff that completed further training were automatically promoted. Under new regulations to improve the quality of health workers, they had to pass a quality control exam after receiving certification.

“...We had many health graduates for the past 6 or 7 years. Old staff had to pass the quality control exam and make a request for changing their status of employment from primary to secondary midwife or nurse to doctor when they completed the course with certificate. It often took about one year for formal approval through our recent administrative and salary ranking system...” [PP, KII1]

Importance of staff performance appraisal: the government adopted a performance management and accounting system (PMAS) in 2010 to improve performance management (RGC, 2010). The PMAS was updated from Priority Mission Groups (PMGs) and Merit Based Performance Incentive (MBPI) piloted between 2007 and 2010⁹. It has since been adopted as a monitoring tool for staff performance

⁹This information was drawn from website of Cambodian Rehabilitation and Development Board, Council for the Development of Cambodia, available from http://www.cdc-crdb.gov.kh/cdc/twg/ninth/capacity_development_xi.htm#top

appraisal. To get promoted each staff member completes a staff evaluation form and then discusses with their supervisor who compares it with their performance plan.

“... With support from the development partners, we started with PMG, MPBI, POC [priority operating costs], and finally with PMAS for staff performance appraisal. With the PMAS tool, we had better job description of responsibility and accountability of staff according the functions of facility, or unit they were in, but not used for staff promotion...” [MoH, KII1]

Managers appreciated staff performance appraisal because staff and supervisors could agree on outputs and professional conduct to be improved.

“...Unlike in the period of 1980s and 1990s, we adopted bottom-up approach of staff monitoring and performance appraisal. In order to get rewards or promotion, my staff had to fill in the staff monitoring and evaluation by themselves and then submit to their direct supervisor for checking and approval of outputs that they achieved according to their activity plan. After reviewing the results, the direct supervisor made and submitted the monitoring and evaluation report of staff performance at the HC to the OD and PHD. The PHD proposed the numbers of health workers for promotion to the MoH for final approval. It is related to the national budget; and we don't have control over it...” [BB, male, KII1]

A study of HR Inc Cambodia (2013) provided an independent assessment of the importance of supervision and monitoring of staff performance and professional practices. A large majority (90%) of 4,708 health professionals that were interviewed were regularly assessed by their supervisor for administrative work and about 88% of 4938 respondents assessed on their clinical and medical work. Staff performance was also occasionally assessed by a non-supervisor. 61% were assessed for administrative work and 63% for clinical practice.

“...the MoH officials often do spot-check for monitoring and assessing the outputs of staff and facility against their quarterly and annual activity plan...” [MoH, KII1]

The health managers agreed that they used staff appraisals to identify training and capacity gaps. They used staff appraisal to nominate particular staff to attend short courses and/or workshops to improve their clinical and medical skills.

In-service training and continuing professional education

In-service training and continuing professional education is a component of the Health Workforce Development Plan Strategy 2006-2015 to improve the technical skills of health professionals. This is to be achieved through systematic capacity building and the development of a licensing registration system for health professionals through the professional councils (e.g. Medical Council of Cambodia established in 2000, Nursing Council/Nursing Associations in 2005, Cambodian Midwife Council in 2006).

These professional councils are expected to play a critical role in registering health workers and strengthening codes of conduct among in both government and private sectors. They also are expected to update and revise curriculums to improve competency-based training at both public and private training institutions. According to the participants at the CDRI workshop in early 2015, they are not yet active in fulfilling their roles. They prioritise registration. There is no documentation of their contribution to in-service training or provision of continuing professional education. A critical concerns discussed in the workshop was the ability of these councils to provide on-the job and/or in-service training for their professional members working on a voluntary basis.

According to the health managers of the ODs, RHs and HCs, there are many in-service training opportunities for health workers in the country. These trainings are largely funded by development partners and/or NGOs. The Human Resources Development Department is responsible for compiling and maintaining the database of continuing education courses and their participants. In-service trainings are implemented by various actors based on the priority of their health-related development programmes, which often results in an ineffective use of resources. Those trainings are not responsive to the personnel plan of the PHD or OD. While a coordinated mechanism is required for in-service training activities (MoH 2008), this has not been aligned with the personnel capacity development plan of PHD and/or OD.

Opportunities to access short-course trainings and/or workshops have been important for health professionals (HPs) since the mid-1990s. The individual HPs often received an allowance for participating in trainings and workshops. The health managers nominate their staff to attend. (Chhea et al., 2010) suggested that unequal opportunities to access professional improvement often demotivated those with fewer opportunities. Improving professional and clinical skills through the provision of in-service trainings was realised in the HSP 2008-2015 and required effective coordination to strengthen the performance of HPs without undermining core activities (MoH, 2008).

In 2011, the majority (82 %) of 5,404 health professionals attended short-trainings and/or workshops. Only 4% of health professionals attended short-courses or workshops abroad (HR Inc Cambodia, 2013:p193). 75% of those working at the SOA attended trainings compared with 60% of those in non-SOA facilities (Table 16). A larger proportion (86%) of the staff at HCs reported to have attending trainings compared to 61% at referral hospitals and 41% at national hospitals.

Table 14: Proportion of health professionals reported to receive short-courses and workshops in 2011 by facility and category of health worker

	Cambodia			
	Trainings		Workshops	
	Count	%	Count	%
SOA	1091	75%	731	50%
non-SOA	2382	60%	1936	49%
Total	3473		2667	
HC	1816	86%	1152	54%
RH	952	61%	757	48%

NH	705	41%	758	44%
Total	3473		2667	
Specialist Doctor	141	67%	129	62%
Medical Doctor	294	48%	384	63%
Other HP	330	62%	273	51%
Secondary Midwife	534	66%	427	53%
Secondary Nurse	977	60%	830	51%
Primary Midwife	462	90%	238	46%
Primary Nurse	670	72%	357	38%
Other	65	40%	29	18%
Total	3473		2667	

Source: HR Inc Cambodia (2013:p194). These figures were weighted counts of 1168 health professionals interviewed in 2012.

Those trainings and workshops were organised as part of the national health development programmes or by NGOs, with focus on improving the quality of basic health services in rural areas. This is well supported by the fact that about 90% of the midwives and 72% of the primary nurses reported to have attended trainings in 2011 (Table 16). About 63% of all medical doctors compared to 38% of primary nurses attended workshops. On average, each individual attended 3 to 5 trainings and/or about 2-5 workshops per year (Table 17).

Table 15: Number of short-courses and workshops attended by health professionals in 2011, by category of facilities

	Short-courses				Workshops			
	N	Average	Min	Max	N	Average	Min	Max
SOA	1070	3	1	22	708	4	1	12
Non-SOA	2310	4	1	40	1860	3	1	60
Health Centers	1792	4	1	22	1139	3	1	20
Referral Hospitals	937	3	1	12	742	2	1	15
National Hospitals	650	5	1	40	687	5	1	60

Source: HR Inc Cambodia (2013:195)

No health professionals working at the HCs were offered the opportunity to attend trainings and workshops abroad. Only those working at the national and referral hospitals or the head of RHs or national health programmes were sent abroad.

“...I was invited to attend trainings and workshops aboard several times. I often shared my experiences in managing staff and this RH, and also learned new things to improve management of this RH...” [KC, male, KII2]

Around 4% of health professionals reported attending trainings and/or workshops abroad (HR Inc 2013).

However, there was a demand for more systematic skills training courses for other key health professionals.

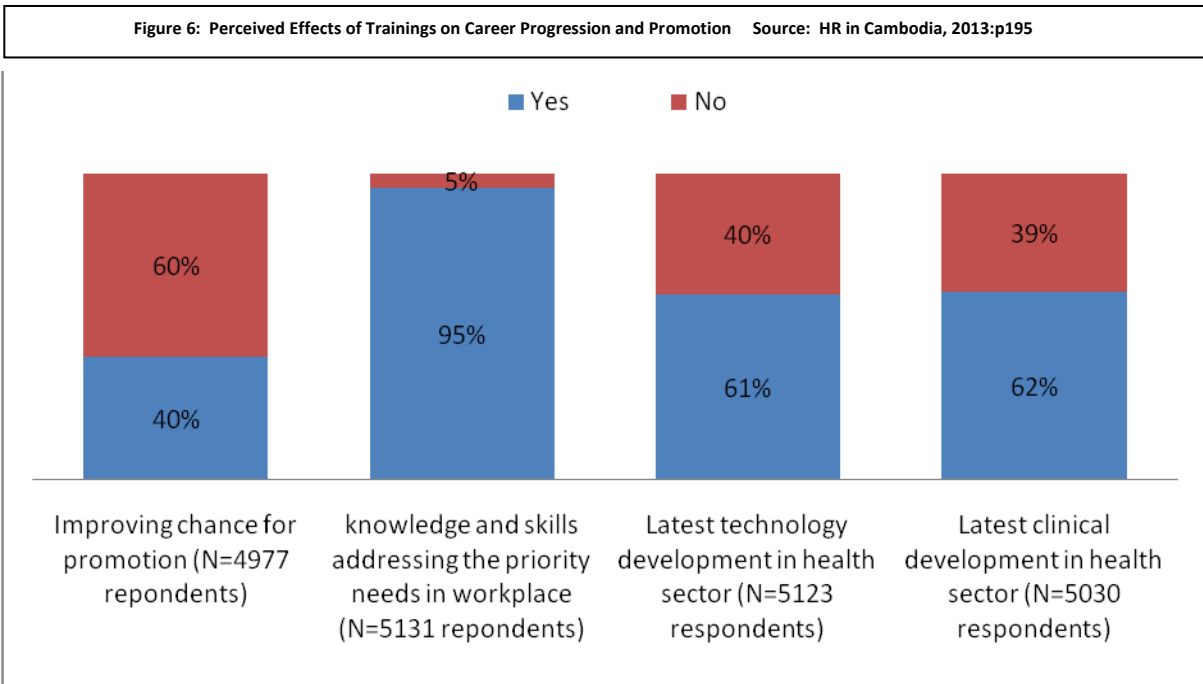
“...My new staff often have good theoretical knowledge but lack of practical experiences. Attending those trainings and/or workshops, my midwives and nurses become more competent in doing their clinical and medical tasks. We still need specific another short training courses for other staffs, for example, to handle surgical and radiological equipment and service properly...” [BB, male, KII1]

Training needs assessment was important to effectively design and plan in service trainings. During our field visits, some medical equipment was left unused at a few RHs and HCs because the staff did not have sufficient knowledge to operate them.

“...the trainings so far focused on MPA performance, maternal health services, safe provision of HIV/AIDS services, anaesthetics, community outreach activities as part of mother and children vacation programmes..” [KC, male, KII3]

About 40% of 4,977 health professionals reported that attending trainings and/or workshops improved their chance of promotion (Figure 6).

“...Majority of my staffs, especially female staffs, could not go for a long period of formal trainings because they had to take care of their family; but they showed a strong commitment to stay working with us. For rewarding or promoting them, we often assigned staff with outstanding performance to take management role of health development programme or take partnership with NGO programme. So that they could get salary supplement for increasing their income and get opportunity to attend the training courses offered by those NGO programme...” [ST, male, KII3]



Around 95% of health workers reported gaining knowledge and skills that they used to address priority needs in the workplace. Around 60% reported obtaining sufficient clinical training to keep them up to date with the latest technology and developments in health care (Figure 6). However, there was a need for a proper assessment of training needs. Trainings for staff were often on soft skills to improve clinical, diagnostic, management, technical, pharmaceutical and medical competency of the HPs in rural areas. However, the managers in the urban settings were more concerned about having adequate supplies of drugs and updated medical equipment.

HR management

The promotion of any staff to take on a leadership or management role is done based on seniority, quality of work and available vacancies (RGC, 2010:p22). Promotion is done through:

- Promotion within the 1st grade of category A is made by Royal Decree
- Promotion within the 2nd grade of category A is to be made by sub-decree
- Promotion within the 3rd grade category A or lower (Krmakar, secretary, administration agent) is decided by the MoH

The development partners viewed the weak system of promotion as weak in relation to motivation and rewarding staff.

“...Promotion was largely based on years of service. It was small in terms of number of financial benefits that staff received from it. It often took years...” [DP, KII1]

“...Promotion was often implemented through an informal patron-client system and lacked sincere process...” [DP, KII2]

The MoH was responsible for appointing the director and deputy director of the PHD. Appointing any manager of the OD was done through a consultation with PHD and/or direct supervisor and at the facility or unit level. A number of criteria such as length of service, loyalty, experience and commitment were used to promote staff to take a management role. In practice, these indicators were not always used to promote staff.

“...Those indicators of performance were not always used for appointing any management position at the PHD, OD and HC level. So far, most decisions of appointment were made by the high-ranking official at MoH. Sometimes, it was done through consultation with us as PHD manager...” [BB, male, KII1]

Our key informants also confirmed that the sub-national managers had limited control over decisions regarding staff promotion (Fritzen, 2007).

“...In practice, we, OD and PHD managers were encouraged to provide daily supervision and conducting staff performance appraisal for promotion and submit list of staff to be promoted to the MoH for final decision. Unlike in pre-1993, we had no control over decision of promotion...” [KC, male, KII1]

The district managers faced confusion over job expectations in their regular performance reviews (Asante et al, 2011). Staff promotion and rewards were rarely aligned with performance outcomes, initiatives and behaviours of individual staff. Promotion is largely based on political connections or influence. We also witnessed a few managers of PHD and ODs being promoted because of a strong relationship with a high-ranking official or a political affiliation instead of the promotion being based on their performance. Getting a management post is very competitive and should be based on performance and merit-based appraisal. Poor transparency regarding promotion resulted in jealousy amongst the workforce (Bundeth et al., 2011).

KI report that it is difficult to mobilise dedicated and well-experienced officials to take management roles in remote rural areas. Political influence to encourage staff to take management roles in rural areas could help improve service delivery.

The PHD/OD managers reportedly have no control over the wages budget, numbers of staff and financial awards. They are also unable to dismiss under-performing staff.

“...all civil servants are paid from the central funds. The PHD has very limited authority concerning budgets. The MoH has authority over budget control, recruitment, career management, performance management, pay and incentive regulation...” [PP_KK1]

The PHD plans operational and recruitment budgets based on the previous year’s budget. This then gets sent to the MoH for approval. The PHDs manage their Chapter 10 funds (the budget line for

personnel costs) for staff salaries, allowances, and mission pay, but they do not have the authority to retain savings and use them for other purposes.

Overall control of sub-national staff members and deployment is centrally managed by the MoH because it has a strong link with national budgets. Since the PHD lacks both devolved budgetary discretion and its own resources, it cannot choose to employ staff. There are questions about the central control of staffing records, which are often inaccurate because of ghost staff (Netree and Craig, 2009).

Contracting health service delivery and its impact on staff

In 1999, the contracting in and out of health service delivery to international NGOs was piloted in 5 ODs. From 2004-2008 this evolved into a hybrid contracting arrangement in 11 ODs, and later to a Special Operation Agency (SOA) within the MoH in 16 ODs since 2009 (Table 13). By 2010, SOAs increased to 20 out of 77 ODs. More information about such contracting models can be founded in (Vong et al forthcoming); (Jacobs et al. 2009); (Kim and Annear 2011).

Under the OD management of the MoH, the civil codes of conduct, especially bans on informal practice, have been hard to enforce. It is difficult to increase staff commitment and facility performance to the same level of the contracted ODs (Soeters and Griffiths, 2003; Kim and Annear, 2011). The provision of performance-based incentives combined with the rotation of standby-staff at public facilities aim to support a 24 hour service at the RH and HCs. The contracted health management was intended by the MoH to be more effective at deploying and keeping adequate health workers in the rural posts.

The shift from external contracting of NGO-managed service delivery towards the internal contracting within the MOH was to increase stewardship, ownership, control and utilisation of financial and human resources to sustain the service delivery at the district level. Evidence regarding the effectiveness of each contracting model is well documented (Conseil Santé, 2007; Jacobs et al. 2009; Ibid) but mixed. Issues regarding staff retention and willingness to remain working in the rural areas under these schemes are not yet documented.

The difference between each contracting model is related to the level of autonomy provided by the MoH to the contractors over staffing, including the rights to hire and fire staff, budget control and the procurement of drugs and consumables (Table 13). Phase I piloted two management approaches of contracting in five ODs with financial support from ADB and the DfID-funded Health Sector Support Project. This pilot scheme was implemented to promote the public-private partnership of service delivery in five ODs through a contract with international NGOs. It was also used by the MoH to deploy adequate number of the health workers, especially midwives and nurses, to work in the remote rural areas.

The difference between the contracting in (three ODs) and out (two ODs) model of contracting was that under the first, contractors (international NGOs) were required to use the exiting MoH supply system of drugs and medical equipment. The contractors were allowed to transfer the government staff from other public health services but had no right to hire and fire staff.

Table 16: Contracting pilot schemes from 1999: implications for HRH (Jacobs et al., 2009)

Management Approach	Standard OD management	Contracting In (CI), Out (CO) in 5 ODs 1999-2003	Hybrid Contracting in 11 ODs, 2004-2008	Internal Contracting: SOA management (16 ODs), 2009 till present
Health and HR management	MoH, PHD, OD (RH, HCs) with civil servant codes of conduct, staff recruitment and distribution system	<ul style="list-style-type: none"> - MoH, PHD offered CI to 3 ODs, using government budget, supply system of drugs and equipment with some ability to transfer staff, but not hire and fire - CO in 2 ODs: NGOs given full control of hiring and firing staff, procurement of drugs and other consumables 	<ul style="list-style-type: none"> - MoH, PHD contracted NGOs and OD office for co-management of health services at RH and HCs - Some autonomy over HR, within standard management guidelines 	<ul style="list-style-type: none"> - MoH, PHD contracted OD office (RH, HC) - Some autonomy over HR, supply and incentive management, monitoring of performance based incentives
Staff Motivation and Retention	Government salaries plus user fees, performance based promotion and rewarding	<ul style="list-style-type: none"> - Fund from ADB/WB and public facilities - CI: top-up of government salary including fixed supplement, based on attendance and facility performance from user fees - CO: paying fixed salary according performance bases and functions 	<ul style="list-style-type: none"> - Government budget, facilities, staff and SGD funds from donors' pooled funds - Extra subsidies from the HSSP budget to hire staff to address shortages - Performance-based incentives with contracted staff 	
Lessons Learned	<ul style="list-style-type: none"> - Low staff motivation - Informal practice as coping strategy of staffs - Mal-distribution and shortage of key health personals, especially midwives in rural facilities 	<ul style="list-style-type: none"> - Contracting out showed better performance in terms of banning informal practices, higher staff motivation with fixed salary - Almost double the cost and dependence on donor's fund - Lack of ownership, information sharing, skills and capacity transfer 	<ul style="list-style-type: none"> - Positive: Improved management styles and responsibilities, accountability and transparency of both management processes and finances at OD level - Shift in emphasis towards team building, problem solving, and monitoring of results, but uneven integration of supervision and monitoring in OD management - Concern: loosely interpretation or ignorance of banning private practices - Needed strong support from PHD for timely staff recruitment and to take action against poorly performing staff - Required a timely supply of drugs and other medical equipment - Staff promotion often influenced by high ranking officials but no evidence of effective retention of key health personnel, apart from midwives in rural HCs 	<ul style="list-style-type: none"> - Strong ownership with more efficient and lower cost of service delivery - Improved HR management and performance with support from financial incentives - Better staff performance and lower staff turnover - Skill and capacity gains - Available budget for PHD/OD/facility managers to hire additional staff to address the shortages

In the three non-targeted ODs, service delivery was managed by the OD and facility managers using civil codes of conduct and government regulations for staffing and HR management. Under this OD management, control of informal practices has never been strictly enforced due to the low living wage paid to staff. Under the CI management, staff were encouraged to work full time and informal practice was banned through the provision of a top-up supplement for attendance at work.

Under CO management, the MoH and/or PHD outsourced the service delivery of 2 ODs to the international NGOs. The contractors had full authority and responsibility for hiring and firing staff, performance-based payments, and the procurement of drugs, supplies and equipment. The public staff recruited to work for the CO operating agencies were asked to take leave of absence from the civil services without pay. If they were to be fired by the contractor, they could return back to their post in public service. Only a few staff were fired and returned to their posts within the MoH.

An assessment suggested that the CO ODs outperformed CI and non-target ODs in terms of having higher outputs, increased staff motivation and a ban on informal practice. Mixed results were found for three CI ODs. One OD that used user fees to motivate staff decreased private health expenditure by 40% compared to an increase of 36% in two CI ODs with no link to user fee schemes (Bhushan et al., 2002). Without support from user fees, the CI contractors could not provide adequate staff compensation or prevent under-the-table payments and after-office-hours private practice. In contrast, the CI contractors that had support from the user fee schemes were able to provide a living wage and banned health workers working outside the contracted RH and HCs (Conseil Santé, 2007). There is no evidence about staff turnover in the CI ODs.

This type of contracting was almost double the cost and did not enable capacity building and skill transfer from the external contracting organisation to the OD management team (Jacobs et al., 2009, Kim and Annear, 2013). Contracting service delivery to external operators had not helped to build and strengthen the capacity of OD managers because the contractors were pre-occupied with reaching contractual targets. A lack of information sharing with OD staff led to resentment among MoH staff and knowledge not being transferred so the OD management team could take over managerial tasks when the pilot ended.

Another concern was regarding the enforcement of codes of conduct (RGC, 1996). Each staff member is allowed to take leave without pay from the government service for a maximum of four years. Their names are removed from the list of civil servants if they do not go back to their government post after four years or continue to work for the Co-operating agency. Such regulation is not yet enforced for contract staff working for the contracted-out ODs. Otherwise, all contract staff be forced out of public health service and contracted RH and HCs would no longer function.

The MoH moved to second phase of the contracting pilot that consolidated the CI and CO management approach into a single hybrid contract for service delivery. This was implemented in 11 ODs between 2003 and 2008. This pilot scheme was financially supported by donor funding and was used as a tool to build the capacity of government staff and transfer managerial skills to the OD managers.

The contractors were required to work within the infrastructure of the MoH, introducing performance management as an additional tool to improve service delivery of the contracting RH and HCs. The

contractual agreement between the MoH and contractors made for better performance management from the start including:

- 1) Reinforcing conflict resolution committees
- 2) Implementing working rules and regulations
- 3) Agreeing the distribution of performance bonuses among staff
- 4) Formulating mission and objectives
- 5) Developing contracts for each facility
- 6) Establishing monitoring procedures
- 7) Updating job descriptions for staff

Under this second phase of contracting, the international and/or local NGOs provided a sub-contract to the OD management team who further created performance contracts with RH and HCs under their supervision (Jacobs et al., 2009). In addition, the budget from the second HSSP was made available to provide salary supplements and subsidies for hiring additional staff members to address staff shortages at the contracted ODs (RH and HCs).

Through this form of contracting only partial management responsibilities for the ODs were handed back to public health managers since the MoH held the contractors accountable. The contractors were responsible for developing performance, while financial resource management and monitoring of facility performance were done by both the contractors and PHD/OD managers. The OD managers gained managerial experience by creating and enforcing internal rules and regulations, deciding on the extra subsidies for hiring additional staff, facility performance, staff contracts and performance bonus distribution.

For capacity building, the government staff and managers received training on team building, communication, leadership, motivation and empowerment, community participation and financial management. There was no independent assessment of this form of contracting. However, a number of improvements to HR management have been documented in various reviews (Jacobs et al. 2009; Kim and Annear, 2013), including:

- 1) Improved staff performance via a performance-based incentive system
- 2) Improved staffing and human resource management
- 3) Improved accountability and transparency in decision-making with a clearer line of authority created between actors

During the hybrid contracting phase, another five additional ODs were selected to pilot an internal contracting model as part of the HSSP, supported by the Belgium Technical Cooperation (BTC). This form of contracting was different from hybrid contracting. The internal contracting ODs were managed by MoH staff, with technical and administrative support from the PHD and BTC. Performance incentives were used as a HR management tool for internal contracting. An assessment of the internal contracting model in Kompong Cham province suggested there was an improvement in staff motivation, health service utilisation, maternal and child health outcomes and improved efficiency and transparency in facility and HR management (Keller et al., 2008).

Like the hybrid contracting model, no evidence of staff turnover and effective retention has been documented. From the literature review of these two pilot schemes, the managers of the facilities received some autonomy to use extra subsidies allocated from the HSSP funding to hire additional staff. Increasing staff motivation performance and retention were linked to the performance-based pay scheme and distribution of performance bonuses generated from user fees.

The promising experiences from internal contracting meant the government decided to move away from private contracting partnerships towards internal contracting, starting with the existing 11 ODs previously contracted to NGOs in 2009.

These 11 ODs have been converted into Special Operation Agencies (SOA) that have some autonomy within the MoH and are contracted to deliver health services by the PHD. Since then, the number of ODs with SOA contracts expanded to 22 out of 77 ODs in 2010. The SOA is considered by the government as the most appropriate model to strengthen and sustain service delivery at the district level. It is heavily reliant on financial support from development partners or donor funding. Key lessons for the SOA to retain effective service delivery and HR management to the same level of the NGO managed-contracts, identified by (Kim and Annear 2013), are:

- 1) Clear understanding of the roles and responsibilities of the contracting parties
- 2) Establishment of clear rules and procedures for implementation
- 3) Adequate and timely provision of resources
- 4) Effective management of performance
- 5) Effective contract monitoring

The evidences regarding how effective each contracting model was at increasing the outputs and performance of the public facilities (RH and HCs), staff motivation and ability to control the private practice of the health workers after-office-hours are well documented in (Conseil Santé, 2007; Jacobs et al. 2009; Kim and Annear, 2011). The ability to contract private practice after office-hours work were more effective during the first phase of the contracting pilot and become less so, especially for the higher level of health professionals such as the factors during the second and third phases of pilot schemes (Kim and Annear, 2011). There is a need for an independent evaluation of how effective the SOA is at maintaining high outputs, staff motivation, banning informal practice and retaining well-experienced and skilled staff to work in rural facilities.

Working hours

By law, civil servants are required to work 8 hours per day, 5 days per week from Monday to Friday (RGC, 2010). Working days and hours were adopted before conflict, according to our key informants. Like other civil servants, health workers should benefit from a weekly leave of 2 days on Saturday and Sunday. Any cessation of service or unauthorised absence should automatically be without pay or the health worker's salary should be suspended. They also might be subject to disciplinary sanctions (Kram NS-RKM-1094-006, on the Common Statute of Civil servants, dated October 30, 1994; and Sub-Decree no.21, on the Duration of the Workweek of Civil Servants of the Kingdom of Cambodia, dated January 30, 1996).

Health professionals rarely obey these rules or regulations due to the low pay they receive from the government. Medical doctors may go to work at a public facility for about 3 hours per day, and other health workers may work for 5 - 6 hours per day. In practice, the health managers of the RHs and CHs and OD have not been able to strictly enforce official working hours.

“...It is not possible for me to force my staff to work for 8 hours a day; 5 or 6 hours with good performance is enough...” [ST, male, KII1]

Failing to comply with regulations is acknowledged as a weakness of current personnel management. With sympathetic management practice and staff working for 5-6 hours a day, the referral hospitals and health centers managed to have 24-hour operations by rotating a few staff to stand-by at the facility. For urgent tasks, the health workers can then be called to their workplace. Despite staff not working full time, health workers produced higher outputs than other civil servants in other sectors.

“...our staff have done the best to fulfill their duty within 4 or 5 hours of their work at the RH and HCs in this OD if we compared to other staff in other sectors. Because we produce real outputs but not just come to the office and have no work to do as many staff experience in other sectors...” [BTB_KII 5]

In the 1980s, staff were working almost full time under the socialist government. There were only a few health workers working at the facilities and there was little employment opportunity outside of government institutions. As opportunities for informal and private practice increased, many staff gradually spent less time working at their posts (Walford et al., 1999).

Since 1997, two measures to assess staff attendance have been used for monitoring and income sharing alongside the introduction of user fees. In urban areas, a pilot test using electronic thumbprint records was used to note the time of staff entering and leaving their workplace. At the health centre, staff are required to write their names on daily attendance sheets. In addition, most health managers organise an early-morning meeting with staff. They use such meeting to encourage commitment at work and make sure that all staff are present.

“...We do take attendance of your staff in the morning and after and often have meeting with our staff to make sure that they could come to work one time at 7:00 am. Some staff cannot make it by themselves and often ask their colleagues to register their name at 7:30 on the attendant list while they often come late because they have to work on their farming. Eight staff here have 5 ha – 10 ha of farmland; and only three do not have farmland. I have to be flexible for them; otherwise, they cannot survive with current income from this HC...” [BTB-KII4]

Some staff with higher expertise, such as doctors or well-experienced nurses, reportedly use office hours for other income-generating activities. Despite having received a better income from health financing, a flexible working hour regulation has been applied to manage the performance of staff at public health facilities in the five provinces and in Phnom Penh.

“...With this record, we do know that some staff actually come at 8:00 AM when we asked them to come at 7 am; it is OK for this group. I as the OD director issue a letter to invite those

particular staff for discussion about the working rules and disciplines with those who are absent for a few days from work. Such meeting is only applied for those who severely violate the working rule and internal discipline. Yes, during the working hours, some staff are called back by their wife to do an examination for ultrasound at their home. They go home for a while and come back to the hospital. In such case, I have to give them some flexibility because they need to earn income for supporting their family; especially, they need money for financing the schooling of their children. I do have the same experience when my son is studying at the university. I have income of 500USD, 600USD or sometimes up to 1,000USD per month which is not high really. I and my wife have to allocate at least half of this income for supporting our children's schooling..." [BTB-KII2]

The managers commonly agreed that their staff had heavier workloads than other government officials because they were required to make the service available 24 hours per day.

"...unlike the staffs] in other sectors, we cannot close our facility on the weekend or during public holiday. We have a few staff to standby at the facility while other key cadres have to be available for call to come to the HC or RH when it is necessary..."[KD, male, KII]

Health workers have to make themselves respond to urgent services.

"...whether budget is available or not, we have to responses to the urgent need for our services, especially in case of flood or a number of houses were on fire down last year. My staff had to work harder to help our people..." [KC, male, KII3]

There was a variation in the workload of health workers at the public facilities in our six provinces. Higher population density and increasing demands meant the health workers in urban areas had more clients to work with than those working in rural areas. However, shortages and high staff turnover meant the remaining staff in rural areas had to do several tasks, which often caused a heavier workload than for those working in urban areas. Some of their colleagues took leave without pay or left their posts to work elsewhere.

"...Our unit, there are 3 health workers who are responsible for 20 beds which all are often used for accommodating our clients. This is a real heavy burden for my staffs; and how can we guarantee the quality of our services. In order to reduce their burdens, I hired two additional nurses to help them. It is difficult for me because some staff took leave without pay to run their own clinic..." [BB,male, KII4]

Longer work hours were often reported for health workers in rural areas from the outreach activities they completed. This evidence was confirmed by the difficulty and time-consuming nature of outreach activities due to poor road access and transportation.

Working conditions

Poor working conditions were a fundamental challenge in posting and retaining key health personnel in rural areas (MoH, 2008). Only a few studies were conducted to examine the causes of this since the

late 2000s (Chhea et al. 2010, Bundeth et al., 2011; and VSO, 2013). Shortage of supplies from the government, including drugs, basic medical equipment, water, electricity, and accommodation are a common complaint, as are poor infrastructure (e.g. roads) and transportation. In addition, staff report concerns about security and distance from family, limited professional support, poor education for children, lack of career advancement, and limited opportunities for private practice. KI comments are summarised in Table 18.

Table 17: Key factors contributing to unattractive working environment in rural areas (19 KII, 2013)

	Fear of ERW or mine explosion	Road access & Transportation	Heavy workload	Lack of drugs, medical equipment	Electricity and water clean water	No accommodation for new staffs	Low Pay
Phnom Penh	NP	NP	NP	CR	NP	NP	LSC
Kandal	NP	NP	LC	CR	NP	CR	LSC
Kompong Cham	NP	CR	SV	CR	SV	CR	LSC
Kompot	LC	LC	SV	CR	CR	CR	LSC
Battambang	SV	LC	SV	CR	CR	CR	LSC
Stung Treng	LC	ED	SV	ED	CR	CR	LSC

Note:

- **NP** = no problem since 1980s
- **CR** = remaining concerns in remote rural areas
- **LC** = less concern since 2009/10
- **SV** = significant difference between urban and rural areas
- **LSC** = long standing concerns
- **ED** = Extremely difficult

Shortages of buildings and supplies

In 2013, all facilities we visited had at least one building for health workers to provide services.

“...This OD was established by government with financial support from donors in 1996/7. We had only 4-5 staffs, who were medical practitioners of former Khmer Rouge at that time. Thousands of people got seriously injured from shooting and explosive remnants of wars, malaria infections, diarrhoea and so on, needing help from us as medical staff. My colleagues and I almost had no time for rest or helping our family in farming and received about 10-12USD per month in 1999/2000. We didn’t have secure electricity and clean water as now, but good supply of medical equipment and drugs from UNHCR and/or other donors. It was better than at war time, we served people under the shade of trees until we got these buildings. We got good support from government and three NGOs for completing three buildings in 1998. There are many mined fields which we had to be cautious during travelling to do our outreach activities as of now. It is difficult for the new comers who do not know the area well...” [BB, male, KII4]

With one or two fragile wooden or thatch-made-roofed buildings, health workers and patients were reportedly not well protected from bad weather such as rains or storms. This situation reported to

continue for health workers in most public facilities in the five target provinces, except Phnom Penh, until the early 2000s.

“...We worked with what we have. I don’t know how to describe the difficulty we had in 1980s and early 2000s, district hospital and health posts had only one or two small thatched roofed building left after Khmer Rouge. There were only a few beds, no electricity or no safe water and toilet in the district hospital. No bed for the patients in the health posts. Like the patients, we often took turn to take a nap on the floor...” [ST, male, KII1]

(Uy et al., 2007) suggested that health professionals in urban areas, especially in Phnom Penh, had a better working environment than those in the rural areas. However, shortages of drugs and medical supplies hindered the ability of health workers to do their jobs at the national hospitals in Phnom Penh. In 2013, health workers at the facilities located on the outskirts of Phnom Penh had fewer concerns about security, road access and transportation and the supply of electricity and water.

“...I and many staff have less problems of work comparing to the problems that the staff faced working at the rural facilities in other provinces. We have no concerns of security or water or electricity in the 1980s or early 1990s for the RH in this OD. This RH also has better equipment and supply of drugs than at HCs for providing midwifery, nursing and referral services at the HCs and protecting my staff from HIV/AIDS and other deadly diseases...” [PP, male, KII1]

Our key informants often compared the difficulty of access to drugs and medical equipment with the private sector. They admitted that although the workers in urban areas were better equipped than those in the rural areas, in Phnom Penh or provincial towns, health managers agreed that the supply of drugs and medical equipment was often inadequate for health workers to do their job.

“...Unlike the private sectors, I and my staff still faced difficulty to provide clinical services because we often had shortages of modern medical equipment and instruments, drugs and lower pay as of now...” [KD, male, KII3]

“...We did have better supply of drugs and equipment from MoH now comparing to that we received in pre-1996. I had to send some of my staff for training on how to use those equipment properly, but we are still behind of the private sectors that we don’t have adequate drugs and medicines; and often just issue medical prescription to our clients to go to private pharmacies in Phnom Penh. Because of this reason, we are not the first choice of patients unless they cannot be cured by private service providers...” [PP, male, KII4]

Patients often needed drugs from the health workers. If these were absent, those patients would receive a medical prescription to purchase them at the private pharmacies. A lack of drugs to offer clients resulted in a lower trust of public facilities and made patients transfer from the public to private providers. This was reported to have lost considerable income from the public facilities, which could have been used for supplementary pay to increase incomes of the health workers.

In rural areas, health workers had limited ability to use their knowledge and clinical practice compared with those working in urban areas because of shortages of basic medical equipment and drugs.

“...because of shortage of drugs and medical equipment, my staff in rural areas cannot properly apply and improve their medical knowledge and skills as those in rural areas...” [ST, male, KII1]

Shortages of electricity and water

Getting secure access to electricity and water at public facilities in rural areas has been uneven across our six study provinces. Most health centres in provinces outside of Phnom Penh and Kandal still have no secure electricity and clean water as of 2013.

“...Before 2012, it was extremely difficult for us to help women give birth at night because we didn’t have electricity. We just had this building and electricity in 2012; but no clean waters. For consultation service is OK, but it is very difficult to serve patients here in this HC. We can help 6-9 women to give birth to a baby per month last year. We have to spend 600,000 Riels (about 150USD) per month for purchasing waters from fire engine trucks...” [ST, male, KII3]

With support from NGOs and donors, most health centres in rural areas were equipped with one or two boreholes or open wells, and one big water-tank for collecting and storing rainwater. Some of those wells run out of water in the dry season so water needed to be purchased for a few months per year. In these periods, health workers did not have good hygiene and sanitation practices and were reportedly at a high risk of infection (Chhea et al, 2010).

“...Sometimes, we could not keep ourselves totally clean because it is difficult to get waters. Unlike before, we now have good supply or access to needles. We do not to boil them for re-using. This helps us a lot in reducing transmission. It is still difficult for us to encourage our patients to have good hygiene and sanitation practices during treatment. My staff may be also in high risks of getting infection from inability to have good practice of hygiene and sanitation...” [BB, male, KII3]

Insecurity

In most parts of country, the health workers faced risks to their life. Like other government officials, they were targeted by Khmer Rouge as they were seen as those that opposed the officials. Only local medical practitioners were willing to stay working in those areas because they had a good knowledge of survival strategies within their community. This was largely reflected in interviews with health managers aged 40 and over.

“...only a few of us were working here between 1982 and 1995/6 when the Khmer Rouge conflict was still going on in this area. Our health post was burned down by Khmer Rouge Troop two times. We were lucky to escape from Khmer Rouge because we hid ourselves in the people’s home. The villagers also tried to help us because they felt we were their friends and relatives...” [KC, male, KII3]

The most difficult period for health workers was from 1984 to 1988. About 380,000 people were conscripted to construct a deforested and mined field barrage in Cambodia, parallel to the Thai border as a military strategy to protect the western area from the Khmer Rouge. The majority of conscripted labourers died of malaria and due to mine explosions. Health workers were also obliged to join and support these labour forces. There are no reports about the number of health workers that were

killed. However, health managers experienced risks from shooting, mine explosions, and malaria when they were working in those areas.

“...I was assigned to go to the Porpel Fortress and frontier areas along Dong Rek Mountain for 9 months in 1987. Like other labourers, I was placed in worst condition of workplace with no sleeping quarters and insufficient supply of food, medicines or quinines, blanket and mosquito nets or proper facility for working...” [KC, male, KII2]

Pre-1997, only those working in the provincial towns or main urban areas had were secure from risk of armed conflict.

“...Only those who worked in the town or urban areas in this province (Battambang) did not worry about risks of life from mine-explosion or getting targeted by Khmer Rouge soldiers...” [BB, male, KII1]

In 2013, the fear of explosive remnants of war (ERW) or unintended stepping in mine-contaminated fields was still affecting people in the former conflict r zones. This issue was mentioned by the health mangers working in the remote areas of Battambang and Stung Treng, although demining is still making progress in those areas. New staff who did not know the area well were reportedly at high risk, especially when they had to go to do their outreach activities or provide home care.

“... So far we did not have any health workers died of mine-or ERW explosion, but my staff still worried about this risk. Some villagers got killed or got serious injured during ploughing their farmland. Demining done by Hello Trust, MAG and CMAC was reportedly very slow. Many people (former soldiers) demined their lands by themselves for getting land to build a house or farming...” [BB, male, KII4]

In other rural areas, the health workers were reportedly faced with high risks of violence from robbery, gangs and drug users, especially when they travelled at night or to remote places. This frustration was of less concern for staff working on the outskirts of Phnom Penh and rural areas of Kandal Province, because they had better road conditions and transportation. Health workers in the former Khmer Rouge zones also had less concern because of strict controls from the local authorities.

“...we don't worry about robbery or thievery in this area. Our local authorities (mostly formers Khmer soldiers or leaders) are very active to control it. Since establishment of this OD and RH, we have good supply of drugs and medical equipment from NGOs but we don't know what will happen in the future when the NGO programmes stop...” [BB, male, KII4]

In the post-conflict period, the health workers in rural areas faced a combined set of poor conditions (see table 16). The difference from before 1993 was that there was external assistance from government, donors and NGOs to overcome the difficulties they faced. Differences in working conditions between rural and urban areas become more apparent after peace in 1999.

Poor road conditions and transportation

The newly established HCs in the remote areas of Kandal reported that staff had difficulty to go to their workplace in the wet season because the access road needed to be renovated.

“...As of 1998, we don’t have security problem but terrible road conditions. It took us almost a day to go to Phnom Penh through terrible roads. Doctor or medical assistants from Phnom Penh or Kandal province did not wish to stay working here at that time. Before the establishment of this OD and referral hospital of Koh Thom in 2006, we had only two deteriorating wooden buildings for accommodating patients, inadequate drugs and a few very old medical institutions. Working conditions at health posts even more difficult for those who worked at the health posts with no bed for patients and often no drugs...” [KD, male, KII2].

In the other provinces, the difficulty in travelling from home to the workplace was reported in the rural areas of at least four provinces: Stung Treng, Kompong Cham, Kompot and Battambang provinces.

“...For our RH is OK, but in the rainy seasons, staff living far away from the health centers often were late or absent from work when there were heavy rains; and roads from their home to the HCs become muddy...” [BB, male, KII5].

Absences happened at the HCs with poor road connections or when the roads got flooded by rising water from the Mekong.

“...In wet season, some staff had to take boat to go to their workplace in Kong Meas and Kosh Sotin and so on. It is really difficult for them and they sometimes were absent for a few days from their work. I and my colleagues, facility managers, cannot blame or take actions against them in this case. They had to cover all expenditure for travelling by themselves because there is no travelling allowance from government...” [KC, male ,KII1]

Similar complaints were also raised for staff working in the flooded areas of Kandal province

“...Unlike now, with muddy roads, some of my staff got wet or their clothes became dirty when they reached at this hospital as of early 2000s. In the dry season, we did not have enough water for keeping our facility and clothes as clean as we wished. We had better supply of water now for doing our job well in this RH just in the last years. It is still difficult for my staff working at the HCs away from this RH, especially in the remote areas...” [KD, male, KII3]

Poor road conditions and transportation made it hard for health workers to get to rural health facilities, especially in the wet season, which lasts for about six months.

“... Some low parts of this Kompong Cham province get flooded in rainy season from Mekong River. It is not possible for my staff to go to the HCs by their motorbike or care. They had to reach their workplace by boat or combination of transportation. They often arrive at their workplace late or leave early to reach their home safely without fear of robbery or gangster group ...” [KC, male, KII5]

In Stung Treng, the construction of a rural road had not been carried out. The national road connecting the province to Phnom Penh is still in progress.

“...It took us for about 2-3 hours to reach Siem Pang Health Center. It is still extremely difficult for my staff to go to most villages in this province for doing their outreach activities. Nurse and midwife from other provinces are never ever willing to come to work here...” [ST, male, KII1]

Health workers are required to do out-reach activities, which can be time consuming in rural areas. They often use their own means of transportation for doing these outreach activities and are constrained by the poor condition of the roads.

“...Outreach activity to raise awareness of important access to our HCs for health care is one of important tasks for my staff in this Stung Treng province. It is quite difficult for me and my staff to do this task but we had to do it. Many villages are still disconnected because of no or poor road. It was only possible for us to reach some villages through walking because we had to walk across water stream and rocky footpath. Doing this work, we received same allowance as the staff in other provinces which travelling was much easier. Some times when we reached the villages for children vaccination, we already run out of ice for retaining quality of vaccines...” [ST, male, KII2]

Many health centres in remote rural areas had no ambulances for referrals. In Stung Treng, we saw health worker struggling to send a woman to the provincial referral hospital; no transportation was available at that time.

“...we had helped one of our clients for two days but she still could not give birth. We called the RH in Stung Treng for sending one ambulance to take the lady to the RH, but there was no response. There is no other mean of private transport available here. We still do not know what to do to rescue the baby and mother...” [ST, male, KII3]

5. Drivers of change

We look in this section at the actors and processes which led to changes in HRH policies over this period. The main actors engaged in the HRH policy changes are highlighted in Table 19. The national HRH strategies were often developed through broad stakeholder consultation (Jacobs et al, 2009). Many schemes are largely funded by donors, and they are at different stages of integration into the government system of management.

“... The pilots of those demand and supply side schemes provide us good lessons about administrative burden and responsibility of OD and facility managers. It is time for us to consolidate those schemes into one system of implementation, monitoring and evaluation in order to reduce the workload of our managers...” [Participants at the national validation workshop, 2015]

Table 18: Policy changes and main actors, 1979 – 2013

Policy changes	Purposes	Main Actors	Financing
Health Management			

- Sector wide approach and integration in late 1990s	Effective coordination and harmonisation of donors' support to health sector	WHO and other Donors	Donor pooled funds
- Moving from <u>contracting in and out</u> to SOA in 2009	Ownership and control of health and HRH management	MoH	Donor pooled funds
- Workforce planning	Workforce production and Projection	MoH, WHO	Donor funds
- Quantity to quality production of health workforce in early 2000s	Strengthening pre-service trainings	Donor-driven	Government budget and fees collection
Financial incentives			
- Midwifery incentives	- 10 USD for midwives in urban - 15 USD midwives in rural	MoH	Government
- SDG incentives	Incentives for health workers and managers	MoH	Donor Pooled Funds
- User Fees	Cost sharing from the Non-Poor population	MoH	
- HEF/CBHI, vouchers	Increasing access for the poor	INGOs	Donor Funds

The government has played critical role in development of policies, legislation, strategies, guidelines, resource mobilisation and allocation from external and internal sources, monitoring and evaluation and pre-service training (MoH, 2008).

“...I was among a few senior officials who developed the health strategic development policies and priorities of action for reconstruction of health system and human resource development in 1980s and 1990s. Only a few officials were active in making the health strategic plan. With new constitution in 1993, the MoH was mandated to take the health sector planning and stewardship of health system and HRH development in Cambodia...” [MoH, male, KII3]

Formal decision-making in the MoH is quite hierarchical and centralised. Key actors in health policy-making include relevant technical departments within MoH, development partners, health NGOs, other ministries and national authorities/committees. Within the MoH there are three general directorates including (1) the Directorate General for Health; (2) the Directorate General for Administration and Finance; and (3) the Directorate General for Inspection. The key technical body in the MoH is the Directorate General for Health, supervising eight departments with different roles and responsibilities, including the Department of Planning and Health Information (DPHI), the Department of Health Prevention (DHP), the Department of Hospital Services (DPS), the Department of Human Resource (DHR), the Department of Essential Drug and Food (DDF), the Department of Communicable Disease Control (CDC), the Department of International Cooperation (DIC) and the Department of Internal Audit (DIA).

(Jacobs et al 2009) suggested that formal procedures are less important in decision-making than behind-the-scenes negotiations. Staff with good technical knowledge holding powerful positions are

an asset for developing policies and strategies because they are required to deal with donors and technical assistants. However, the donors are influential in shaping policy making and prioritising actions because of the significant amount of funds they provide. Among those donors, WHO has played a leading role in providing technical support to the MoH for policy formulation since 1993 (Fujita et al., 2013).

The government focused strengthening service delivery in operational districts and the institutions (RH and HC) under it in 1996. Concerns about the quality of health workers trained and employed within the health sector meant that local recruitment and the deployment of health workers was centralised by the MoH in 2002. This change from a local to a central system of recruitment and deployment was governed by the Council of Administrative Reform within the Council of Ministers for improved HRH planning.

The donors who supported human resource development shifted their focus from quantity to quality of health workers in mid 1990s. This led to the termination of pre-service training for medical assistants between 1995 and 1997, and ceasing the production of midwives between 1996 and 2002.

“...It was big mistake for us that we ceased the midwifery courses in 1996. It took us a half decade to restart the midwifery courses in 2003 because of the concern of quality of pre-service training and competency of trained midwives...” [MoH, male, KII3]

The government was then required to restart midwifery trainings (3+1 courses) in 2003 to address acute shortages.

“...I have no objection to the evidence for making right policy. Without the mid-term review, we did realise that we had shortages of midwives, nurses and other key health personals, especially in rural area...” [MoH, female, KII3]

Back in the 1990s, capacity building, HRH development and management were pulled in different directions by the different agendas of multilateral and international agencies. This lack of coordination resulted in overlapping interventions and did not help strengthen the government stewardship and ownership of health sector development (Godfrey et al., 2000). The Council of Administrative Reform (CAR) then called for a sector-wide approach (SWAP) in 2000, which was adopted in a few years later. Cambodia has gradually moved from donor-driven policy-making to taking more ownership of policy formulation processes (Vong et al. forthcoming).

Donor-driven policy-making was reduced by the enforcement of HSSP in which bilateral and international organisations agreed to put their financial support into a common donor trust fund, which operated in a different accounting system. Following a discussion on aid effectiveness in 2004, the Royal Government of Cambodia (RGC) and development partners signed a Declaration on Harmonisation and Alignment. This led to the adoption of a five-year Action Plan on Harmonisation and Alignment in 2006. In 2008, HSP2: 2008-2015 set up mechanisms for partners engaged in the health sector to implement, monitor and elaborate on the health plan. Donors made efforts to harmonise their procedures and in 2009, a seven-donor sector-wide approach (SWAP) was launched to support implementation of the HSP2 (Action for Global Health). This was to harmonise partners in

planning and implementing through stakeholder consultation and discussions organised by the various technical working groups.

In 2004, to promote aid effectiveness and participatory policy development, the government and donors agreed to establish the Government-Donor Coordination Committee (GDCC), which oversees 19 Technical Working Groups (TWGs). Members of TWGs consist of key government officials, representatives from donor agencies and NGO leaders. The key tasks of TWGs include strategy development, resource mobilisation, capacity development coordination and promoting aid effectiveness within their specific thematic areas (Jones, 2013).

A few of these technical working groups are well functioning and provide policy feedback and contextual analysis for policy making. However, policy feedback between research findings and policy is often missing, probably because of poor engagement. At the implementation level, there are few well-functioning processes for linking evidence-based-knowledge and action. Most crucial policy spaces, budgetary disbursements to the districts and effective political interventions lack systems to draw on health and management-related evidence.

In 2009, the government launched the HSSP2: 2008-2015 with support from donor pooled funds (Table 9). The participation of development partners was guided by the Service Delivery Grant and HEF mechanism introduced in 2008 (WHO, 2014:15). Despite having these tools, donor funding remains largely fragmented. Insufficient coordination persists and prevents the effective implementation of current health and HRH policies. Concerns over weak financial management (World Bank, 2011) means donors have largely chosen to channel most of their funds through NGOs. Responding to criticism of a weakening public system, a small group of donors created a common pooled fund in 2005 (Fujita et al. 2013). Many continue to use inflexible guidelines, which constrain MoH action.

In practice, local policy makers often compromise the national priorities of health and HRH development in favour of donor's ideas. They rarely reject any proposed innovations with funding from donors (Jones, 2013). Policy makers have kept good relationships with donors to ensure a flow of funds. Donors retain the capacity to enforce some of their decisions and preferences. A significant portion of the responsibility for effective management of health sector still lies with international development partners. With a history of reforms in policy being initiated by development partners, the policy-making agenda in health is highly-donor driven. However, the government can veto any proposed policy innovations and/or measures that do not come with additional financial support, or where policies have been put in place but the Government has to provide additional budgetary commitment (ibid).

Government ownership has been built into some pilots, such as health contracting schemes. Donors agreed to allocate funds into SDGs for SOA operations, and national wide-midwifery incentive schemes. In order to increase the stewardship and ownership of recent pilot schemes, the government launched a master plan for social health insurance in 2005. In 2013, the possible integration of existing schemes was still subject to negotiation and policy dialogue. At the implementation level, the health managers of the OD, RH and HC reported a significant workload to deal with the reporting, monitoring, accounting and review systems for different donors and/or funders.

6. Financing of policies

The policies and strategic actions mentioned above were supported by the establishment of national budget for health in 1994. Total health expenditure (THE) has significantly increased along with economic growth. THE has increased up to approximately USD 812-833 million in 2013 from about USD 495-550 million in 2008 (Table 20a). This is more than 5.34% of the GDP or USD 55 per capita (MoH, 2014).

A total budget of USD 753.4 million is estimated in the National Strategic Development Plan 2009-2013 as the amount required to support the implementation of HSP2: 2008-2015. From the CDC database, the total spending from government and donors for the health sector has increased from USD 215 million in 2008 to 328 million USD in 2013 (Table 20a). This is about 44-46% of the total budget required for full implementation of the HSP2 in 2013. Spending to support the Health Sector Annual Operation Plan (HS AOP) shows a more remarkable increase from approximately USD 161 million to USD 349 million over the same period. This budget allocation has not yet met the financial needs for full implementation of HSP2. The financial deficit for supporting HSP2 and/or current policy interventions (Table 19) is approximately USD 404-425 million (Table 20b). This financial gap is largely financed by OOP.

Inadequate public health financing means public health service delivery is often considered poor quality. This image has led to increased use of private health services, constituting approximately two thirds of care episodes (World Bank, 2011:p4). The use of private services has not only led to high out of pocket (OOP) expenditures, but also exposes the patients to unregulated and poor quality services. OOP outlays still predominate in THE and often place a burden on the poor, making care too expensive for people of most income levels (World Bank 2013).

Table 19: Health expenditure by source, 2008-2013 (million USD)

	2008	2009	2010	2011	2012	2013
Total budget required for HSP2: 2008-2015*	753.4	753.4	753.4	753.4	753.4	753.4
Government expenditure for health**	104.6	125.4	151.8	161.8	187.5	208.0
Donor expenditure on health from CDC database**	110.7	128.3	108.0	106.8	116.6	120.2
Donor planned expenditure on health based on HS AOP**	56.0	85.2	88.2	114.5	141.2	141.4
Total expenditure with Government and Donor Expenditure for health (CDC database)	215.3	253.7	259.8	268.6	304.1	328.1
Total expenditure with Government and Donor planned expenditure for health	160.6	210.6	240.0	276.2	328.6	349.4
Total OOP**	334.8	394.4	416.5	444.0	465.7	483.8
Total Health Expenditure from Government, Donor, OOP (CDC database)	550.1	648.1	676.3	712.6	769.8	811.9

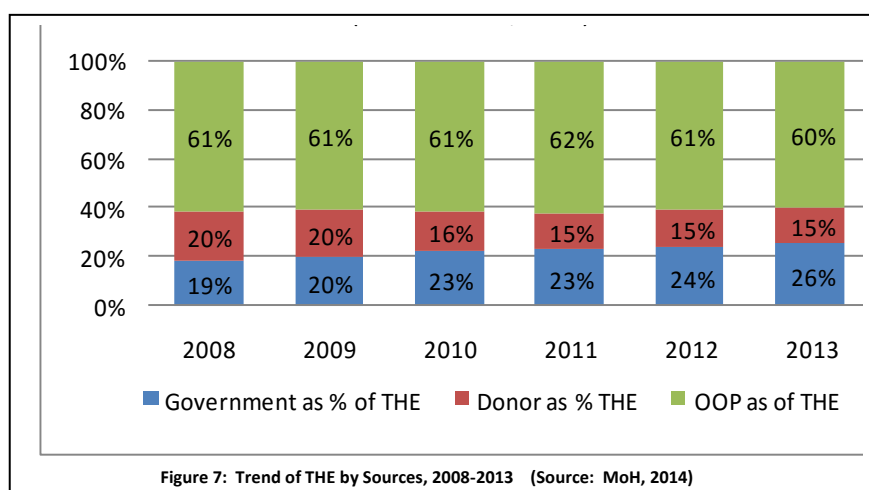
Total Health Expenditure from Government, Donor planned expenditure, OOP	495.4	605.0	656.5	720.2	794.4	833.1
Financial Gaps of Health Expenditure Compared to Total Budget Required for Full Implementation of HSP2 2008-2015						
Total financial gap with Government and Donors' expenditure (CDC database)	538.1	499.7	493.6	484.8	449.3	425.3
Total financial gap with Government and Donor planned expenditure to HS AOP	592.8	542.8	513.4	477.2	424.8	404.0
Financial gap as % of total budget required for HSP2 (CDC database)	71%	66%	66%	64%	60%	56%
Financial gap as % of total budget required for HSP2 (Government and Donor planned expenditure)	79%	72%	68%	63%	56%	54%

Note: * Figures were taken from the National Strategic Development Plan 2009-2013.

** Figures were taken from the Annual Health Financing Report 2013.

National budget allocation by sectors

The government has shown a commitment to increasing its share of THE, from 19% in 2008 to 27% in 2013. Around 70% of the national budget is allocated to the central level and 30% to the provincial level operations. The central budget is for the procurement of drugs and medical consumables. A large proportion (60%) of national spending is for drugs, financial support and social assistance, followed by 19% for equipment. Only 18% is spent on staff remuneration, 4% on maintenance, 3% on communication and around 1% for tax in 2013 (MoH, 2014).



Donor expenditure for health

Donors' contributions are largely committed by bilateral and multilateral agreements through different funding modalities to support the HSSP and/or Health Sector Annual Operation Plan (MoH, 2008). Donor spending

for health represents 15% of THE, gradually decreasing from approximately 20% in 2008 (Figure 7). Such funds are largely used to support demand-and-supply side schemes. For example, HEF (demand-side scheme) is supported by health development partners (60%) and by the government counterpart fund (40%). It is agreed that the share of the counterpart fund is expected to increase by 10% annually, while contributions from development partners should be reduced by the same proportion over the period of HSSP2 implementation (MoH, 2014). This share of spending is for direct benefits only while

the management costs remain fully relying on donor fund. There are strong debates about the sustainable funding of these demand-and-supply side schemes since Cambodia still relies heavily on donor funding.

7. Lessons and conclusions

Cambodia still faces critical challenges to have adequate health professionals in rural areas after 17 years of peace and political stability. Armed conflict between the early 1970s and 1998 resulted in a great loss of about 2 million people and the destruction of the entire social and economic system. Public and private institutions were abolished, and the intellectuals, including health professionals, were targeted by the Khmer Rouge between 1975 and 1978. Few medical practitioners and students survived and remained in the country in 1979.

The development of human resource for health (HRH) is placed at the top of political and policy priorities to reconstruct and develop the health system. In 2013, the MoH employed around 20,000 health workers, which is planned to increase to 32,000 by 2020. Midwives and nurses comprise 68% of the public health workforce, suggesting a focus on increasing primary health care services in rural areas. Nonetheless, medical doctors and well-trained and experienced health professionals are concentrated mainly at the national and provincial facilities. Most midwives and nurses at the rural facilities seem to have good theoretical knowledge but lack technical skills. Shortages of health workers, incentives, and HRH management need to be addressed to ensure equitable access to health services for all Cambodians. Health and HRH development policies have been significantly influenced by external technical assistance.

How policy has developed

Human resource development policies have been developed to reconstruct and develop the health system. The MoH has long-standing experience in building capacity to take ownership and stewardship of health and HRH policies. These HRH experiences can be divided into four stages to address the need to increase the number of health workers employed and retained in rural areas.

1. **Reconstructing the health system, 1979-1989:** There was immediate need for the rapid production of the health workforce to reconstruct primary health services for the population. Cambodia was subjected to international sanctions at that time. Reconstruction of the health system was largely influenced by political and technical support from socialist ideologies to provide free services for all. With technical support from Vietnamese advisers, the authorities at both central and sub-national levels were responsible for establishing health facilities, and training and recruiting health workers. All remaining medical practitioners and students worked for the government to establish health services. Those doctors took on many tasks as administrators, clinicians and trainers. This decentralised policy could only be practiced in areas where there was relative security or that were controlled by the government. A low level of care was available at those facilities because they were equipped with only one or two trained health workers and lacked drugs and medical equipment. At the national level, a few national hospitals were re-established with a few physicians, nurses and midwives to provide general care, surgery and other services.

- 2. Strengthening and development of health and HRH system, 1990-1995:** The Paris Peace Agreement in 1989 led to removal of the international sanctions from Cambodia in 1991 and an influx of foreign aid. The MoH, with technical support from WHO, UNICEF, and international NGOs made the first national development programmes to rebuild the health system in 1993. This improved health infrastructure and produced health workers, especially midwives, to increase the availability of primary health care services.

At the policy level, the direction and priorities of the national health development programmes were largely influenced by foreign aid. The bilateral and international agencies who controlled the funding pulled the development agenda in different directions. Weak and unreliable administration and financial management meant that the development partners channelled their financial support to the international NGOs. Development assistance for the health sector was unevenly distributed. The government did not have institutional capacity to coordinate the external aid or the NGO programmes, resulting in overlapping interventions and a lack of government ownership. Nonetheless, the MoH took advantage of external support and focused on:

- administrative reform, by transferring the authorities and budget control for development of health facilities and HRH trainings from the PHD to the MoH
- developing institutional mechanisms to improve the pre-service training programmes of health professionals

The development partners did not trust the centralised administrative and financial management system of the government. Such fragmented practices continued until the launch of the first HSSP in 2004, and when some donors supporting the health sector agreed to allocate their funding into the donor trust fund to support HSSP implementation.

Of critical note in this period was the flow of well-experienced staff from the public to the NGO sector for better pay. Donors and NGOs competed with the public sector to recruit well-trained health professionals, who were largely government employees, and offered a high salary. Such practices undermined the capacity of the MoH to effectively manage and implement national programmes because experienced staff had left to join other programmes.

- 3. Exploring health management innovations, 1996-1999:** The ineffectiveness of development assistance to improve health and HRH management was due to a lack of policy and institutional capacity. With support from WHO, the government and donors came together to develop the first health coverage plan (HCP) and to launch a national charter of health financing in 1996. The HCP focused on speeding up the establishment of health facilities and changed the structure of the system from one HC/HP in each commune and one hospital in each district to the establishment of operational district (OD).

The functions and staffing of HCs and RHs were defined to provide MPA and CPA services. However, most HCs and RHs did not provide full primary health care and referral services because of a lack of well-trained health workers and poor infrastructure.

In addition, the government endorsed the national charter of health financing (CHF) to formalise user fees. This is because health workers often charged unofficial fees at the public facilities and so user fees would increase revenue for the health facility, which was then redistributed among the health workers who were present at work. The government allowed donors and international NGOs to pilot some demand-and supply-side schemes which aimed to increase the utility of public services and the performance of health workers at the public facilities.

- 4. Scaling up health management innovations and improving quality of HR production for achieving Universal Health Coverage, 2000-present:** Policy formation is still largely influenced by development partners. Government has increased ownership and stewardship of some development innovations such as SOA and the national midwifery scheme. This has been supported by the HSSP, the operational manual of service delivery grants, national midwifery schemes and the priorities highlighted in HSP 2008-2015. Nonetheless, HEF are still managed by NGOs and are in the process of scaling up to achieve universal coverage.

Effectiveness of policies to date

Centralised recruitment and deployment

Since the early 2000s, the government has centralised staff recruitment and distribution for both training and employment. This has both advantages and disadvantages for addressing staff shortages and retaining well trained and experienced health workers in rural areas. The newly recruited health workers have a better knowledge of the subject because the students with higher scores are selected to attend pre-service training courses at the training institution of their choice. However, budget allocation for the health sector allows the MoH to recruit only 50% of the health workers required to fill the vacancies available at rural facilities. The staffing gaps are filled by use of the SDG budget to hire health graduates based on annual contracts. In addition, the students from resource-poor schools in rural areas often cannot compete with those from urban areas and are often screened out at entry, national exit and annual civil servant examinations.

Experiences of local recruitment and deployment in 1980s and 1990s suggested that most students from resource poor schools were selected for trainings and then posted back to work in their home areas. Almost all remained in their post, although they received meagre pay or had limited opportunities for informal practice. In contrast with the new system of staff recruitment and distribution, most newly recruited health workers wish to be posted in urban centres where there are opportunities for informal practice or getting a part time job with private provider to generate extra income. Many health workers go to their assigned post in rural areas to complete their probation period or get official recognition as one of government employee for job security. They then often seek support from their strong connections with high-ranking officials to be posted to work in the urban areas.

Other reasons for leaving rural posts for urban areas are associated with low and irregular pay, being far from hometowns, insecurity, lack of accommodation and poor quality of education for their children. Nonetheless, factors for those who stay working in rural areas are:

- 1) Proximity to home and family support

- 2) Extra income from informal practice or having another business
- 3) Marriage to local people and willingness to be part of the community

Salary reform and financial incentives

To address the poor commitment of staff because of low pay, a number of financial incentives have been implemented to increase remuneration of health workers by government and donors.

- 1. Salary Reforms:** In 2007/8, the government launched a salary reform with strong commitment to increase basic pay by 10-15% every year and up to 20% in the last few years. With 15% of government budget allocated for the salaries of 17,000 staff employed by the MoH, staff received an average of 90USD per month which remains relatively low compared to a living wage of 120USD as estimated by WHO (2014) or 300 USD per month by (Uy et al, 2007). Low pay has created incentives for the public health workers to undertake informal practices for generating additional income to cover cost of livings. Great differences in pay between government, NGOs and private sectors have led to a brain-drain from public sector to the NGO sector between 1990s and mid-2000s. Many well-experienced health professionals also had a second job with private providers.
- 2. National pilot financial incentive schemes:** A number of financial schemes have been implemented to increase staff commitment and performance at the public facilities. Those financial incentives included 1) demand side-schemes such as CBHI introduced by NGOs in a few ODs in 1998, and HEF managed by INGOs since 2000; and 2) supply side schemes such as the national midwifery incentive scheme (NMIS) managed by the MoH since 2006/7, and contracting models of health management introduced by INGOs in 1998/9.

In 2013, health workers received on average of 207USD in rural areas and 265USD in urban areas at work from government salary and incentives. This amount was claimed to not be enough to cover the cost of living around 300USD per month for a health workers with a family. Therefore, they spent around 3-5 hours a day at the public facility; and used the rest of their time to undertake informal practice or other income generating activities to earn an average of 356USD in rural areas and 720 USD in urban areas to sustain their living and finance their children's education. The incentive schemes are also heavy to administer for local managers.

Strengthening performance management

A number of HRH management tools have been introduced to increase staff motivation and promotion. Those tools include the administrative control of staff attendance at work, increasing personal activity plans, career path promotion, letters of appreciation and in-service training. Some of these staff management tools have not been yet effectively enforced in practice.

The administrative control of attendance at work, personal activity plan and letter of appreciation are managed by the local health managers of HC, RH, OD and PHD and seem to be effective. However, those local managers still have no control over career path promotion. The decisions regarding staff rewards are centrally managed by the MoH, which is influenced by patronage practices.

The provision of on-the-job training is an effective tool for improving clinical competency and skills. It has been made available through national and NGO health related programmes, but is not yet aligned with PDH and OD staff development plans.

The SOA adopted from contracting in-and-out models has become an important management tool for strengthening government ownership of health and HRH management and is being scaling up. SOA practice has not yet proved effective for staff retention and banning informal practices however. The benefit of adopting an SOA model is that the government has full control of staffing, financial resources, and because the management capacity of local managers has been built via performance based planning. SOA implementation is supported by SDGs introduced in 2008, which heavily rely on the donor pooled funds. The effectiveness of SOA in strengthening staff performance and ensuring the quality of service delivery requires a proper assessment from an independent agency.

Strengthening professional code of conduct

Cambodia has established a professional code of conduct in recent years through the establishment professional boards or committees for the registration of health professionals. Since 2013 efforts have been made to register all health professionals and health service providers. Remarkable success was made into registering and licensing private health institutions, while medical practitioners are not yet registered. The professional boards are still attempting to fully perform their roles. The members of these professional boards are volunteers.

HR information systems

The monitoring and information system plays a critical role in providing inputs for human resource planning. However, current official records of public health professionals do not reflect the actual number of public workers working at their post. There are abnormal trends and distributions of the health workers between urban and rural areas.

Quality and community confidence in providers

The impact of recent changes in policy interventions to improve performance and professionalism can be learnt from a few studies of health seeking behaviours and trust of people in health providers. For example, (Khun and Manderson, 2007) suggest that women lacked confidence in public health services in the villages to take care of their children who had dengue between 2002 and 2003. Children were taken to the HC or RH when they had severe symptoms of dengue. Poverty determined the ability to pay for proper care; suspicion about clinical ability of local health staff and quality of drugs at the local HCs caused fundamental delays in seeking care and inappropriate treatment. Mothers used home services first, then sought remedies from public and private providers, showing an ineffective route of care from one sector to the other. Women reported no difference in the quality of care between the private providers, whose medical staff were the same people employed at the public facilities, and drugs were from the same source. In addition, women could not take their children to a public facility if they did not have the money to pay service fees up front and they may go to private providers where they could pay for their service over time. Such a lack of confidence in the capacity and abilities of medical staff at the health centre occurred in the period of contracting in-and-out in Kompong Cham province (Ensor et al, 2016). The HEF was not yet made available for the poor in those rural villages of this eastern province of Kompong Cham.

The study by (Ozawa and Walker (2011) focussed on trust and health seeking behaviour of people at public and private providers across seven villages under the Thmar Pouk OD areas, in the northeast province of Banteay Meanchey. In health seeking, trust was defined as the acceptance of a vulnerable situation in which the patients believe the health provider will care for their interests or health. Trust was seen as closely linked with the quality and efficiency of care that they received from the provider, and which influenced health-seeking decisions. It also related to their level of understanding about proper care, with people often preferring to have IV injections to take drugs for faster recovery. For minor health problems such as colds, headaches, dizziness, diarrhoea or stomach aches, they went to buy drugs from local pharmacy, shop or market close to their home to reduce the cost and time for treatment. They sought care from public and private providers when they felt more serious symptoms.

People trust in public and private providers were not necessarily related the quality of care they received. Interpersonal and personal relations with the providers were reported as important reasons for health seeking decisions among the villagers in the northeast province. Accessing public providers was not the first choice as people only went if they had a serious illness. People used the public provider because there was health insurance (75%), location close to home (30%) and low cost (15%). They also value good quality of care at the RH more than HC. Public providers scored an average of 4.02 out of 5 for quality of care, compared to 3.96 for private providers. They valued the professional morals of public providers and they were trusted for their skills and abilities, and effective referral systems.

The reasons for seeking private providers for care included convenience and proximity to their home. Private providers could also offer service at the patient's home and patients do not always have to pay upfront. People trust the private providers because they are friendly, approachable, thorough, and easy to contact. Ros et al. (forthcoming) suggest that health seeking behaviour for deliveries has changed over time. Unlike in the 1990s, women in rural areas now prefer public provider to traditional midwives. This shift in birth delivery suggests a significant change in women's trust in public providers.

Increasing trust in public providers may be affected by the HEF and other demand-side schemes, which have been made available to people. HEF appears to be most effective at increasing access to health care of the poor people when these financial incentives schemes are used in combination with complementary supply-side and demand-side financing initiatives such as contracting and CBHI (Annear et al., 2008). In addition, the ODs with contracting experiences (supply-sides schemes) show more efficient performance than those without contracting experiences (Ensor et al, 2016). With contracting schemes, the management capacity of local managers has been built (Vong et al. forthcoming). Nonetheless, recent demand-and-supply-side schemes results in mixed effects to improve staff performance and retain experienced health workers in rural areas. Improvements to the quality of care in rural areas are constrained by the movement of experienced workers to urban areas. In addition, there is higher confidence and trust in the referral system of public providers over private providers. One important effect of the current policy on HRH management is on improving professional codes of conduct of public providers in rural areas, especially the provision of IV injections. People trust in the quality of maternal health care and the clinical skills and competencies of public providers. Nonetheless, people agreed with health managers that the quality of service or care at public facilities is also determined by the availability of experienced health workers, drugs and medical equipment.

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