A REVIEW OF HEALTH LEADERSHIP AND MANAGEMENT CAPACITY IN CAMBODIA

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CONTENTS

2 Acronyms
3 Executive summary
4 Snapshot: Cambodia
5 Introduction
6 Purpose and approach
6 Access to health care
7 Financing of the health system
7 Human resources for health
9 Health management structure
11 Number and distribution of managers
12 Competence of local managers
13 Management working environment
13 Functioning of management support systems
14 Socio-cultural context
15 Summary
16 References
18 Appendix

LIST OF FIGURES
8 Figure 1. Sources of health finance, 2005
8 Figure 2. GDP per capita and health spending as a proportion of GDP, 2000–2004
10 Figure 3. Organisational and management structure of the health system in Cambodia

LIST OF TABLES
11 Table 1. Distribution of health personnel and facilities by province in Cambodia, 2008
ACRONYMS

AIDS acquired immune deficiency syndrome
AusAID Australian Agency for International Development
GDP gross domestic product
GTZ Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)
HIV human immunodeficiency virus
HRH human resources for health
MAKER Managers taking Action based on Knowledge and Effective use of Resources
MDG Millennium Development Goals
MoH Ministry of Health
NIPH National Institute of Public Health
NIS National Institute of Statistics
UNDP United Nations Development Programme
UNSW University of New South Wales
USAID United States Agency for International Development
USD$ United States dollars
WHO World Health Organization
WPRO Western Pacific Regional Office (WHO)

A note about the use of acronyms in this publication

Acronyms are used in both the singular and the plural, e.g. MDG (singular) and MDGs (plural). Acronyms are also used throughout the references and citations to shorten some organisations with long names.
This review describes the current situation of health leadership and management capacity in Cambodia. Cambodia has made tremendous efforts to rebuild its health system following years of conflict that decimated the country’s health infrastructure.

The introduction of health sector reforms in the 1990s has seen the health status of the population improve markedly with life expectancy at birth raised from 49.7 years in 1990 to 62.2 years in 2010. Infant mortality has fallen to 69 per 1,000 live births in 2008 from 97 per 1,000 in 2003. The proportion of the population with access to an improved water source has increased from 30% in 2000 to 61% in 2008.

Despite these achievements, the Cambodian health system still faces serious challenges. Maternal mortality, for example, appears to have worsened slightly with the ratio deteriorating from 440 per 100,000 live births in 1985–2003 to 460 per 100,000 in 2005–2009.

To enhance sustainable development of the health sector, the Ministry of Health has developed a Health Strategic Plan 2008–2015, which identifies three priority areas – reduce newborn, child and maternal morbidity and mortality with increased reproductive health; reduce morbidity and mortality of HIV/AIDS, malaria, tuberculosis, and other communicable diseases; and reduce the burden of non-communicable diseases and other health problems.

The Ministry of Health (MoH) recognises the need to scale-up service delivery at the operational district level in order to achieve these goals. It also acknowledges the crucial role that strong management and leadership capacity and performance play in scaling-up service delivery.

WHO estimates that about 4,300 doctors and 14,800 nurses worked in Cambodia around 2007 with the MoH alone employing over 15,000 staff. Although the size of the workforce appears small in relation to the population, compared to similar developing countries, Cambodia’s health workforce density is higher than that of about 30 low- and middle- income countries.

Management structures and responsibilities within the health sector differ in accordance with the different health service delivery models in Cambodia. In the Contracting-out Model, contractors have complete management responsibility for services that have been contracted to them, including hiring and firing of staff and setting of wages. The Contracting-in Model, however, allows contractors to work within the MoH system to strengthen the existing administrative structure and personnel using government-supplied drugs and consumables as well as budget supplements for staff incentives and operating expenses. Finally, in the Government Model, management and service delivery responsibilities rest with government district health management teams.

The actual number of managers and management support personnel in the Cambodian health system could not be established in this review. However, with 76 operational districts and each a district health management team of about five or six members, it is estimated that between 380 and 456 middle managers and management support personnel work at the operational district level although some remote districts may have fewer team members. The majority of the district level managers appear to have clinical backgrounds as medical doctors, nurses or midwives. The Cambodian National Institute of Public Health with support from GTZ\(^1\) has been providing management training for district managers to improve their managerial capacity and performance.

The working environment of district managers has reportedly improved significantly following the development of the 1996 Health Coverage Plan and Guidelines for Operational Health Districts have provided district managers with some sense of direction in terms of planning. However, the legislative environment remains restrictive with middle managers having limited influence on human resource management practices.

Overall, human resource planning and personnel management are not aligned with health sector planning and the Health Coverage Plan; there are no human resource policies to support staff deployment in underserved areas; and financial flows are not aligned with managerial authority and with accountability for outcomes. Additionally, no effective system of supportive supervision for district managers exists and key management support systems such as the health information management system do not function adequately to enhance district management.

While the Cambodian MoH has developed strategies to address these and other issues confronting the health system in the second Health Strategic Plan 2008–2015, the key challenge remains implementation of the plan, particularly, the capacity of the MoH to monitor and evaluate progress and impact on health outcomes.

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\(^1\) GTZ: Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)
SNAPSHOT: CAMBODIA
BASIC DEMOGRAPHIC AND SOCIO-ECONOMIC DATA

Population in 2009
14.8 million

GDP per capita
(PPP USD$) in 2008
$1,820

Life expectancy
at birth in 2009
62 years

Under age 5 mortality in 2009
88 per 1,000 live births

Maternal mortality from 2005 to 2009
460 per 100,000
live births

Nursing and midwifery
density from 2000 to 2007
9 per 10,000
people

Doctor density
from 2000 to 2009
2 per 10,000
people

Key to acronyms
GDP = gross domestic product
PPP = purchasing power parity
USD$ = United States dollars

(Adapted from UNDP 2010, UNICEF 2011, WHO 2010)
Cambodia has made a tremendous effort to rebuild its health system following years of conflict that decimated the country’s health infrastructure. The government introduced health sector reforms in the 1990s that emphasised strengthening and extending the delivery of primary health care through the district health system. Since the early 1990s health system reform has seen the health status of Cambodians improve markedly. Life expectancy at birth has risen from 49.7 years in 1990 to 62.2 years in 2010. Infant mortality has fallen to 69 per 1,000 live births in 2008 from 97 per 1,000 in 2003. The proportion of the population with access to an improved water source has increased from 30% in 2000 to 61% in 2008 (UNDP 1993, 2005, 2010). Based on trends over 2000–2008, the country is likely to meet or exceed its MDG targets of reducing infant mortality, lowering the fertility rate and reducing HIV/AIDS prevalence (Barrère et al. 2001; Hor et al. 2006; Lane 2007; UNDP 2010).

Despite this progress, Cambodia still faces significant health challenges with several health indicators not improving as expected. Maternal mortality in particular, appears to have worsened rather than improved. The maternal mortality ratio slightly deteriorated from 440 per 100,000 live births in 1985–2003 to 460 per 100,000 in 2005–2009. The overall proportion of births attended by skilled health personnel remained around 44% in 2000–2008 (UNDP 2005, 2010). The gains made so far have not been equally distributed geographically and between population groups (Land 2008).

Rural areas generally have poorer health indicators than urban areas. Infant mortality rates in remote provinces of Mondulkiri and Ratanakiri, for example, are more than three times the level in Phnom Penh – the capital (NIHP and NIS 2006). Additionally, Cambodia, like other developing nations, is undergoing health and demographic transition and faced with a double burden of communicable and non-communicable disease. While malaria and tuberculosis continue to be a problem, there is a growing prevalence of hypertension and diabetes mellitus. WHO estimates that about 25% of adults has high blood pressure and 10% has diabetes (WHO WPRO 2008b). The number of deaths and injuries has increased by 50% between 2000 and 2005 according to the MoH (Government of Cambodia 2008).

Another significant health challenge faced by Cambodia is the vast and growing private sector. While the government is the main provider of the health care infrastructure, only about one-fifth of treatment episodes are carried out in government facilities. About 50% of treatments are reportedly covered by the private sector – private hospitals, clinics, pharmacies and private consultations with trained health workers (WHO 2007). The non-medical sector, comprising a variety of providers such as drug vendors, traditional and religious healers and traditional birth attendants, attracts about 21% of patients (NIHP and NIS 2006). The use of private medical and non-medical providers appears widespread in both urban and rural areas.

There are particular concerns about the quality of health care delivered by these private unregulated providers, although the problem with quality cuts across the entire health sector of Cambodia – public, private and non-medical (Government of Cambodia 2008; Land 2008). Consequently, in the second Health Sector Strategic Plan 2008–2015, the MoH has made improving quality in service delivery and management a priority. It seeks to do this through establishment of and compliance with the national protocols, clinical practice guidelines and quality standards, in particular establishment of accreditation systems (Government of Cambodia 2008).

Overall, the MoH second Health Sector Strategic Plan 2008–2015 aims to further enhance sustainable development of the health sector following the implementation of the first Health Sector Strategic Plan 2003–2007. The second plan is linked to the MDGs and has three main goals: reduce newborn, child and maternal morbidity and mortality with increased reproductive health services; reduce morbidity and mortality of HIV/AIDS, malaria, tuberculosis, and other communicable diseases; and reduce the burden of non-communicable diseases and other health problems.

To accomplish these goals, attention is placed on five strategic areas: health service delivery, health care financing, human resources for health, health information systems, and health system governance. The MoH believes that a successful implementation of the second strategic plan (2008–2015) will increase demand and ensure equitable access to quality health services that will facilitate the achievement of maximum level of health and well-being by all Cambodians (Government of Cambodia 2008).
The purpose of this review is to describe the current situation of health management and leadership capacity and analyse issues that affect the performance of district health managers. It is intended to inform the development of policy recommendations for improving management and leadership performance in six AusAID priority countries – Cambodia, Fiji, Lao PDR, Papua New Guinea, Solomon Islands and Timor-Leste.

The review was conducted through desk review of published and grey literature and discussions with key individuals. The first six sections provide a brief description of key aspects of the health system of Cambodia and the final four attempt to assess management and leadership capacity using a modified version of the WHO MAKER framework.

Key components of the framework used include numbers and distribution of managers, managerial competency, the management working environment, management support systems and socio-cultural context in which managers operate. A summary of key points about management and leadership in Cambodia has been provided in a box at the end of this report.

Detailed analysis and discussion of the issues identified has been done in a separate paper that brings together all the issues identified from the six countries. This synthesis will be available in 2011 from www.hrhhub.unsw.edu.au

As is the case in many developing countries access to health care in Cambodia is constrained by poverty. Poor families often cannot afford essential health services and resort to ‘illegal’ pharmacies, traditional healers and other unqualified private providers. It is estimated that about one-third of the population does not have the resources to pay for health care from either the public or (qualified) private sector providers.

The overall utilisation of public health facilities is around 0.4 visits per person per year, which according to the MoH is low and must be improved (Government of Cambodia 2008; WHO WPRO 2008a). Access is also constrained by geographical location; there are fewer health facilities and health workers in rural and remote areas than in urban areas. Approximately 54% of doctors are reportedly employed in the capital city – Phnom Penh, where only 9.3% of the population lives (Chhea et al. 2010).

The government acknowledges these challenges and has expanded coverage and access, especially for the poor and other vulnerable groups, a key component of its health sector strategic plans (Government of Cambodia 2008). Since the mid-1990s the government has been implementing a Health Coverage Plan which has sought to place health centres within a 10-kilometre radius or a maximum of two-hours walk of the population and a referral hospital within 20–30 kilometres or a maximum of 3 hours by car or boat (Government of Cambodia 2008).

Health centres were to offer basic services known in Cambodia as Minimum Packages of Activities and referral hospitals to offer a Complementary Package of Activities. As part of the implementation of the Health Coverage Plan, the government embarked on building new health facilities and upgrading existing ones. About 121 existing district hospitals were upgraded and almost 800 commune clinics were converted into health centres (Eldon and Gunby 2009).

Health equity funds and community-based insurance schemes are designed to reduce or remove financial barriers to service access. Health equity funds have reportedly improved the use of public sector health facilities; although there are reports of many poor people still not using public facilities because they do not want to go far away from their homes (Asante 2009).
The Cambodian health system is financed largely with private (out-of-pocket), government and donor funds. Of the three sources of finance, out-of-pocket spending dominates. In 2005, for example, the total expenditure on health was about USD$512 million or USD$37 per capita of which 68% was out-of-pocket; 22% from donors and just about 10% from the government (see Figure 1, p.8; Government of Cambodia 2008). In rural areas, it is estimated that about 11% of private household expenditure is for health, and among the poorest households this is about 28% (Eldon and Gunby 2009). In recent years, government spending on health has risen, albeit not to the 13% of recurrent expenditure targeted in the 2002 National Strategic Development Plan. Health spending in 2007, for example, was about 12% of government recurrent expenditure (and 1.2% of GDP), up from about 10.7% in 2006 (Government of Cambodia 2008). In terms of government health expenditure as a proportion of GDP there was a significant rise between 2000 (1.0%) and 2002 (2.1%) but in 2004 government spending fell from 2.1% of GDP to 1.7% (see Figure 2, p.8).

The overall government strategy for financing the health system remains focused on increasing government health spending and removing financial barriers to accessing quality health care. Several social protection measures and safety nets have been devised to improve access for the poor. The two key ones are the health equity funds and community-based health insurance scheme (Government of Cambodia 2008). The health equity funds were developed by a number of international non-government organisations to assist the MoH provide services at district level. These funds provide financial access to public health services for the poor by supporting health facilities in waiving fees for the poor (Eldon and Gunby 2009; Noirhomme et al. 2007). The success of the health equity funds has led the government into trying a community-based health insurance scheme in 2007 that seeks to subsidise access to health services for the poor by supporting health facilities in waiving fees for the poor (Eldon and Gunby 2009; Noirhomme et al. 2007). The success of the health equity funds has led the government into trying a community-based health insurance scheme in 2007 that seeks to subsidise access to health services for the poor by supporting health facilities in waiving fees for the poor (Eldon and Gunby 2009; Noirhomme et al. 2007).

WHO has observed that health worker density in Cambodia is higher than the density in some 30 low- and middle-income countries, mostly in sub-Saharan Africa.

The human resources for health challenges facing Cambodia are similar to those facing many developing countries – shortages, maldistribution and competency, among other things. The country's long political conflict took a severe toll on health professionals with many health workers either losing their lives or migrating to other countries. The Khmer Rouge regime reportedly closed all health facilities between 1975 and 1979 and killed a large part of the medical staff (Noirhomme et al. 2007). Nonetheless, efforts to rehabilitate the health system appear to have paid off with significant improvements in health workforce numbers. According to WHO, there are about 4,300 doctors and 14,800 nurses in Cambodia. The MoH reportedly employs over 15,000 staff (WHO 2007; WHO WPRO 2008b). Although shortages in some specialties exist, the number of health workers in Cambodia is said to compare better with similar developing countries.

WHO has observed that health worker density in Cambodia is higher than the density in some 30 low- and middle-income countries, mostly in sub-Saharan Africa. For example, compared to Rwanda, Cambodia has three times the number of doctors per 1,000 population and 45% more nurses (WHO 2007).

Despite the relatively high number of personnel, the MoH has described the size of the health workforce as small in relation to the country's population. Other workforce challenges identified in the Health Sector Strategic Plan 2008–2015 include high level of overlap between the government and private sector health workforce; imbalances in deployment, with some overstaffing in urban areas and severe understaffing in remote rural areas; inadequate financial compensation; and inadequate career progression opportunities. The health worker density in Cambodia is higher than the density in some 30 low- and middle-income countries, mostly in sub-Saharan Africa. For example, compared to Rwanda, Cambodia has three times the number of doctors per 1,000 population and 45% more nurses (WHO 2007).

Many public sector health workers in Cambodia also work in the private health sector to subsidise their income.

As mentioned earlier, over half (54%) of doctors in Cambodia work in the capital city – Phnom Penh, where only 9.3% of the population lives.
FIGURE 1. SOURCES OF HEALTH FINANCE, 2005
(Adapted from Government of Cambodia 2008)

FIGURE 2. GDP PER CAPITA AND HEALTH SPENDING AS A PROPORTION OF GDP, 2000–2004

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP/capita (PPP)</th>
<th>GHExp % GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1,446</td>
<td>1.0</td>
</tr>
<tr>
<td>2001</td>
<td>1,860</td>
<td>1.8</td>
</tr>
<tr>
<td>2002</td>
<td>2,060</td>
<td>2.1</td>
</tr>
<tr>
<td>2003</td>
<td>2,078</td>
<td>2.1</td>
</tr>
<tr>
<td>2004</td>
<td>2,423</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Key to acronyms
- GDP: gross domestic product
- GHExp: government health expenditure
- PPP: purchasing power parity
- USD$: United States dollars
skills and competencies\textsuperscript{6} and limited management capacity due to low quality of practical training sites and limited quality of teaching staff among both school instructors and preceptors; low salaries and lack of appropriate motivation associated with weak performance related management, constraining increased productivity and quality of services; lack of coordination in training activities, resulting in frequent absence of staff from their work place (Government of Cambodia 2008).

Several interventions have been outlined in the 2008–2015 strategic plan to tackle the challenges. These include improving the technical skills and competence of the health workforce; strengthening staff professionalism, ethical conduct and quality of work; improving staff distribution and retention with priority to personnel essential to the priorities of the health sector; and improving staff remuneration, salaries, performance and incentives (Government of Cambodia 2008).

A list of strategies has been developed for each of the interventions. For example, to improve staff distribution and retention, the MoH will among other things use donor-funded incentives to lure workers to ‘priority areas’. While this has the potential to improve remuneration of health workers and increase motivation, it also can skew staff distribution towards ‘donor priorities’ which are not necessarily harmonised with national objectives (WHO WPRO 2008a).

HEALTH MANAGEMENT STRUCTURE

The operational districts are the focus of attention in terms of achieving the country’s health policy objectives especially \textit{under the current organic law on decentralisation and deconcentration}.

There are three health service delivery models in Cambodia with different management structures and responsibilities. The first is the Contracting-out Model where contractors have complete management responsibility for service delivery, including hiring and firing and setting wages, procuring and distributing essential drugs and supplies, and organising and staffing public health facilities.

The second is the Contracting-in Model where contractors work within the MoH system to strengthen the existing administrative structure and healthcare personnel with government-supplied drugs and consumables, and a nominal budget supplement for staff incentives and operating expenses.

The third is the Government Model where management and services remain within the government district health management team and government supplied drugs and consumables are used. This analysis is concerned with the government sector and more specifically the district level (known as the operational district in Cambodia).

The operational districts (76 in number) oversee referral hospitals, health centres and health posts. Figure 3 (p.10) shows how the health system is organised and the management structure at the operational level. The operational districts are the focus of attention in terms of achieving the country’s health policy objectives especially under the current organic law on decentralisation and deconcentration.

The central MoH level is responsible for policies, legislation, strategic planning etc. The ‘provincial level’ (20 provinces and 4 municipalities) operates as a link between the ‘central level’ and the ‘operational districts’.

\textsuperscript{6} In their comprehensive Midwifery Review, Sherratt et al. (2006) demonstrated that levels of competency among primary care midwives in Cambodia are inadequate and placing primary midwives in rural areas has failed to address broader health needs, particularly those of children.
A review of health leadership and management capacity in Cambodia
Augustine Asante et al.

FIGURE 3. ORGANISATIONAL AND MANAGEMENT STRUCTURE OF THE HEALTH SYSTEM IN CAMBODIA
(Adapted from Government of Cambodia 2008)

Central
- Policy, legislation, strategic planning
- Resource mobilisation and allocation
- Monitoring, evaluation, research, health information systems
- Training, support to provinces and/or districts
- Multi-sectoral coordination, external aid

Provincial
- Implement national health policies, strategic and operational plans
- Ensure equitable distribution and effective use of resources
- Support development of operational districts through monitoring and evaluation, coordination and staff development

District

**Referral Hospitals**
- Accepts referrals from health centres and posts
- Provides specialist services
- Treatment of complex health problems
- Provides follow-up service
- Supports health centres and posts through clinical training and supervision

**Health Centres and Health Posts**
- Provides primary health care
- Community liaison and participation
- Integrates clinical care and public health actions
- Ensures access to culturally appropriate services
NUMBER AND DISTRIBUTION OF MANAGERS

Table 1 shows the distribution of health personnel and facilities by province in 2008 although the number of health managers in each is not specified.

Health districts are run by district health management teams of around five to six members. With 73 operational districts the number of individuals involved in health management at the district level is approximately 365–438 nationwide.

The Health Strategic Plan 2008–2015 notes, ‘many remote facilities are insufficiently staffed because of recruitment and deployment problems associated with limited competency.

### TABLE 1. DISTRIBUTION OF HEALTH PERSONNEL AND FACILITIES BY PROVINCE IN CAMBODIA, 2008

(Adapted from Government of Cambodia 2008)

<table>
<thead>
<tr>
<th>CODE</th>
<th>PROVINCE</th>
<th>OPERATIONAL DISTRICTS</th>
<th>POPULATION</th>
<th>HEALTH FACILITIES</th>
<th>HEALTH PERSONNEL</th>
<th>HEALTH WORKER PER POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Banteay Meanchey</td>
<td>4</td>
<td>678,033</td>
<td>63</td>
<td>769</td>
<td>1:882</td>
</tr>
<tr>
<td>2.</td>
<td>Battambang</td>
<td>5</td>
<td>1,024,663</td>
<td>78</td>
<td>1,246</td>
<td>1:822</td>
</tr>
<tr>
<td>3.</td>
<td>Kampong Cham</td>
<td>10</td>
<td>1,680,694</td>
<td>135</td>
<td>1,229</td>
<td>1:1,368</td>
</tr>
<tr>
<td>4.</td>
<td>Kampong Chhnang</td>
<td>3</td>
<td>417,616</td>
<td>37</td>
<td>470</td>
<td>1:889</td>
</tr>
<tr>
<td>5.</td>
<td>Kampong Speu</td>
<td>3</td>
<td>716,517</td>
<td>50</td>
<td>645</td>
<td>1:1,111</td>
</tr>
<tr>
<td>6.</td>
<td>Kampong Thom</td>
<td>3</td>
<td>630,803</td>
<td>50</td>
<td>503</td>
<td>1:1,254</td>
</tr>
<tr>
<td>7.</td>
<td>Kampot</td>
<td>4</td>
<td>585,110</td>
<td>48</td>
<td>648</td>
<td>1:903</td>
</tr>
<tr>
<td>8.</td>
<td>Kandal</td>
<td>8</td>
<td>1,265,085</td>
<td>94</td>
<td>900</td>
<td>1:1,406</td>
</tr>
<tr>
<td>9.</td>
<td>Koh Kong</td>
<td>2</td>
<td>139,722</td>
<td>15</td>
<td>143</td>
<td>1:977</td>
</tr>
<tr>
<td>10.</td>
<td>Kratie</td>
<td>2</td>
<td>318,523</td>
<td>32</td>
<td>380</td>
<td>1:838</td>
</tr>
<tr>
<td>11.</td>
<td>Mondulkiri</td>
<td>1</td>
<td>60,811</td>
<td>24</td>
<td>147</td>
<td>1:414</td>
</tr>
<tr>
<td>12.</td>
<td>Preah Vihear</td>
<td>1</td>
<td>170,852</td>
<td>33</td>
<td>223</td>
<td>1:766</td>
</tr>
<tr>
<td>13.</td>
<td>Prey Veng</td>
<td>7</td>
<td>947,357</td>
<td>92</td>
<td>947</td>
<td>1:1,000</td>
</tr>
<tr>
<td>14.</td>
<td>Pursat</td>
<td>2</td>
<td>397,107</td>
<td>36</td>
<td>491</td>
<td>1:809</td>
</tr>
<tr>
<td>15.</td>
<td>Ratanakiri</td>
<td>1</td>
<td>149,997</td>
<td>29</td>
<td>257</td>
<td>1:584</td>
</tr>
<tr>
<td>16.</td>
<td>Siem Reap</td>
<td>4</td>
<td>896,309</td>
<td>60</td>
<td>626</td>
<td>1:1,432</td>
</tr>
<tr>
<td>17.</td>
<td>Sihanouk Ville</td>
<td>1</td>
<td>199,902</td>
<td>12</td>
<td>255</td>
<td>1:784</td>
</tr>
<tr>
<td>18.</td>
<td>Stung Treng</td>
<td>1</td>
<td>111,734</td>
<td>13</td>
<td>243</td>
<td>1:460</td>
</tr>
<tr>
<td>19.</td>
<td>Svay Rieng</td>
<td>3</td>
<td>482,785</td>
<td>37</td>
<td>477</td>
<td>1:1,012</td>
</tr>
<tr>
<td>20.</td>
<td>Takeo</td>
<td>5</td>
<td>843,931</td>
<td>74</td>
<td>870</td>
<td>1:970</td>
</tr>
<tr>
<td>21.</td>
<td>Odar Meanchey</td>
<td>1</td>
<td>185,443</td>
<td>14</td>
<td>210</td>
<td>1:883</td>
</tr>
<tr>
<td>22.</td>
<td>Kep Ville</td>
<td>1</td>
<td>35,753</td>
<td>4</td>
<td>81</td>
<td>1:441</td>
</tr>
<tr>
<td>23.</td>
<td>Pailin Ville</td>
<td>1</td>
<td>70,482</td>
<td>5</td>
<td>107</td>
<td>1:659</td>
</tr>
</tbody>
</table>

Total 73 12,009,229 1,054 11,867 1:964

Notes to Table 1
1. Phnom Penh was excluded from the list of provinces hence the total number is 73 instead of 76.
2. Comprised of Health Centers and Health Posts.
3. Includes medical assistants, doctors, nurses (primary and secondary) and midwives (primary and secondary).
and motivation of health staff’ (Government of Cambodia 2008, p.21). However, insights from a MoH official suggests that the unequal distribution of staff might not have any effect on the number of district managers as Cambodia is known to have ‘more than enough’ managers at all levels of the health system (Asante 2009).

With the Cambodian health system undergoing major reform including decentralisation and deconcentration, it is critical that district managers have adequate competency to implement the country’s renewed primary healthcare concept effectively. Information about the qualifications of individual district health managers could not be obtained; therefore, it was not possible to assess their managerial competencies.

The general information on management capacity of the health system, nonetheless, suggests that district health managers on average have limited managerial competency and that many clinicians working in management roles have not had formal management training appropriate for the district level (Eldon and Gunby 2009; Government of Cambodia 2008; Asante 2009). No information could be obtained about national training plans for MoH staff or for evaluation of management training.

The National Institute of Public Health in Cambodia provides some management training for district level managers with the support of GTZ but no information could be obtained on what the training covers or the number of managers trained.

Since 1995 GTZ has supported the MoH in implementing the health sector reforms in the areas of quality management and human resource development and continues, since 2009 under its social protection program, to provide practical training and to revise quality standards for hospitals.

To address the issue of health worker competency in general, and managerial competency in particular, the government is seeking to ‘develop systematic continuing education and management training’. To address the issue of health worker competency in general, and managerial competency in particular, the government is seeking to ‘develop systematic continuing education and management training’.

**COMPETENCE OF LOCAL MANAGERS**

To address the issue of health worker competency in general, and managerial competency in particular, the government is seeking to ‘develop systematic continuing education and management training’.
The working environment of district managers in Cambodia appears to have improved over the years. The development of the Health Coverage Plan and Guidelines for Operational Health Districts provides district managers with some sense of direction in terms of planning (Government of Cambodia 2002). However, the legislative environment remains restrictive and sub-national managers have a limited ability to influence human resource management practices. For example, sub-national managers have no control over the wages budget or staffing numbers; they have the responsibility to direct and supervise activities but they cannot conduct evaluations, offer financial rewards or discipline and fire under-performing staff (Fritzen 2007).

District managers also face several performance management challenges including the lack of an effective system of performance management for individuals or work units. There is also no effective system for linking individual performance to the goals and functions of the MoH or for rewarding appropriate initiatives and behaviours (Men et al. 2005). Additionally, while there is theoretical clarity and order in the MoH structure, there is no such clarity regarding roles and responsibilities at both the provincial and the operational district levels (Eldon and Gunby 2009). Finally, district managers receive little supportive supervision from the provincial and central levels.

The MoH allocates only a minimal proportion of its budget for supervision-related activities making it difficult for managers to undertake supervisory activities (Hill and Eang 2007). The MoH is proposing to ‘strengthen integrated monitoring and supportive supervision at provincial and (operational district) levels to support health service delivery functions at referral hospitals and health centres through the provision of dedicated budgets for monitoring and supervision’ (Government of Cambodia 2008, p.31).

There is also no effective system for linking individual performance to the goals and functions of the Ministry of Health or for rewarding appropriate initiatives and behaviours.

The effectiveness of district managers depends partly on the functionality of support systems: systems of procurement and supply of drugs and other consumables, infrastructure and logistics management systems, planning and budgeting etc.

The functioning of these critical support systems in Cambodia poses additional challenges to district health managers. For example, the procurement and supply management system is perceived as weak and largely ineffectual. This results in frequent stock-outs at central medical stores, operational district pharmacies, referral hospitals and health centres (Ley and Singh 2009). The MoH recognises the problem and is seeking to strengthen the Public Procurement Unit as well as logistical systems to ensure availability and timely delivery of drugs and health commodities at health centres and referral hospitals (Government of Cambodia 2008).

In addition to the challenges posed by the procurement system, there is no effective system of gathering and sharing information. Financial information vital for budgeting and resource allocation often bypasses the provincial health finance office and goes straight to the central finance office especially in relation to national programs (Eldon and Gunby 2009). This makes it hard for provinces to effectively plan and support the activities of district managers.

Finally, the current reward system does not encourage good management; many health centres lack qualified, motivated and committed staff, particularly midwives (Ley and Singh 2009). This is partly due to the low salaries and incentives for public sector health doctors. In general, public health doctors in Cambodia earn around USD$50 per month, and nurses about USD$20 per month (Nodora and Fritsch 2008). As a result of the low salaries, many healthcare personnel work for only a few hours at public health facilities and spend the rest of the day earning money elsewhere to supplement their incomes (Henderson and Tulloch 2008).

The government is contemplating merit-based pay incentives to provide selected staff with levels of remuneration necessary to fulfil their responsibilities. This will replace the current system of ad hoc salary supplementations (Government of Cambodia 2008).
THE SOCIO-CULTURAL CONTEXT

In the health field, women are more likely to be employed as nurses than doctors.

Socio-cultural attitudes in Khmer society have defined the role of women in the economy. Cambodian society is strongly hierarchical with defined notions of power and status. Within it, women are expected to prioritise household-based activities. Moreover it is socially unacceptable for women to marry someone with a lower level of education and women are encouraged not to pursue a position in society that is higher than their husband’s. As a result women have gravitated toward low-skilled and low-income occupations (Ty et al. 2009).

Despite having the highest labour force participation rate in South-East Asia (74%) and comprising 52% of the total population, women account for less than 9% of senior management roles (Ty et al. 2009). In the health field, women are more likely to be employed as nurses than doctors. Given that managers are more likely to come from the ranks of doctors than nurses, it would be reasonable to state that there is a gender imbalance among health managers in Cambodia resulting from the cultural bias towards promoting males. Accordingly, there is likely to be a cultural taboo associated with the promotion of female health managers.
SUMMARY

As in other countries, the majority of the health managers in Cambodia have clinical backgrounds as medical doctors or nurses.

Access and utilisation of health care
- Cambodia has made significant efforts to rebuild its health system following years of conflict that decimated the country’s health infrastructure.

Financing the health system
- Combined, out-of-pocket expenditure (68%) and donor contributions (22%) finance almost 90% of the health system. Health equity funds and community based insurance schemes have been introduced to reduce the burden of cost on the poor. Government policy is to increase expenditure on health but allocations as a proportion of GDP have fluctuated around 2% in recent years. District level health managers therefore face some uncertainty in estimating the amount of financial resources available to them.

Human resources for health
- No accurate statistics about health workforce numbers exist but WHO estimates there are about 4,300 doctors and 14,800 nurses in Cambodia. The MoH reportedly employs over 15,000 staff. Although the MoH considers the size of the health workforce small in relation to the country’s population, compared to similar developing countries, Cambodia’s health workforce density is higher than the density of about 30 low- and middle-income countries.

Health management structure
- There are three health service delivery models with different management structures and responsibilities:
  - Contracting-out: where the contractor has complete management responsibility for service delivery
  - Contracting-in: where the contractor works within the MoH system to strengthen the existing administrative structure
  - Government model: where management of service delivery and resources remain with government district health management teams.

Number and distribution of managers
- Health districts are run by district health management teams of around five to six members. With 73 operational districts the number of individuals involved in health management at the district level is approximately 365–438 nationwide.

Competence of district health managers
- As in many other developing nations, the majority of the health managers in Cambodia have clinical backgrounds as medical doctors or nurses.
- The National Institute of Public Health in Cambodia with support from GTZ provides some management training for district level managers in the areas of quality management and human resource development and continues, since 2009 under its social protection program, to provide practical training and to revise quality standards for hospitals.

Management working environment
- The working environment of district managers in Cambodia has reportedly improved with the development of the Health coverage Plan and Guidelines for Operational Health Districts which are believed to have provided district managers with some sense of direction in terms of planning. The legislative environment, however, remains restrictive as sub-national managers have limited ability to influence human resource management practices.

Functioning of management support systems
- Other issues that affect management capacity and effectiveness include limited supportive supervision for district managers, weak and ineffectual procurement and supply management systems, low staff motivation as a result of poor remuneration and lack of an effective system of gathering and sharing information.

The socio-cultural context
- Gender roles in Cambodian society result in fewer females than males being promoted to managerial positions.
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APPENDIX

ORGANISATIONAL STRUCTURE OF THE CAMBODIA MINISTRY OF HEALTH
(Adapted from WHO WPRO 2008c)

- Minister of Health
- Secretaries of State
- Under-Secretaries of State
- Cabinet
- Department of Internal Audit
- Directorate General for Administration and Finance
  - Department of Administration
  - Department of Personnel
  - Department of Budget and Finance
- 20 provincial and 4 municipal health departments
  - 76 operational districts
    - 69 referral hospitals
    - 942 health centres
    - 67 health posts
A review of health leadership and management capacity in Cambodia

Augustine Asante et al.

Bureau of Inspection

Bureau of Control

Directorate General for Health

Department of Planning and Health Information

Department of Human Resources Development

Department of Drugs, Food, Medical Equipment and Cosmetics

Department of Hospital Services

Department of Preventive Medicine

Department of Communicable Disease Control

Department of International Cooperation

National Institute of Public Health

Cambodia Pharmaceutical Enterprise

Calmette Hospital

Pasteur Institute

Directorate General for Inspection

National centres

National hospitals

4 regional training centres

University of Health Sciences

Faculty of Medicine

Faculty of Odonto-Stomatology

Faculty of Pharmacy

Technical School for Medical Care

Calmette Hospital

Pasteur Institute

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**Human Resource for Health Knowledge Hub, University of New South Wales**

Some of the key thematic areas for this Hub include governance, leadership and management; maternal, neonatal and reproductive health workforce; public health emergencies; and migration.

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**Health Information Systems Knowledge Hub, University of Queensland**

Aims to facilitate the development and integration of health information systems in the broader health system strengthening agenda as well as increase local capacity to ensure that cost-effective, timely, reliable and relevant information is available, and used, to better inform health development policies.


**Health Finance and Health Policy Knowledge Hub, The Nossal Institute for Global Health (University of Melbourne)**

Aims to support regional, national and international partners to develop effective evidence-informed national policy-making, particularly in the field of health finance and health systems. Key thematic areas for this Hub include comparative analysis of health finance interventions and health system outcomes; the role of non-state providers of health care; and health policy development in the Pacific.

[www.ni.unimelb.edu.au](http://www.ni.unimelb.edu.au)

**Compass: Women’s and Children’s Health Knowledge Hub, Compass is a partnership between the Centre for International Child Health, University of Melbourne, Menzies School of Health Research and Burnet Institute’s Centre for International Health.**

Aims to enhance the quality and effectiveness of WCH interventions and focuses on supporting the Millennium Development Goals 4 and 5 – improved maternal and child health and universal access to reproductive health. Key thematic areas for this Hub include regional strategies for child survival; strengthening health systems for maternal and newborn health; adolescent reproductive health; and nutrition.

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