

CURRENT PROBLEMS IN NATIONAL HOSPITALS OF PHNOM PENH: FINANCE AND HEALTH CARE

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ABSTRACT

The current problems in Cambodia's national hospitals subsist in a geographic imbalance in the location of staff and health facilities, and low staff motivation largely due to inadequate payment. This paper aims to investigate the associations among hospital performance, hospital finances, and other related issues in five national hospitals in Phnom Penh, using annual reports of the five hospitals and annual statistics of the Ministry of Health, from 2000 to 2004. The bed occupancy rates (BOR), average lengths of stay (ALS), hospital mortality rates (HMR), maternal and neonatal mortality rates, numbers of patients, main health problems of inpatients, numbers of health personnel, staff incentives, and annual hospital income were used in this study as indicators of five hospitals in Phnom Penh city. The ALS varied from 3.8 to 9 days. The numbers of health personnel (physician, medical assistant, secondary nurses, primary nurses, secondary midwives, and primary midwives) per 100 beds were from 114 to 282. Supplemental salary per staff also differed greatly among these hospitals; the salaries were the highest at Calmette hospital (US\$ 212.8) and the lowest at Preah Kossamak (US\$ 12.4). In the five hospitals, the average BOR was 58.8%, and the mean of total annual income was US\$ 1,427,852 per year. Although not significant, there was a tendency for higher supplemental salaries to be associated with higher BOR (Spearman rank correlation coefficient 0.70, $p = 0.188$). This study showed the differences in the hospital indicators among five national hospitals in Phnom Penh city, and the tendency of higher BOR in the hospitals paying higher supplemental salaries to the staff. Higher supplemental salary to the staff seemed to contribute the better hospital performance.

Key Words: Bed occupancy rate, Hospital income, Number of health personnel, Hospital salaries

INTRODUCTION

The Kingdom of Cambodia has been facing many problems on their health service system, its infrastructure, and human resource capacities since the end of long civil war during 1970 to 1993, resulting that the health status of its people is the worst in South-East Asia.¹⁾ The average life expectancy of Cambodia in 2004 was 51 years for males and 58 years for females, mainly due to high infant and child mortality, high maternal mortality, and high occurrence of preventable diseases. These values were quite low in comparison with those of neighboring countries (67

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years and 73 years of Thailand, 68 years and 77 years of Vietnam and 58 years and 60 years of Laos, respectively).²⁾ Many deaths in Cambodia are preventable, especially in the areas where poverty deters people from accessing health services.^{1,2)}

The Ministry of Health of Cambodia puts the priority on the strategies to implement the effective health care system with appropriate distribution of health personnel. The Ministry has initiated the establishment of a 3-level health care system (district, provincial, and central levels) in order to provide basic health care for people in both rural and urban areas. On the contrary, most physicians preferred to settle in urban areas, which offered attractive employment

Table 1 Hospital indicators of five national hospitals in Phnom Penh, Cambodia, (average for years 2000–2004)^{8,9)}

Indicators	National Maternal and Child Health Center (NMCHC)	National Pediatric Hospital (NPH)	Calmette Hospital (CH)	Preah Kossamak Hospital (PKH)	Norodom Sihanouk Hospital (NSH)
Average length of stay (days)	3.8	4.8	4.8	5.4	9
Bed occupancy rate (%)	65.8	86.1	71.7	20.4	50.0
Beds	154	114	258	254	282
Physician/100 beds	68	54	45	48	61
Nurse-midwife/100 beds	144	104	74	79	103
Outpatients	27,410	43,033	16,886	10,863	45,215
Inpatients	9,570	7,573	15,572	3,551	7,435
Hospital mortality per year					
General hospital mortality rate (%)	1.9	1.6	4.6	3.5	4.3
Maternal death rate per 100	0.2		0		0.1
Neonatal death rate (%)	1.8		0.2		1.8
Financial data (US\$) per year					
Total annual income	2,275,480	524,874	2,561,244	820,781	956,880
National budget	1,606,569	103,551	694,056	700,557	699,309
Donors budget	88,858	311,543	32,613	18,949	86,135
Hospital User fee	580,053	109,780	1,834,575	101,275	171,436
Total amount/ bed	14,776	4,604	9,927	3,231	3,393
Supplemental salary/physician	84.4	45.2	212.8	12.4	24.5
Supplemental salary /nurse-midwife	67	35.5	135.4	9.4	15.3
Newly diagnosed patients per year					
Malaria		63	137	49	128
Diarrhea		1,719	183	114	111
Acute Respiratory Infection		981	325	71	80
Meningitis		38	45	11	11
Tuberculosis		738	2,137	330	1,076
Surgery		672	3,025	2,104	883
Road accidents		4,500	2,306	1,158	211

opportunities for professional development, and higher quality education and other amenities for their families. As a result, there has been a severe shortage of health personnel in rural areas, where preventable deaths occurred frequently.

In the capital city, Phnom Penh, preventable deaths are relatively few,³⁾ because the health facilities in Phnom Penh have a higher proportion of well-educated and highly-skilled health staffs than those in the rural areas. Actually, the health staffs find numerous advantages from practicing in the city, and prefer to stay there.⁴⁾ Even under these relatively better conditions, the health facilities in Phnom Penh have been facing a lot of problems on the poor performance because of low motivation of health personnel, possibly due to low wages. Shortages of drugs and medical supplies seem to be another possible cause of the poor performance, as well as limitations in the public financial resources devoted to each facility.¹⁾ Even in the urban areas including Phnom Penh, public health facilities have not been the first choice of people seeking medical care, because of their unreliability and relatively higher fees than those of traditional healers and pharmacies. The first option of the people has been traditional healers and private providers, but not public health facilities, because of their poor performance.⁵⁾

Financial support plays an important role in the facility management and improving the quality of health services, especially in hospitals.⁶⁾ This paper aims to demonstrate the financial conditions and characteristics (health personnel, patients, and cared diseases) of five national hospitals in Phnom Penh. In addition, the distribution of health personnel in referral hospitals according to province of Cambodia is reported to depict the background surrounding the five hospitals.

MATERIALS AND METHODS

Materials

There are eight national hospitals in the capital city, of which we selected five for study: Calmette Hospital (CH), Preah Kossamak Hospital (PKH), Norodom Sihanouk Hospital (NSH), National Pediatric Hospital (NPH) and National Maternal and Child Health Center (NMCHC). Three of them – CH, PKH and NSH – provide three main services of obstetric-gynecology, surgery and general medicine. NPH provides only children's services, and NMCHC provides mainly obstetric-gynecology services.⁷⁾ The remaining three hospitals, Ang Duong Hospital (AH), Kuntha Bopha Hospital (KBH), and the Tuberculosis Center (TC) were not included in the study, because AH was focused on specialized in ear, nose and throat, and KBH and TC were responsible for providing services to people free of charge.

Hospital directors and finance managers of the respective institutions were fully informed of the proposed study procedures. Data on the measures listed in Table 1 were collected through a form developed for each hospital. The supplemental salary for each staff member was written on comprehensive lists of staff employed at each hospital. Moreover, we gathered information from the annual report of the Ministry of Health and the staff organizational structure of each hospital, as well as the annual hospital reports. The study focused on data of bed occupancy rates (BOR), average length of stay (ALS), hospital mortality rates (HMR), maternal and neonatal mortality rates, number of out-patients and in-patients, main health problems of inpatients, numbers of health personnel, health personnel's supplemental salary, and annual incomes in five hospitals in Phnom Penh city from January 2000 to December 2004.⁸⁻¹⁸⁾

Cambodia has 23 provinces as shown in Fig. 1. The numbers and rated per 1000 population of health personnel of each province in 2004 were extracted from the database of the Human Resource Development Department of the Ministry of Health in the Kingdom of Cambodia.¹⁸⁾

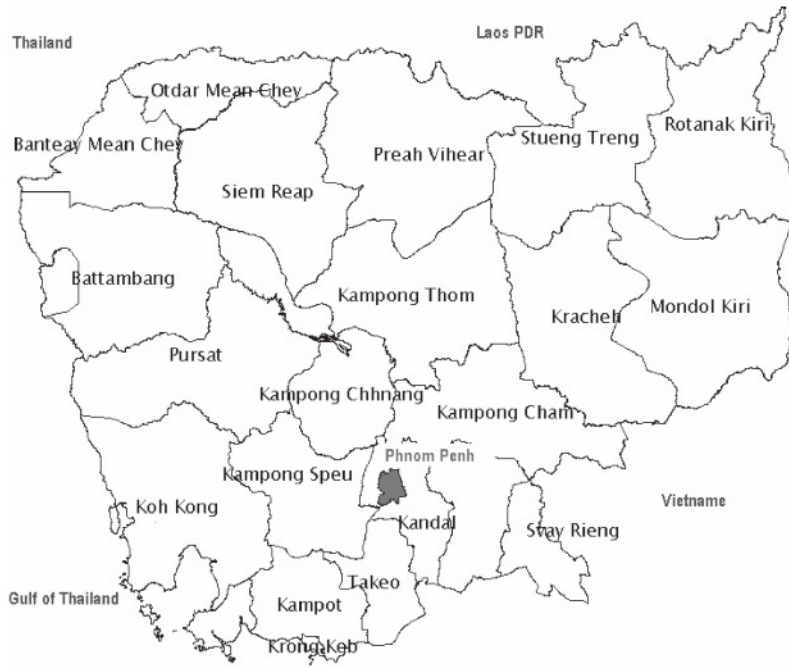


Fig. 1 Map of Cambodia

Definition of measures

Supplemental salary is the money from user fees income of the hospitals, so that it is used to supplement to the monthly government salary. The salary is the amount that all staff receives from the government as stated in the staff policy. All government staff in every hospital in Cambodia received the same salary, approximately 15 to 30 US\$ per month.^{1,19)} Generally, the government salaries for health personnel depended on staff categories such as medical doctors, medical assistants, nurses, midwives, and workers. Medical assistants received the same salary as medical doctors because both of them had the same level of status in this system. Nurses and midwives also received the same amount.

The income from user fees was used for various purposes according to the Ministry of Health guidelines. It was divided into three different portions: 49% for staff motivation, 50% for hospital operation, and 1% for depositing in the treasury. The 49% of the user fee income was divided among hospital staff by function (e.g., physician, nurse, and midwife) according to individual hospital regulations²⁰⁾ and was considered the supplemental salary.

Statistical analysis

Spearman rank correlation coefficient between BOR and supplemental salary was calculated by STATA version 7 (STATA, College Station, TX, USA).

RESULTS

The numbers of health personnel in the whole country are 5,303 in 2004, among whom 2,598 (49%) were employed in the capital city, Phnom Penh (Fig. 2). The number of health personnel

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per 1,000 residents was around 1.76 in the city, which was about 10 times higher than that in the provinces (Fig. 3).

Table 1 shows the BOR of the five hospitals in Phnom Penh, whose average was 58.8%. The ALS also varied from 3.8 days of NMCHC to 9.0 days of NSH. The number of general physicians per 100 beds was from 45 to 68 (the average: 55.2), and the number of nurses/midwives per 100 beds was from 74 to 144 (the average: 100.8). The outpatients were the least in PKH (10,863) and the most in NSH (45,215). The average number of inpatients was 8740.2; 9,570 patients in NMCHC, 7,573 patients in NPH, 15,572 patients in CH; 3,551 patients in PKH; and 7,435 patients in NSH.

The financial resources of the five hospitals are also shown in Table 1. The average of total annual income of the five hospitals was US\$ 1,427,852, which was received from the national budget (US\$ 760,808), donors (US\$107,620), and hospital user fees (US\$559,424). The funds received from various donors and user fees were used for hospital operation and staff members' supplemental salaries. We found no statistically significant difference in staff supplemental salaries

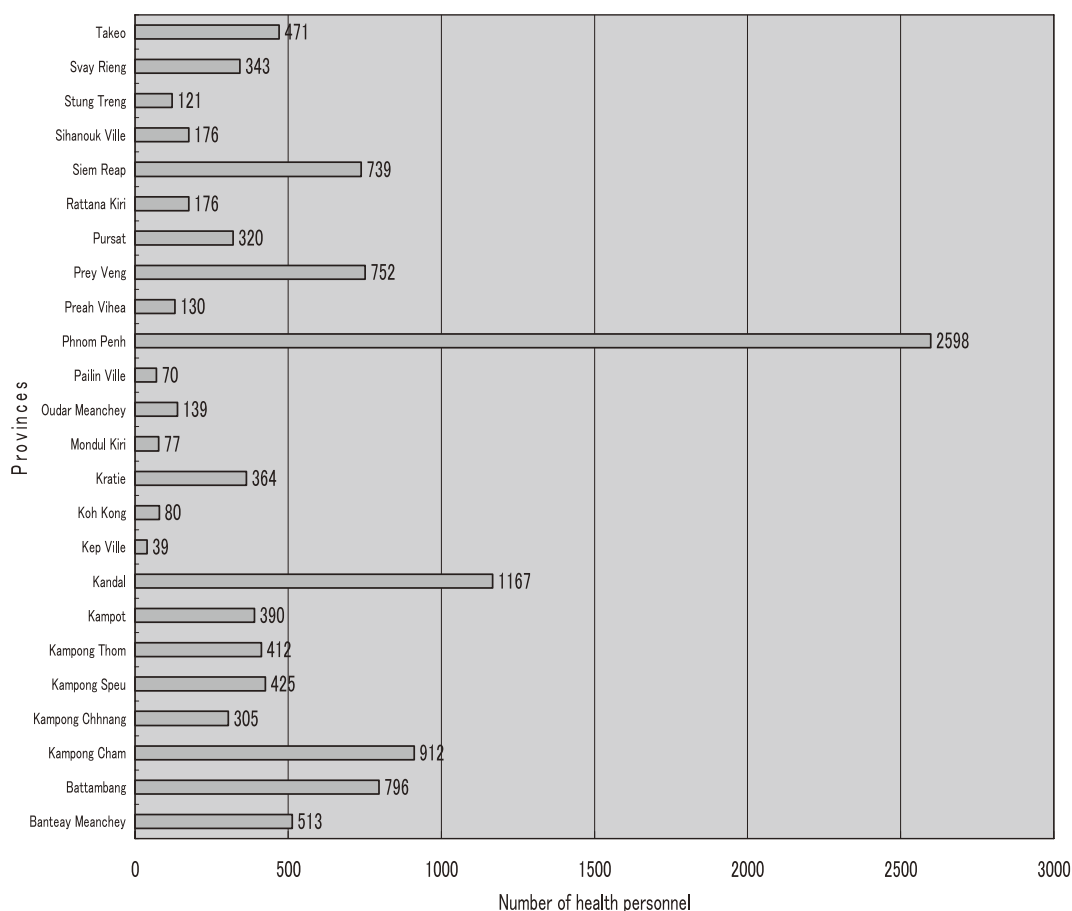


Fig. 2 Number of health personnel (medical doctors, medical assistant, secondary nurses, primary nurses, secondary midwives, and primary midwives) who provided clinical services in hospitals in different regions in the Kingdom of Cambodia, 2004¹⁹⁾

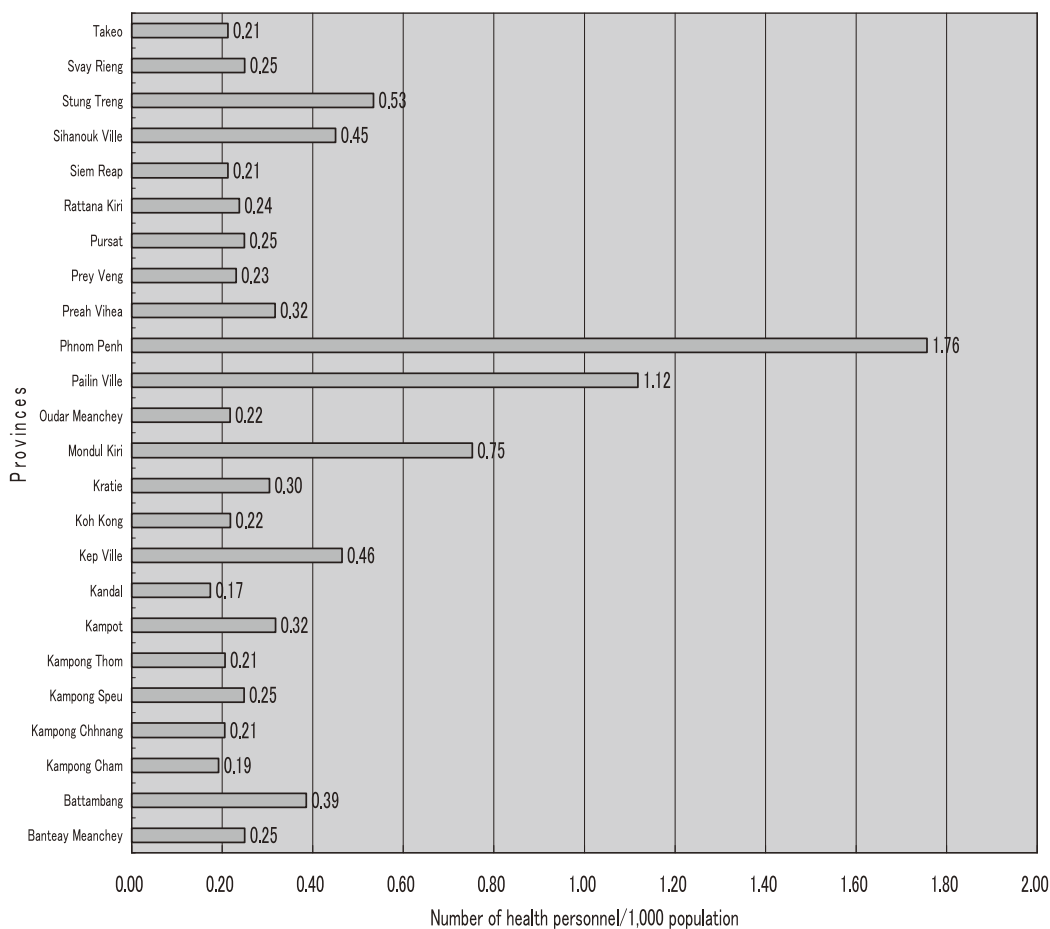


Fig. 3 Health personnel (medical doctors, medical assistant, secondary nurses, primary nurses, secondary midwives, and primary midwives) who provided clinical services in hospitals in different regions per 1,000 population in the Kingdom of Cambodia, 2004¹⁹⁾

between low BOR and high BOR hospitals. We only found a statistical tendency that the amount of staff supplemental salary of high BOR hospitals was higher than that of low BOR hospitals ($p = 0.083$).

The main diseases/injuries varied according to the hospitals' specialties; NPH treated 4,500 road accident patients; CH and PKH had 3,025 and 2,104 general surgery patients, respectively; and NSH received 1,076 of tuberculosis patients. The hospital mortality rate also varied.

DISCUSSION

In the present study, we found clear evidence that the ratio of medical personnel who provided clinical services in the city was much higher than that in the provinces. According to the pre-1999 Ministry of Health policy, the most graduates from medical school had to go to work in

their own province. This policy meant that there might have been enough health personnel in each province to provide health care. After 1999, the policy was reformed; now all graduates must take an entrance examination to hold a position where each province needs.²¹⁾ However, the present study on the health personnel per population demonstrated that Phnom Penh city was overrepresented. The finding indicated the necessity for the Ministry of Health to consider the method for the balanced distribution of health personnel.

This study also showed the possible association between BOR and supplemental salary. There are two possible interpretations for this result. One is that the more the supplemental salary for the staff is increased, the more the staff's activities for patient services are encouraged, and the more patients use the hospital, resulting in the increase in the BOR. In addition, it is expected that the increase in the hospital income elevates the investment for equipment, drugs and materials, resulting in the improvement of the facility, which in turn increases the hospital access by patients. Another interpretation from the opposite can similarly be made: simply stated, the more BOR increases the hospital income through user fees, which makes possible to provide the more supplemental salary to the staff. For example, CH received the highest user fee income (72% of total amount among the five hospitals), because it is an autonomous hospital with modern medical equipment under strong support from French government. Further studies are needed to conclude this issue.

The user fee is an important factor for contributing to the performance of health care services, the quality of care, and sustainability of hospital's function. The staff receives a higher supplemental salary when the income from user fees is high. Moreover, the fee for service can maintain the function of hospitals such as paying for the hospital operation, hospital cleaning, and so on.

The salary of health staff ranges from US\$15 to the maximum US\$30 per month. The actual living cost requires from US\$200 to US\$300 per month for an ordinary family living in the city.²³⁾ Therefore, qualified health personnel has to devote their time to working for private clinics or non-governmental organizations in order to earn additional income. Some hospital staff demands unofficial payment from their patients. Sometimes, they lobby the patients to use their private practices. In addition, it is not rare that they do not work full-time in the hospital, having other private activities such as their own clinics or other businesses. The private sectors and non-governmental organizations lure qualified personnel to work for them with attractive salaries and benefits. Consequently, the numbers of working staff in the public sector have been limited and the hospital services have been impaired, especially in the afternoons and evenings, causing such hardships for patients as long waiting times. A previous study found that most public staff had at least one source of additional private income; i.e., another job besides working in the hospital.²²⁾ Otherwise, they could not support their families on their income. The Ministry of Health implemented a user fee, which can be used for both hospital running costs and salary supplementals as staff incentives. Although not significant, the association between the hospital BOR and staff supplemental salary observed in the present study may share the similar mechanism of health personnel's behaviors.

In Cambodia, health care accessibility and affordability for poor people remain to be critical problems. Hospitals require patients to pay the hospital fees, except for the destitute who have an exemption, and hospital patients are also required to buy extra drugs from private drug stores. As a result, most people seek medical care from traditional healers and other health care providers in the private sector, because their care is less expensive and much more convenient.²³⁾

The performance of hospital and general management is the main keys to running services smoothly and properly. The staff management and the organization structures need to be well organized, for instance, assigning the right persons to the right place. Furthermore, the cli-

ent-oriented approach is the most essential approach to improving hospital performance. If we implement a client-orientated approach, some basic requirements are needed such as staff capacity building, service improvement, and staff motivation. The poor management of hospitals leads to a waste of resources, including money, staff time, buildings and equipment.²⁴⁾

The quality of services delivered from most national hospitals is not yet acceptable. Most national hospitals are faced with problems such as inadequate payment of health workers, very limited public financial resources, shortages of drugs and medical materials, and inadequate regulation of quality of care. The unofficial payments, poor attitudes of staff, and the long waiting times exist as facts.²⁴⁾ To improve the quality of hospital service, in addition to increasing the budget for hospital's operation and staff's supplemental salaries, other factors should be considered: kind attention to patients, accurate diagnosis and proper treatment, clean facilities, adequate medical equipment, available qualified staff and drugs, appropriate price, reasonable waiting times and so on.²⁴⁻²⁶⁾ The basic hospital management skills should be trained to the administrative staff. Furthermore, the exchanges of challenges and successes among hospital administrators and health officials should be organized yearly with some participants from developed and developing countries. This will help the administrative team to achieve better outcomes for hospital services.

In conclusion, this study showed the differences the hospital indicators among five national hospitals in Phnom Penh city, and the possible association between the BOR in hospitals and supplemental salaries to the staff. Higher supplemental salary to the staff seemed to lead the better hospital performance. For better understanding of situation regarding health care services provided by hospitals in Cambodia, further studies should be carried out with comprehensive analyses about cost-effectiveness of hospitals, as well as the knowledge, attitude and practices of the health workers regarding to patient care.

ACKNOWLEDGEMENTS

I would like to express my gratitude to H.E Oknha Ing Bunhoaw, member of national assembly for Takeo province; Dr. Kdan Yuvatha, vice-director of National Pediatric Hospital (NPH), and Ms. Sary Seila, a student at National University of Management (NUM) of Cambodia, all of whom contributed ideas and facilitated the data collection toward the completion of my thesis. I express my sincere thanks to Japanese Ministry of Education, Culture, Sports, Science and Technology and the Young Leaders' Program (YLP) in Nagoya University Graduate School of Medicine, which gave me the opportunity to gain invaluable knowledge, which I hope to use to make valuable contributions in my beloved country. Last of all, I express my thanks to Professor Nobuyuki Hamajima, who contributed ideas, support and experiences to improve this article.

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