Ministry of Health  
Kingdom of Cambodia

National Public Health and Research Institute  
In collaboration with WHO and GTZ

The demand for health care in Cambodia  
Concepts for future research

April 30, 1998
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Acknowledgements

The impetus behind conducting this health demand survey was Dr. Fabrice Sergent, WHO Strengthening Health Systems (SHS) team economist and Dr. Julian Lob-Levyt, WHO SHS team leader. Professor Pham Huy Dung and Ms. Marietta Morada, WHO consultants, did the initial survey work and draft reports.

Dr. Caroline Dimond, Associate Professional Officer, WHO SHS project, representatives from UNICEF and other non-governmental organizations contributed to the development of the survey instruments. GTZ and the National Public Health and Research Institute (NPHRI) facilitated the preparation training, selection of interviewers, and survey research.

Dr. Oum Sophal, Director of the NPHRI, and Dr. Gertrud Schmidt-Ehry, GTZ team leader, developed summary reports of the research. Professor Amornrath Podhipak and Mr. Dusit Sujirarat, Faculty of Public Health, Mahidol University, linked the research to specific health indicators in cooperation with Dr. Novopol of the NPHRI and Dr. Chhom Rada, GTZ.

Dr. Willem van de Put, Transcultural Psychosocial Organization (TPO), Dr. Maurice Hours, UNICEF, and Mr. James Knowles, World Bank, made important contributions but are not responsible for the shortcomings of the report nor necessarily endorse the conclusions and recommendations.

Ms. Sarah Barber, WHO Health Sector Reform (HSR) team, developed the final report, conclusions and recommendations in consultation with Dr. Henk Bekedam, WHO HSR team leader, Dr. Oum Sophal, Dr. Gertrud Schmidt-Ehry, and Dr. Daniel Perez, WHO HSR team. Dr. Hun Chhun Ly and Mr. Seng Choen Leng, WHO HSR team members, translated the executive summary into Khmer.
Executive summary

Background

Many public health facilities in the Kingdom of Cambodia lack managerial, financial and human resources. Although nominally free, public health services carry informal fees but the quality of services remain low in general. Many people have lost confidence in public services and turn to indigenous healers and private providers for care.

The Ministry of Health (MoH) aims to extend the quality and reach of public health services through a process of organizational and financial reform. The first step was nationwide organizational reform, and piloting health financing schemes in selected districts under the Accelerated District Development (ADD) program. This data from this survey will be used to complement other information sources in monitoring the effects of the reforms.

Sixteen districts were selected as the location for the study, eight each from the MoH’s Accelerated Development District (ADD) program and non-ADD areas. From two communes in each district, five clusters of twenty households were selected, totaling 3200 households. Interviewers conducted facility surveys where households were selected. The facility survey was based on the former district health system to provide a picture of the available public services. The fieldwork was completed in December 1996.

Utilization of health services in ADD and non-ADD areas

The study showed the following significant differences in technical and managerial quality and demand for health care between facilities in ADD and non-ADD areas.

- There was a significant difference in the source of advice about safe delivery for pregnant women. In ADD areas, 36% consulted public health staff while 23% did so outside of the ADD.
- Households in ADD areas reported spending 20% of their total expenditures for health, significantly less than 24% reported by households in non-ADD areas.
- Households in ADD areas also spent significantly less on private health providers (US $6) compared to non-ADD (US $8).

Additionally, the percentage of respondents who were recently ill and bought drugs as the first course of action was lower in ADD areas (51%) compared to non-ADD (62%). Another 10% went to the commune health facilities in ADD areas compared to 5% in non-ADD areas.

Several indicators of utilization were higher in those public health facilities judged "good" based on a four-area quality rating. The proportion of women using family spacing services was significantly higher in areas with good public hospitals, although the existence of these services was a part of the quality rating.

- Higher utilization in both public and private hospitals occurred in those areas with good quality public hospitals.
- When a child is ill, utilization of public facilities is slightly higher in areas with good commune health facilities.

The survey showed some important differences in public health facility utilization between ADD and non-ADD areas. This probably reflects, however, the selection of ADD areas, many of which were chosen due to existing facilities, and human and material resources. It is inconclusive, therefore, that the provision of technical equipment and materials alone is sufficient to significantly increase utilization in public health facilities.

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1 \( p = 0.0382 \).
2 \( p = 0.005 \). See part 2.2 for methodological limitations.
3 \( p = 0.003 \).
4 \( p = 0.02 \).
**Costs of health care**

Health costs remain a major household expenditure. The poorest spend the highest percentage of total household expenditures for health compared to other groups. As people become wealthier, they spend more on health, suggesting an ability to pay.

People spent on average 39,300 riels (US$ 15) for one episode of illness. For initial assistance, 70.2% of people recently ill sought care in the private sector. Therefore, a high proportion of funds spent for health went to the private sector, mostly buying medicine.

The average cost of hospitalization (168,945 riels, US$ 65) represented slightly over two and one-half times the estimated monthly income for the largest group of respondents in the survey, farmers on their own land (65.8% of total respondents). A large percentage of people named moneylenders as a source of funds for major illness (45%), indicating that a major illness in the family could result in high health expenditures.

Further, the average cost of hospitalization was 12 to 13 times higher than the average amount household heads were willing to pay for hospitalization (9,220 riels, US$ 3.55 for farmers, and 13,179 riels, US$ 5.07 for non-farmers). The amount willing to pay compared to estimated actual expenditure for health suggests that people actually paid more than they are willing for public health services. This may indicate that people perceive the potential benefits from a visit to the public health facility as low compared to the costs. Alternatively, households may have shifted regular expenditures to make cash available for high unexpected hospital services.

The facility survey confirmed a generally higher activity level in ADD areas compared to non-ADD. Only a quarter of respondents, however, knew that commune health staff could provide curative care, and over half believed the commune staff did not have enough drugs.

**Actions when ill**

Purchasing drugs was the most common first action reported for both a hypothetical illness (fever) and actual illnesses that occurred 30 days before the survey. Those households with members who were recently ill primarily purchased drugs as the first or second course of action. Of those who bought drugs initially, most stopped treatment (63.6%). Of all other groups who did not initially buy drugs and continued treatment, most bought drugs as the second course of action.

With no enforcement of pharmacy regulations and little drug consumer education on the potential side effects and limitations of modern drugs, people are not protected from a potentially harmful unregulated drug market with resulting high costs and prolonged ill health.

**Perceptions of quality of care**

The percentage of women\(^5\) who reported never having used contraception and those who desire to do so suggest a large unmet need for contraceptive knowledge and methods. The expressed desire for contraceptives compares similarly to the majority of pregnant women surveyed who said they would be happy to pay for good quality prenatal care and delivery services at the commune health service level.

About 60% of women who had recently delivered,\(^6\) however, did not choose public health facilities as their preferred location for delivery because of distance, family can’t participate, cost, lack of drugs, and not Khmer tradition. Distance is related to lack of transportation, poor roads, security problems, as well as not knowing when to go to the facility and whether staff will be there. Although nominally free, public health care carries unpredictable informal fees, and people are uncertain how much they will have to pay. Not knowing whether public facilities have drugs contributes to price uncertainty through the possibility of having to continue seeking drugs elsewhere. Once in the drug store, however, the buyer controls the costs and no consultation fee is involved.

The main reasons why people bought medicine first included less waiting time and the availability of drugs. People’s expectations for quality were rudimentary: drugs and staff present to administer them quickly. Cambodians may perceive the drug as the cure \(42\), thereby seeking a source directly. Additionally, many

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\(^{5}\) Women of childbearing ages with two or more children.

\(^{6}\) Women who gave birth within 12 months before the survey.
facilities were operating at a low level, despite the funds invested in reconstruction. It will take time for the population to regain trust in public health services.

Experience from other countries indicate that behavioral "quality" of health services becomes increasingly more important as the overall level and type of basic services expand and people have more choice. However, hospitals in ADD areas rated slightly lower than those in non-ADD areas on the behavioral quality rating and commune facilities rated nearly the same in both areas. The behavioral quality rating measured staff attitude and time spent with patients.

More information is needed on people's perception of technical and behavioral quality as well as cultural and financial accessibility to translate this expressed demand for maternal and child health services into the same level of utilization.

**Recommendations**

1. The MoH should prioritize strengthening management structures enabling the introduction of user-financing.\(^8\)
2. Following the National Health Financing Charter, the MoH should develop user-financing systems only in those areas where the necessary management structures are in place.
3. The MoH should ensure the appropriate design of user-financing systems following the National Health Financing Charter and provide further guidelines in implementing aspects of user-financing schemes, such as community involvement and exemption schemes.
4. The MoH should encourage district and health center staff to develop services appropriate to the needs of their community, taking into consideration local non-governmental health providers.
5. The MoH should develop strategies to promote consumer education about health care and pharmaceuticals and work with Cambodian professional associations to advocate for appropriate practices.
6. The MoH should develop specific strategies to advertise what public health services have to offer and the individual's place within the health system.

**Areas for future research**

- What factors will be important determinants of quality services after a basic level of public health care is broadly established?
- What differences in health seeking behavior exist aggregating for the various characteristics of individual, the facility, severity and etiology of the illness?
- What are all the options available to Cambodians when ill?
- Are Cambodian indigenous healers considered "poor quality" options for health care?
- What factors are important in determining priorities for non-household food expenditures?
- What areas on the supplier side need to be addressed to improve the quality of care?

\(^7\) See part 4 and annexes 2 and 3 for details of the types of hospitals and commune facilities surveyed.

\(^8\) User financing can be defined as *all direct contributions by users and communities in a variety of forms to service providers* (32).
1. Introduction

1.1. Background

Many public health facilities in the Kingdom of Cambodia lack managerial, financial and human resources. The 1996 MoH budget planned per person was $2.17, and the actual amount received was $1.53.9 Public health staff salary levels are correspondingly low, approximately US$ 15 to 20 per month, providing a small fraction of the actual cost of living.

People pay informal fees in the nominally free public sector, despite generally low quality services. Many have lost confidence in public services and turn to private health providers for care. The range of private providers is broad and includes public health staff practicing privately, often in direct competition with the public facility where they are posted. People spend a high proportion of total household expenditures for health.

In light of this situation, the Ministry of Health (MoH) has begun a process of organizational and financial reform. The overall objective of the reform is to extend quality basic health services throughout the country. The MoH is developing strategies to establish a financial partnership with the population in developing a sustainable district health system. The MoH also envisions piloting various kinds of market-managed reforms based on contracting mechanisms.

The MoH is following an approach through which different options for financing reforms can be systematically tested and evaluated before nationwide implementation. The MoH took the first step by implementing organizational reform nationwide and piloting health financing schemes in selected districts under the Accelerated District Development (ADD) program. This survey on the demand for health care is a part of the experimental approach to monitor the effects of the reforms.

1.2. Objectives

The overall objectives of the survey are:

1. To improve the knowledge of current demand patterns in such a way as to enable health authorities to better design health financing schemes.
2. To provide a picture of demand before MoH reform implementation and baseline information for comparison with a follow-up demand survey to evaluate progress.

The survey also aims to contribute to capacity building within the Ministry of Health, specifically the National Public Health and Research Institute (NPHRI). It is hoped the findings can provide further insight about individual decisions in seeking health care, household health expenditure profiles, perceived quality of health services, and the potential response to an increase in the availability and quality of public health services.

1.3. Methodology

Samples for the study were selected from fourteen provinces through a multi-stage design. In the first stage, eight districts were randomly selected from each of two strata: the MoH’s Accelerated District Development (ADD) Program and non-ADD districts. During the second stage, two communes were selected from each district. The number of communes selected totaled 32: 16 from each the ADD and non-ADD districts. In the final stage, five clusters of twenty households were selected from each of the 32 communes, for a total of 3200 households. Households surveyed, therefore, were distributed equally between the ADD and non-ADD areas. (see Annex 1) Interviewers applied opportunistic methods when members of the selected households were not at home.

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Facility questionnaires were conducted in the areas selected for household surveys and evaluated the quality of staff and overall management within the former district health system of commune clinics, district and provincial hospitals.

Preparation training was conducted at the National Public Health and Research Institute (NPHRI), and the survey instruments were piloted in Oudong district, Kompong Speu. Field operations were conducted from 7 October to 20 December 1996. The team entered the data into EPI Info Version 6, later tabulated in SPSS.

2. Biases and limitations

2.1. Limitations inherent to household health surveys

Household surveys are based on self-reported data, relying on the respondent's memory and willingness to communicate with the interviewer. Respondents may have recalled episodes of severe illnesses better than mild ones.

The difference between socially acceptable action and reality may bias a survey based on self-reported actions. This may be compounded due to the practical impossibility of conducting interviews in private in Cambodia. Illnesses with social stigmas could be underestimated.

2.2. Other methodological limitations

Interviewers were civil servants, and respondents may have perceived them as reporting to the government. Some interviewers were medically trained; this has resulted in the underreporting of private health providers or traditional healers in other countries. Underreporting of the use of indigenous healers could also be attributed to the survey terminology, such as the prescribed list of illnesses and symptoms, some of which differ from common terms people use to describe symptoms and illnesses.

Insufficient attention was given to developing survey instruments that would enable an analysis disaggregating gender, other individual predisposing factors, and characteristics of the illnesses. Simple questions for estimating household expenditures resulted in low estimates of monthly household consumption in comparison with other surveys. The calculation of household expenditures for health did not consider diverse influencing factors, in particular the frequency and severity of illnesses, possibly resulting in an underestimate of costs especially for poor or atypical households. Estimates of willingness to pay assumed people had adequate information about the characteristics and value of the health services. (35)

For the facility questionnaire, the quality rating was subjective, and variations between interviewers may have occurred. The facility survey was based on facilities in the former district health system (commune clinics, district and provincial hospitals) as opposed to those designated in the provincial health coverage plans as future health centers and referral hospitals. Staff interviewed and observed for quality ratings were those present at the time of the survey therefore may not represent all staff. The mean was used to divide the facilities between “good” and “poor,” as opposed to a standard of managerial and technical competency.

2.3. Cambodia and developing country specific

The last census in Cambodia was conducted in 1962, precluding an adequate frame for this survey. Population data, in particular age projections, relied on 1993 statistics collected by UNTAC. Securing accurate ages is difficult due to lack of birth records. Due to time and resource constraints, only a

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10 United Nations Transitional Authority in Cambodia.
limited number of samples could be selected for the survey resulting in a rough overview as opposed to a
detailed breakdown by province.

The survey instrument did not gain detailed information about income and expenditures of subsistence
farmers, the largest group of respondents for the head of household (65.8%). The survey’s field work
coincided with pre-harvesting and harvesting season for the majority of Cambodians, major flooding in
some areas and important national holidays, potentially influencing patterns of the demand and supply of
health services. Flooding and security problems resulted in the replacement of some communes; therefore, the results may be less representative of remote areas.

The survey instrument may not have been adequately adapted to the specifics of Cambodia. The
categories of health care providers, in particular traditional healers, do not represent the diversity of the
Khmer healing system. Translation of the survey and responses between English and Khmer may have
contributed to misunderstandings in the intended message.

In Cambodia, extended families and friends, even separate households, live under one roof and more or
less contribute to shared expenses. Studies in Cambodian have further shown that household
composition fluctuates significantly corresponding to seasonal changes, further complicating the
quantification of household income and expenditures.

2.4. Accelerated Districts for Development (ADD)

Differences between ADD and non-ADD areas may not only reflect the impact of the reform. Some
ADD areas were selected because of existing external human and material resources.

3. Findings from the household survey

The data showed similar characteristics and patterns of behavior among households in ADD and non-ADD
areas. Meaningful differences between ADD and non-ADD areas are noted.

3.1. Household profile

The survey’s household profile was similar to the 1996 national demographic survey. The demand
survey covered rural and semi-rural areas only.

The dependency ratio indicates a large proportion of children and elderly to potentially economically
active adults. Households with high dependency ratios may suffer illnesses more frequently and have
fewer resources for health.

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11 The survey uses the term “traditional healer.” However inadequate, this instrument was unable to differentiate
among the broad range of indigenous healers that practice in Cambodia.

12 Dependency ratio is defined as the percentage of youngest and oldest population groups (0-14 years, 65 and older)
to the population 15-65 years.
Table 1. Selected Demographic Indicators.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Demand survey</th>
<th>Demographic Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Sex Ratio (M:100F)</td>
<td>92.6</td>
<td>91.7</td>
</tr>
<tr>
<td>Age Structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 – 14 years</td>
<td>42.4</td>
<td>43.9</td>
</tr>
<tr>
<td>15 – 64 years</td>
<td>53.9</td>
<td>52.6</td>
</tr>
<tr>
<td>65 years and over</td>
<td>3.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Dependency Ratio</td>
<td>85.5</td>
<td>90.2</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>31.3</td>
<td>28.3</td>
</tr>
<tr>
<td>Married</td>
<td>58.4</td>
<td>60.9</td>
</tr>
<tr>
<td>Others</td>
<td>10.3</td>
<td>10.8</td>
</tr>
<tr>
<td>Total Fertility Rate</td>
<td>4.8</td>
<td>5.2</td>
</tr>
</tbody>
</table>

The largest category of respondents was farmers in their own farms (65.8%) who reported an average monthly income of 66,404 riels (US$ 26), and expenditures of 167,901 riels (US $ 65.58). 13 (see Annex 4) Income estimates for farmers likely underestimated self-produced and consumed items.

The respondents with the highest self-reported household income and expenditures’ 14 were shop owners-operators and vendors (6.3% of total household heads). The mean monthly income for shop owners was 521,600 riels (US$ 200), and for vendors, 270,09 reis (US$ 104). Monthly expenditures averaged 374,112 riels (US$ 144) for shop owners, and 242,122 riels (US$ 93) for vendors.

3.2. Expenditures for health

Household heads estimated monthly amounts spent for public and private health care, food, education, and other expenses. The percentage of household health expenditures in relation to total estimated expenditures averaged 22.1% or 36,157 riels (US $ 13.90) for all occupations.

Farmers spent a higher proportion of total reported expenditures on health, due in part to the difficulty in adequately measuring expenditures.

Table 2. Proportion of total expenditures for health by occupation.

<table>
<thead>
<tr>
<th>Proportion of total expenditures</th>
<th>Health</th>
<th>Food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers (n=1840)</td>
<td>0.243</td>
<td>0.600</td>
</tr>
<tr>
<td>Non-farmers (n=924)</td>
<td>0.178</td>
<td>0.709</td>
</tr>
</tbody>
</table>

13 Exchange rate used was 2600 riels = $1.00, December 1996.
14 n=2764.
The proportion of total household expenditure for health was highest among the group with the least total monthly expenditures, 28% for households spending 50,000 riels or less. With this exception, the proportion of total expenditures for health increased as total spending increased. Considering the proportion of total expenditures spent on health within the lowest expenditure group, an estimated minimum monthly amount spent per household is 14,000 riels (US $5.38).

Households in the ADD areas spent 20.1% of total expenditures for health, significantly less than the 23.9% reported by households in non-ADD areas.  

Households in ADD areas also spent significantly less on private health providers. Average monthly expenditures for private health providers in ADD areas was 14,632 riels (US$ 5.63), compared to 20,542 riels (US$ 7.90) in non-ADD areas. Comparing the average monthly expenditures for private providers (17,660 riels, US$ 6.79) and the average monthly total health expenditures (36,157 riels, US$ 13.80), it is estimated that each household spends about 49% of monthly health expenditures in the private sector.

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15 p=.005, n=2759.
16 p=.003, n=2807.
17 See section 5.2 for discussion.
3.3. Sources of financing and willingness to pay for health care

The head of household named possible sources of financing if a family member were very sick. The most common sources named were moneylenders (44.6%) and/or savings (43.8%).

Household heads estimated how much they could afford to pay when a member of the family got sick. For a consultation, respondents varied little by income or occupation, stating they could afford an average between 1,972 riels (US$ 0.76) and 1,952 riels (US$ 0.75). For hospitalization, farmers could afford 9,220 riels (US$ 3.55), and other occupations, 13,179 riels (US$ 5.07).

3.4. Perceptions about commune level public services

When asked about the commune clinic nearest their home, 97.4% of household heads knew that the staff could provide child immunizations. Just over one quarter (25.1%) stated that the staff could provide treatment for minor illnesses, and one fifth (20.0%) thought they could provide delivery and prenatal care.

Regarding specific qualities of the services, 53.4% of household heads responded that the public commune facility nearest their home did not have enough drugs, and 20.0% mentioned having to wait a long time. An additional 26.6%, however, noted that staff was qualified, and 19.8% stated that staff was present to treat patients.

3.5. Planned initial action for children and adults with fever

Household heads responded what they would do first if a family member had a fever. The most common response was to buy medicine (38.5% for a child and 36.1% for an adult) because of less waiting time and the availability of drugs.

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18 65.8% of total respondents.
19 "Commune services" refers to commune clinics within the former district health system as opposed to health centers. See part 4 and annex 2 for definitions and listing of locations surveyed.
Nearly one third (32.5%) of household heads said they would first go to a public health facility for a child with fever, and 29.5% would so for an adult. Household heads would use private practitioners for a family member with fever (29.4% for a child, 33.7% for an adult), because they felt private practitioners were qualified, attended to the patient promptly and had enough drugs.

Table 3. Reported first intended action if a household member had a fever, compared to actual responses to household members who were ill within 30 days of the survey.

<table>
<thead>
<tr>
<th>Health provider</th>
<th>Intended first action if a household member had a fever</th>
<th>Actual first action for household members who were recently-ill (n=2915)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If a child had a fever (n=3072)</td>
<td>If an adult had a fever (n=3101)</td>
</tr>
<tr>
<td>Buy medicine</td>
<td>38%</td>
<td>35%</td>
</tr>
<tr>
<td>Hospital (district or province)</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Commune clinic</td>
<td>16%</td>
<td>13%</td>
</tr>
<tr>
<td>Private provider</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>Private provider / home</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>Nothing / home remedy&lt;sup&gt;20&lt;/sup&gt;</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Traditional healer</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>totals</strong></td>
<td><strong>101%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

In the majority of cases (53% and 56%), the intended initial care for children and adults with fever takes place at home.

<sup>20</sup> An option only for the survey question on actual illness.
3.6. First and second course of action for household members who were recently ill

Household members reported if they or their children had been ill within 30 days before the survey. The majority of respondents in both ADD (50.9%) and non-ADD areas (61.9%) bought medicine first (overall average of 57.3%).

Table 4. Household members’ first two choices in seeking care for the same episode of illness, ADD and non-ADD areas combined (=2915).

<table>
<thead>
<tr>
<th>First action</th>
<th>Second action (% of people who chose provider)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Home Remedy</td>
</tr>
<tr>
<td>Nothing</td>
<td>6.9</td>
</tr>
<tr>
<td>Home Remedy</td>
<td>2.1</td>
</tr>
<tr>
<td>Buy Drugs</td>
<td>57.3</td>
</tr>
<tr>
<td>Kru Khmer</td>
<td>4.5</td>
</tr>
<tr>
<td>Priv practitioner</td>
<td>8.4</td>
</tr>
<tr>
<td>Commune clinic</td>
<td>7.1</td>
</tr>
<tr>
<td>Hospital</td>
<td>13.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
</tr>
</tbody>
</table>

Of the majority who bought medicine first (57.3%), most (63.6%) did not continue seeking treatment. Of the remaining 43%, the most common second course of action was going to the hospital (17.2%).

For all those who did not buy medicine as their first course of action and continued to seek care, the most common second choice was to buy medicine.

An average of 13.8% of respondents went to a hospital initially (15.3% for ADD, 12.7% for non-ADD areas). Over three-fourths of people who went to the hospital first did not continue seeking treatment (75.1%).

21 District or provincial public hospitals. See annex 3 for listing of locations surveyed.
Of those who initially did nothing, used a home remedy, or went to a kru khmer, substantial percentages were not satisfied initially and continued treatment. Of those who first went to the public health facilities, private practitioner or bought drugs, over half stopped seeking treatment.

3.7. Costs of seeking care

The majority of people bought medicine as their first course of action, and the average amount paid was 12,100 riels (US$ 4.65). This was the cheapest recourse with the exception of home remedies (the first choice of 2.2% of respondents costing on average 10,400 riels, US$ 4.00). For those who chose the hospital as the first course of action, the average amount paid for an initial visit was 45,000 riels (US$ 17.30), more than any other health care provider mentioned.

Table 5. Responses from or about household members who were ill 30 days before the survey regarding the type of health care sought initially and its estimated cost (ADD and non-ADD areas), n=2915.

<table>
<thead>
<tr>
<th>Type of assistance</th>
<th>% first action</th>
<th>Estimated average cost 22, 23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy medicine</td>
<td>57.3% (1670)</td>
<td>12,100 riels ($ 4.65)</td>
</tr>
<tr>
<td>Public hospital</td>
<td>13.8% (402)</td>
<td>45,800 riels ($ 17.60)</td>
</tr>
<tr>
<td>Private Practitioner</td>
<td>8.4% (244)</td>
<td>42,300 riels ($ 16.27)</td>
</tr>
<tr>
<td>Commune clinic</td>
<td>7.1% (206)</td>
<td>13,800 riels ($ 5.31)</td>
</tr>
<tr>
<td>Do nothing</td>
<td>6.9% (201)</td>
<td>--</td>
</tr>
<tr>
<td>Kru Khmer</td>
<td>4.5% (131)</td>
<td>21,400 riels ($ 8.23)</td>
</tr>
<tr>
<td>Home remedy</td>
<td>2.1% (61)</td>
<td>10,400 riels ($ 4.00)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0% (2915)</strong></td>
<td><strong>19,000 riels ($ 7.30)</strong></td>
</tr>
</tbody>
</table>

On average, respondents estimated paying 19,000 riels (US$ 7.30) for the first contact with any health care provider. For those who continued to seek care for the same episode of illness, the second contact was estimated to cost on average 29,000 riels (US$ 11.15), and the third, 33,000 riels (US$ 12.69).

Based on these responses, the rate of return was 1.7. This indicates that when ill, a person seeks health care an average of 1.7 times for the same episode of illness. Applying the average costs, one episode of illness costs about 39,300 riels (US $15.11).

3.8. Hospitalization

Household members reported if they or their children had been hospitalized within 12 months before the survey.24 The majority of respondents (66.7%) initially went to provincial or national public hospitals for hospitalization.

Of those who did not initially seek care at a hospital (33.3%), only 9% were referred to a hospital from the public or private facility from which they sought care first.

Overall, respondents recalled paying on average 168,945 riels (US$ 64.98) per hospitalization stay, almost half of it for drugs (48.1%). The range was 111,300 riels (US$ 42.81) for a stay in a district hospital, and 380,400 riels (US$ 146.30) for a private hospital in Phnom Penh. Variation was broad, however, and expenditures for provincial and Phnom Penh hospitals commonly reached up to one million riels (US$ 384.62).

22 For those who chose the type of assistance as their first course of action
23 US$ 1.00 = 2600 riels.
24 n=583.
The estimated average cost of hospitalization in a provincial hospital was reported as 167,300 riels (US$ 63.35), more than half (57.4%) of which accounted for drugs. In comparison, stay in a national public hospital averaged slightly higher at 192,700 riels (US$ 71.11), an estimated 44.1% spent on drugs.

### 3.9. Health seeking behavior of pregnant women

Of those responses from pregnant women surveyed, over one third (38.5%) responded that the pregnancy was not intended. Most pregnant women reported receiving advice about safe delivery (84.7%). The source of advice was significantly different in ADD as opposed to non-ADD areas. A larger percentage of pregnant women consulted commune health staff for advice on safe delivery in ADD areas (36.2%) compared to those in non-ADD areas (22.7%).

Figure 6. Source of advice about safe delivery for pregnant women in ADD compared to non-ADD areas (p=.0382).

Over three fourths (80.7%) intended to give birth at home, 43.6% with the assistance of traditional birth attendants. Some 17.4% stated that they planned to deliver in a hospital.

Asked if they would be happy to pay for either good quality checkups or delivery services at a commune clinic, over three fourths of the women responded positively (84.5% and 83.2%, respectively).

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25 n=291.
26 n=288.
3.10. Women who recently gave birth

The vast majority of women who gave birth during the 12 months preceding the survey reported having delivered at home (89.9%). Of those, 44.6% were assisted by traditional birth attendants. In contrast, when asked where they would have preferred to deliver, 39.6% named a public hospital or clinic.

Table 6. Responses from pregnant women about their planned place of delivery, and women who gave birth within 12 months before the survey about their actual and preferred place of delivery.

<table>
<thead>
<tr>
<th>Place of delivery</th>
<th>Pregnant women (n=291) Planned</th>
<th>Women who gave birth within the last 12 months (n=602) Actual</th>
<th>Preferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home with TBA</td>
<td>43.6%</td>
<td>44.6%</td>
<td>58.4%</td>
</tr>
<tr>
<td>Home with midwife</td>
<td>37.1%</td>
<td>45.3%</td>
<td></td>
</tr>
<tr>
<td>Public hospital/clinic</td>
<td>14.1%</td>
<td>14.1%</td>
<td>39.6%</td>
</tr>
<tr>
<td>Private hospital</td>
<td>3.1%</td>
<td>NA</td>
<td>1.8%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1.0%</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>totals</td>
<td>98.9%</td>
<td>104.0%</td>
<td>99.8%</td>
</tr>
</tbody>
</table>

Approximately 60.4% of women respondents who gave birth within the last 12 months did not name the public hospital or clinic as their preferred location to deliver. Other important reasons include the family not being able to participate, the cost higher than home delivery, lack of drugs, and public facility deliveries not fitting with Khmer tradition.

Figure 7. Responses from women who gave birth within six months before the survey on why they did not prefer to go to a public facility for delivery (n=363).

- not Khmer tradition: 24.1%
- no drugs: 34.9%
- high cost: 37.4%
- family can’t participate: 46%
- distance: 51.9%

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27 n=602.
28 "At home" only response.
29 Probable recording error
30 n=363.
Within the ADD areas, 30.9% of women who had delivered within the last 12 months reported not having checkups during pregnancy. Outside the ADD areas, a larger percentage (45.9%) reported not to have had a checkup.

### 3.11. Family spacing

Responses about family spacing among married women under 49 years of age with two or more children indicate that over three-fourths (78.0% of respondents) have never used any method of contraception. Of those women who have never used or were not using contraceptives regularly (87.3% of respondents), 71% expressed a desire to use contraceptives.

For those women who have ever used contraceptives, injectable contraceptives are more frequently used than other methods (11.1% of respondents in this category). The most commonly reported sources for injectable contraceptives were health centers (42.2%) and private clinics (32.5%).

The proportion of women using family spacing services was significantly higher in those areas with good quality hospitals.\(^{31}\)

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\(^{31}\) p=.02. Technical and managerial quality measured, including the existence of family spacing services. Good facilities were higher than the mean.
4. Findings of the facility survey

The facility survey aimed to provide baseline information on the quality of facilities existing at the time of the survey. Facilities were given a score between one and five in four areas: technical, managerial, behavioral, and environmental.

The highest score possible was five. A hospital technical quality rating of five indicates that the facility could carry out seven selected surgical procedures, owned more than 80% of CPA listed equipment, applied standard treatment guidelines, and maintained a post-operative infection rate less than 10%. In comparison, a score of one meant that the hospital had no surgical facilities or operating room, less than 70% of CPA equipment available, and no standard treatment guidelines.

The locations surveyed include commune clinics, district and provincial hospitals within the former district health system based on administrative boundaries. It does not take into consideration locations designated as health centers and referral hospitals in the provincial health coverage plan. These terms are used to denote locations and do not imply the existence of a minimum level of services. (See annexes 2 and 3 for listings of locations surveyed.)

4.1. Technical quality

The technical quality rating measured the availability of technical equipment, drugs, and activity level. It also included staffing levels and qualifications.

The overall technical rating was higher for hospitals and commune clinics in ADD districts (3.0 and 3.0) compared to non-ADD areas (2.1 and 2.4). Four areas were significantly different between hospitals in ADD and non-ADD areas.

Table 7. Significantly differing ability in technical areas between hospitals in ADD compared to non-ADD areas (n=16 hospitals).

<table>
<thead>
<tr>
<th>Technical area</th>
<th>% capable in ADD (n=8)</th>
<th>% capable in non-ADD (n=8)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal medicine</td>
<td>48.8</td>
<td>16.7</td>
<td>0.007</td>
</tr>
<tr>
<td>Surgery</td>
<td>43.0</td>
<td>9.6</td>
<td>0.018</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>43.2</td>
<td>11.7</td>
<td>0.008</td>
</tr>
<tr>
<td>Laboratory</td>
<td>28.3</td>
<td>11.2</td>
<td>0.035</td>
</tr>
</tbody>
</table>

Surgical and x-ray services were available in only three of the hospitals, two provincial and one district. With the exception of the two provincial hospitals, all other hospitals observed offered similar services to health centers but had patient beds.

A significant difference was seen in the availability of technical equipment in commune clinics in ADD areas compared to non-ADD areas. A higher activity level was observed for commune clinics in ADD areas compared to non-ADD areas.

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32 Although some commune clinics surveyed had been reorganized according to the health center guidelines, this report maintains the term “commune clinic” because the survey was based on the former district health system.

33 p = .019
Table 8. The average number of specific activities in hospitals and commune clinics surveyed.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hospitals (n=16) Average number</th>
<th>Commune clinics (n=31) Average number, ADD (n=15)</th>
<th>Average number, non-ADD (n=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultations per day</td>
<td>8.4</td>
<td>13.4</td>
<td>8.6</td>
</tr>
<tr>
<td>Patient visits per day</td>
<td>1.8</td>
<td>13.9</td>
<td>9.5</td>
</tr>
<tr>
<td>Minor interventions per month</td>
<td>22.0</td>
<td>8.2</td>
<td>2.8</td>
</tr>
<tr>
<td>Middle interventions per month</td>
<td>8.5</td>
<td>Preventive activities EPI</td>
<td>EPI</td>
</tr>
<tr>
<td>Major interventions per month</td>
<td>5.5</td>
<td>Days spent for EPI</td>
<td>5.4</td>
</tr>
</tbody>
</table>

The staffing levels and qualifications were similar in all hospitals. Physicians represented the highest proportion of staff posted to hospitals (26.2%) followed by secondary nurses in ADD areas (23.4%) and primary nurses in non-ADD areas (19.5%).

A higher percentage of secondary midwives were posted to hospitals in ADD (14.3%) as opposed to non-ADD areas (9.2%). Hospital staff interviewed averaged 8.47 years of experience and 66.46% had undergone some refresher training during the previous year, probably specific vertical program training. The highest proportion of clinics staff in ADD areas were nurses (48.1%) while midwives represented the highest proportion in non-ADD areas (42.65).

Commune clinic staff averaged eight years of experience. In the ADD areas, 88% of staff had undergone refresher training in the past year compared to 68.5% in non-ADD areas.36 (See annexes 5 and 6 for summaries of staff professional experience.)

For those staff interviewed, income was higher in hospitals as compared to health centers reflecting greater possibilities in and around a hospital for generating supplemental income.

Figure 8. Hospital staff government salary, supplemental income, and reported expenditures for one month (in Riels)37

4.2. Managerial quality

The managerial quality rating measured the number of working hours per day, patient waiting time, and the frequency of drug shortages. The overall managerial quality rating was similar in ADD hospitals (2.6) and commune clinics (2.9) compared to non-ADD area hospitals (2.5) and commune clinics (2.1).

34 Data missing for one clinic.
35 Two provincial hospitals in ADD areas.
36 Date missing for two clinics.
37 N = 164, n = 77 in ADD areas, n= 87 in non-ADD areas.
The number of working hours per day in hospitals averaged 4.8 hours. Staff said they worked an additional 2-3 hours in private practice. In commune clinics, staff worked an average of 4.3 hours per day (4.8 in ADD and 3.8 in non-ADD).

4.3. Behavioral quality

The behavioral quality rating measures staff attitude toward the poor, consultation time, and the time spent for explanation with patients. The overall behavioral quality rating was slightly lower for hospitals in ADD areas (3.6) compared to non-ADD areas (3.7), but higher for commune clinics in ADD areas (3.73) as opposed to non-ADD (3.06).

The average consultation time at commune clinics was about 13 minutes, of which the time spent explaining to the patient was similar in ADD (5.4 minutes) compared to non-ADD areas (4.6 minutes).

In hospitals, the average consultation time was the same, 13 minutes, of which 6 minutes were spent in patient explanation. ADD hospitals averaged slightly lower, only 11.5 minutes on average for a consultation.

4.4. Environmental quality

The environmental quality score measured hygiene and facility conditions. The rating was higher for hospitals and commune clinics in ADD areas (3.4 and 3.13) compared to those in non-ADD areas (2.2 and 2.31, respectively).

Twenty-two of the 31 commune clinics had buildings designated as clinics. ADD area staff judged 69.2% of facilities good or acceptable, however non-ADD staff judged only 43.4% good or acceptable. In nine commune clinics, staff worked from their homes or another government building. Seven had organizational charts and job descriptions. The percentage of commune clinics judged clean was higher in ADD (66.7%) compared to non-ADD areas (53.8%).

4.5. Quality score and utilization

Within ADD and non-ADD areas, selected health centers and hospitals had been developed, however, none of the ADD districts had fully developed all planned facilities at the time of the survey. To determine service quality and utilization regardless of location, all facilities were given a total quality score.

Hospitals. A total quality score was given to each hospital based on the four quality area ratings. The mean was used to divide the facilities into “good” and “poor.” Five of eight “good” hospitals were in ADD areas.

Figure 9. Overall quality rating of hospitals, good or poor, based on the mean distribution of the four quality area ratings (16 locations).

Higher utilization in both the public and private sectors is seen in those areas with good quality hospitals. Additionally, the proportion of women using family spacing is significantly higher in areas with good quality hospitals.
Table 9. Utilization indicators in areas with poor and good quality hospitals.\textsuperscript{38}

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Area with poor quality hospital (n=8)</th>
<th>Area with good quality hospital (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of households that use public facilities when a child in the household is ill</td>
<td>28.8 %</td>
<td>31.9 %</td>
</tr>
<tr>
<td>% of households that use private providers when a child in the household is ill</td>
<td>26.43 %</td>
<td>29.63 %</td>
</tr>
<tr>
<td>% of households that use public facilities when an adult in the household is ill</td>
<td>25.5 %</td>
<td>31.22 %</td>
</tr>
<tr>
<td>% of household that use private facilities when an adult in the household is ill</td>
<td>32.4 %</td>
<td>35.1 %</td>
</tr>
<tr>
<td>% of women using family spacing services</td>
<td>6.4 %</td>
<td>15.3 % (p=.020)</td>
</tr>
</tbody>
</table>

Commune clinics. The same total quality rating was developed for each clinic based on the four quality area ratings. Nearly three-fourths (73.3%) of commune clinics in ADD areas were good quality compared to 50.0% of clinics in non-ADD areas.

Figure 10. Overall quality rating of commune clinics, good or poor, based on the mean distribution of the four quality area ratings (31 locations).

Family spacing use was higher in areas with good commune clinics. Overall use of private providers was higher in areas with poor commune clinics for both adults and children.

For a sick child, utilization of public facilities was slightly higher in areas with poor commune clinics. For a sick adult, utilization of public facilities, however, was nearly the same regardless of the quality of the commune clinics.

Table 10. Utilization indicators in areas with poor and good quality commune clinics.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Area with poor quality health clinic (n=12)</th>
<th>Area with good quality health clinic (n=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of households that use public facilities when a child in the household is ill</td>
<td>29.6%</td>
<td>31.4%</td>
</tr>
<tr>
<td>% of households that use private providers when a child in the household is ill</td>
<td>31.3%</td>
<td>25.0%</td>
</tr>
<tr>
<td>% of households that use public facilities when an adult in the household is ill</td>
<td>28.9%</td>
<td>28.3%</td>
</tr>
<tr>
<td>% of household that use private facilities when an adult in the household is ill</td>
<td>35.8%</td>
<td>31.7%</td>
</tr>
<tr>
<td>% of women using family spacing services</td>
<td>9.8%</td>
<td>11.45%</td>
</tr>
</tbody>
</table>

\textsuperscript{38} See annexes 7 and 8 for a listing of indicators for clinics and hospitals.
5. Discussion

5.1. Utilization of health facilities

The survey showed some differences between facilities in ADD and non-ADD areas. Overall, the technical quality rating was higher for locations designated as hospitals and commune clinics in ADD areas (3.0, 3.0) compared to non-ADD areas (2.1, 2.4). Two technical quality indicators were significant:

- Hospitals in ADD areas were significantly more capable in four technical areas: internal medicine, surgery, tuberculosis and laboratory. \(^{39}\)
- Technical equipment for commune clinics was significantly more available in the ADD areas compared to non-ADD. \(^{40}\)

The managerial quality rating was higher in ADD area commune clinics (2.9) compared to non-ADD (2.1). The environmental quality rating was higher for hospitals and commune clinics in ADD areas (3.4 and 3.1) compared to those in non-ADD areas (2.2 and 2.3). \(^{41}\) Additional marginal differences between ADD and non-ADD areas include:

- A higher percentage of secondary midwives was posted to ADD areas (14.3% of staff) as opposed to non-ADD areas (9.2%).
- The vast majority of ADD area staff had undergone some refresher training during the previous year (88.0%) compared to non-ADD areas (68.5%).
- ADD area commune staff worked longer (4.8 hours per day) than staff in non-ADD areas (3.8 hours per day).

Three significant differences existed in demand and expenditures for health care between ADD and non-ADD areas:

- There was a significant difference in the source of advice about safe delivery for pregnant women. \(^{42}\) In ADD areas, 36.2% consulted health staff while 22.7% did so outside of the ADD.
- Households in ADD areas reported spending 20.1% of total expenditures for health, significantly less than 23.9% reported by households in non-ADD areas. \(^{43}\)
- Households in ADD areas also spent significantly less on private health providers (US $ 5.63) compared to non-ADD (US $ 7.90). \(^{44}\)

In addition, the majority of people who were recently ill and bought drugs as the first course of action was lower in ADD areas (51 %) compared to non-ADD (62 %). An additional 10 % went to the commune health facilities in ADD areas compared to 5% in non-ADD areas.

Several indicators of utilization were higher in those public health facilities judged "good" based on a four-area quality rating. The proportion of women using family spacing services was significantly higher in areas with good public hospitals, \(^{45}\) although the existence of these services was a part of the quality rating.

- Higher utilization in both public and private hospitals occurred in those areas with good quality hospitals.

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\(^{39}\) See page 16 for p-values.
\(^{40}\) p=.019.
\(^{41}\) Refer to facility survey details, part 4.
\(^{42}\) p=.0382.
\(^{43}\) p=.005. See part 2.2 for methodological limitations.
\(^{44}\) p=.003.
\(^{45}\) p=.02.
• Utilization of public facilities for a sick child was slightly higher in areas with good commune clinics.

Some important differences exist in public health facility utilization between ADD and non-ADD areas. This probably reflects, however, the selection of ADD areas, many of which were chosen due to existing facilities, human and material resources.

Nonetheless, the differences were marginal in comparison with the investments made in infrastructure and human resources development. It is inconclusive that the provision of technical equipment and materials alone is sufficient to significantly increase utilization in public health facilities.

5.2. Costs of health care

The percentage of monthly health expenditures to total monthly expenditures within the household averaged 22.1%, or 36,157 riels (US$ 13.90). With the exception of the lowest expenditure group, the proportion of total monthly expenditures for health increased as total spending increased.

The Socio-Economic Survey of Cambodia in 1996 also found that health expenditures were a substantial proportion of total household expenditures, and this proportion increased corresponding to income. This survey’s estimates for total expenditures were low in comparison with the national socio-economic surveys. The actual amounts for health expenditures, however, are comparable.

Another survey in three provinces estimated that health expenditures accounted for approximately 15% of total expenditures, but the poor incur higher costs both in absolute terms and as a proportion of total expenditures. This could be attributed to overall decreased income for adequate nutrition, water and health care.

Health costs remain a major household expenditure. The poorest spend the highest percentage of total expenditures for health compared to other expenditure groups. As people become wealthier, they spend more on health, suggesting an ability to pay.

Comparing the average monthly expenditures for private providers (17,660 riels, US$ 6.79) and the average monthly total health expenditures (36,157 riels, US$ 13.80), it is estimated that each household spends about 49% of monthly health expenditures in the private sector. For initial assistance, 70.2% of people who were ill 30 days before the survey sought care in the private sector. For both total health expenditures and costs of initial assistance, nearly 50 to 70% of funds spent for health went to the private sector, mostly buying medicine.

The average cost of hospitalization (168,945 riels, US$ 64.98) represented slightly over two and one-half times the estimated monthly income for the largest group of respondents in the survey, farmers on their own land (65.8% of total respondents).

A high percentage of people named moneylenders as a source of funds for major illness (44.6%). A variety of credit is broadly available in rural Cambodia, common to agricultural populations who may experience seasonal fluctuations in the availability of cash. Interest rates can be as high as 550%, with complex repayment mixing in-kind payment, labor, and seasonal price variations depending on the market value of the commodity used for repayment.

This corresponds to other qualitative and anecdotal information that a major illness in the family results in high health expenditures. More information is needed on the consequences of high health expenditures within the household, priorities in defining expenditures, and ability to pay for health care.

Further, the average cost of hospitalization was 12 to 13 times higher than the average amount household heads were willing to pay for hospitalization (9,220 riels, US$ 3.55 for farmers, and 13,179 riels, US$ 5.07 for non-farmers).

The amount willing to pay compared to estimated actual expenditure for health suggests that people paid more than they were willing for public health services. This may reflect a number of factors.

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46 Ministry of Planning estimates are between 25-33% higher for total monthly household expenditures.
Households may have shifted regular expenditures to make cash available for high unexpected hospital services.

Alternatively, willingness to pay reflects the perceived quality of care and accessibility, or the maximum amount people are willing to pay according to the perceived benefit. (35) Cambodians are accustomed to nominally free government health services. A low willingness to pay, therefore, may reflect an expectation that it should be free.

5.3. Perceptions and realities in the commune health facilities

Immunizations have long been a major activity at commune level and most people knew this (97.4%). The facility survey confirmed that health staff in ADD areas generally had a higher activity level. Only a quarter of respondents, however, stated that commune health staff could provide curative care (25.1%) and over half (53.4%) said they did not have enough drugs. The perceived benefit of a visit to the commune clinic appears low.

One in five household heads (20.2%) stated that maternal health and delivery services were offered at the commune level facility. Maternal health and delivery services are primarily provided by midwives, and over one-third (36.8%) of commune clinics had a midwife posted. A higher percentage of midwives were posted to non-ADD commune facilities (42.6% compared to 30.8% in ADD areas). The facility survey, however, did not recognize primary and secondary level midwives, among which the levels of experience and training differ vastly. Nor did it use 24-hour delivery services as an indicator.

A significantly higher percentage of pregnant women, however, used commune health staff for advice during pregnancy in ADD areas compared to non-ADD. According to the facility survey, commune clinics in the ADD areas generally had better equipment and human resources, therefore were more likely to offer maternal and child health services than those in non-ADD areas. This cautiously indicates some success in offering improved maternal and child health services at commune level.

5.4. Actions when ill

Comparing the first actions taken for a hypothetical illness (fever) in the family and an illness that occurred 30 days before the survey, there are some interesting discrepancies.

Purchasing drugs was the most common first action taken within both groups, but the percentage was considerably higher among those households with a sick member. It could be assumed that many of the illnesses recalled after 30 days would be more serious than fever, yet the majority of people bought drugs first (57%).

Calling private practitioners home was reported by 14% of those who responded what they would do first for a child and adult with fever. Van de Put argues that these private practitioners are in most cases an extension of self-medication, because people go to them to administer drugs purchased. (42)

Those households with members who were ill within 30 days before the survey primarily purchased drugs as the first or second course of action. Of those who bought drugs initially, most stopped treatment (63.6%). Of all other groups who did not initially buy drugs and continued treatment, most bought drugs as the second course of action. For the 20.9% of people who first went to a public facility, the majority stopped treatment (64.45%); however, nearly one quarter continued treatment by purchasing drugs.

The reasons people stopped treatment could vary. People could have been satisfied with the service and cured. Alternatively, they may have been unable to continue paying for care. Although the severity of the illness cannot be determined, it is presumed that those who initially bought drugs were suffering milder conditions that those who went to the hospital.

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47 p=.0382.
Based on this information, the return rate was 1.7. This figure included inpatient and outpatient use in both public and private sectors. It is higher than the 1.17 average return rate in public health facilities in 1996 (17), perhaps due to inappropriate initial treatments, mainly purchasing drugs directly, and cash constraints. Cash constraints for health care can lead to the purchase of partial drug dosages, discontinuation of treatment, and early hospital discharge. (34) Anecdotal evidence suggests that the basis for treatment at a drugstore in Cambodia is the amount the individual is able to pay.

With no enforcement of pharmacy regulations and little drug consumer education on the potential side effects and limitations of modern drugs, people are not protected from a potentially harmful unregulated drug market with resulting high costs and prolonged ill health.

5.5. Perception of quality of care

The proportion of women who have never used any contraceptive method and those who desire to do so are consistent with other surveys of contraceptive use and knowledge, suggesting a large unmet need for contraceptive knowledge and methods. (7) The survey on contraceptive knowledge, attitude, and practice (KAP) stated that most women who wanted contraceptives did not know where to access them, and concluded that accessibility and information are the main strategies to address unmet need. (7)

Is information and supply enough? The majority of pregnant women in this survey said they would be happy to pay for good quality prenatal care and delivery services at the commune level, although the vast majority delivered at home. The majority of people recently ill also sought curative care at home (78%).

This finding is consistent with some qualitative studies that relate care at home to cost, distance to the facility, and low knowledge of the possibilities and limitations of the public health facilities. (42) Likewise, it matches the survey's findings about women who preferred not to deliver in a public health facility. About 60% of women who had recently delivered did not choose public health facilities as their preferred location for delivery. Responses given included distance (51.9%), the family cannot participate (46%), cost (37.4%), no drugs (34.9%), and not Khmer tradition (24.1%).

**Distance.** Distance is related to lack of transportation, difficulties in travelling at night, poor roads, and security. It could also mean that women do not know when they should go to the facility or if someone will be there. Some studies have shown that physical proximity itself does not necessary increase utilization if other institutional barriers are prohibitive. (35)

**Cost.** Price uncertainty is one barrier. Although nominally free, public health care carries unpredictable informal fees, and people are uncertain about how much they will have to pay, to whom and when. This uncertainty could prevent people from seeking care at the public facility instead going to the private sector where prices are more certain or can be controlled. (11) One study showed that women expecting difficult deliveries waited to go to the hospital until the last moment for fear of paying more. (35) Opportunistic costs, such as transport and care at the facility as well as time lost for accompanying family members, can make the total costs for seeking care prohibitive.

**Drugs.** Not knowing whether public facilities will have drugs contributes to price uncertainty through the possibility of having to purchase drugs elsewhere. Once in the drug store, however, the buyer controls the costs and no consultation fee is involved.

The main reasons why people surveyed bought medicine first included less waiting time and availability of drugs. People's expectations for quality are rudimentary: people want drugs and staff present to administer them quickly. This is probably due to the recent reconstruction of public health facilities, many still operating at a low level. It will take time for the population to regain trust in public health services. Cambodians may also perceive the drug as the cure (42), thereby seeking a source directly.

48 1996 MoH HIS reports a 1.11 return rate in public health centers and 1.25 in public hospitals.
49 One or more responses from each individual possible.
Drug availability may refer to the availability of different types of drugs that people perceive as effective. Qualitative research shows that Cambodians perceive injectables and infusions as effective, but these are not in the standard drug kits for commune level health facilities.

**Behavior.** Experience from other countries indicate that behavioral quality of health services becomes increasingly more important as the overall level and type of basic services expand and people have more choice. The behavioral quality rating for hospitals in ADD areas, however, was slightly lower than those in non-ADD areas. This rating measured staff attitude and time spent with patients.

**Culture and history.** Cultural considerations are important in increasing accessibility. Survey respondents named two important factors in providing maternal health services: inviting the family to attend delivery and practicing Khmer traditional pre- and post delivery activities.

An evaluation of the activities of the Reproductive Health Association in Phnom Penh suggests historical and cultural reasons for low use of contraceptives. In some countries, husbands make decisions about family size, and anecdotal evidence suggests that this situation may be true in Cambodia, resulting in high use of less “visible” injectable contraceptives. During the 1980s, the government followed a pronatalist policy to increase population. When the MoH approved the use of modern contraceptives in 1994, the rationale was family spacing.

The reliability of public health services is related to the stability of the government. One study in Phnom Penh noted an increase in the number of women requesting IUD removal from a national government hospital before the 1993 elections for fear that government health services might collapse.

The large proportion of women with the expressed desire for maternal and child health services and contraceptives compared to relatively low use overall suggests this demand involves a broad range of factors. More information is needed on people's perception of technical and behavioral quality as well as cultural and financial accessibility to translate this overwhelming expressed need for maternal and child health services into the same level of utilization.

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50 Willem van de Put, report to the Reproductive Health Association of Cambodia, 1995.
6. Recommendations

6.1. The MoH should focus on creating strong management structures enabling the introduction of user financing.\textsuperscript{31}

Insufficient attention has been given to the establishment of strong organizational support structures in the ADD districts or those areas where minimum public health infrastructure exists.

The MoH must prioritize strengthening management structures, such as improving drug supply, strong supervision, regular budget access, staff upgrading, and referral systems. Involving community representatives early in the establishment of health centers facilitates continued participation. Strong management structures address the integration of vertical structures and their conflicting lines of authority and accountability.

People's perceptions of public health services are low, and much uncertainty about the presence of staff and drugs surrounds a visit to the public facility. The establishment of the ADD areas provides an opportunity for the MoH to demonstrate an improved level of public health services with reliable resources.

6.2. Following the National Health Financing Charter, the MoH should develop user financing systems only in those areas where the necessary management structures are in place: drugs and equipment, human resources, budget for running costs, and organizational structures.

The implementation of user financing systems for generating additional income without any changes in organization and quality of services has been shown to promote inefficiency and exacerbate existing inequalities to accessibility. (9)

The MoH should establish user-financing systems only where the necessary management systems are in place. Such systems include adequate drug supplies, regular budget for running costs, material and human resources, in addition to the organizational structures including regular supervision and financial management systems. Effective financial management systems ensure that collected revenues are used to improve the quality of services.

6.3. The MoH should ensure the appropriate design of user financing following the approved National Health Financing Charter. The MoH should provide further guidelines and documentation on successful aspects of user financing schemes, such as community involvement and exemption schemes.

As outlined in the financing charter, community involvement and exemption schemes are essential in the design of a user-financing system.

Individuals have the right to participate in the development of their local health services, and broad participation could lead to health services that are more accessible, culturally and financially. To be successful, local health services must take into account people's preferences.

The selection of community representatives in district and health center committees is an important activity, but many challenges remain. It is difficult to choose community members who can represent a broad range of interests, as well as establish regular feedback mechanisms from the community. The participation of women is of crucial importance to increase accessibility for maternal health services. Health staff, too, must be better prepared to respond to the needs of the community. (31) The MoH should provide further guidelines to the provinces and districts on the purpose and methods for gaining community support in public health services and choosing community representatives. Documentation of successful experiences would be a useful start.

\textsuperscript{31} User financing can be defined as \textit{all direct contributions by users and communities in a variety of forms to service providers} (32).
The poor face the greatest barriers to utilization. Experience in setting up exemption schemes, however, shows the process fraught with difficulties. They include low administrative capacity, staff unwillingness to grant exemptions, and those eligible not taking advantage of the benefits (34). Although the MoH financing policy states that exemption schemes are a necessary part of user financing systems, the MoH needs to establish better guidelines and document successful experiences in identifying and exempting who cannot pay.

Exemption schemes should consider a range of factors that influence the decision to seek care: seasonal poverty, opportunistic costs, and availability of cash. Surveys in other countries have shown that lack of cash deters people seeking medical treatment. O ther survey data show that people view indigenous healers and private providers as more affordable because of the flexible payment terms including in-kind and credit. Some countries that have moved from a “free” public health service have had some success with prepayment schemes (6), enabling people to pay when they have cash available.

The cost of exemptions for the poor should be factored into the total costs. It should be determined whether the government, other donors or the local community is able to take on the costs for providing care to the poor.

6.4. The MoH should encourage district and health center staff to develop services appropriate to the needs of their community, taking into consideration local non-governmental health providers.

The level of satisfaction with the public health services could be improved. Following the general MoH policy of decentralization, the health center management committees should have more control in developing services most responsive to the needs of their communities. This could include determining staff working hours or other services and drugs the health centers could provide.

This adaptation should include increased cooperation with local non-governmental health providers. One district study in 1993 documented the existence on average of three non-governmental health providers per village and 63 per commune, compared with an average of 2.8 public health staff per commune. In this study, commune public health workers represented only 4.3% of all health service providers surveyed at commune level. Indigenous healers have been largely invisible in public health planning, although they provide much of the available care in rural areas, and some have gained the trust of the people. Some healers and monks are known for their ability to care for the mentally ill.

Private providers, or those who offer some type of western medicine, might better provide certain services that public health staff are unable to offer. Such cooperation could help address harmful traditional practices. It is important that existing local non-governmental health providers be considered in developing appropriate services locally.

6.5. The MoH should develop strategies to promote consumer education about health care and pharmaceuticals. The MoH should also work with the Cambodian professional associations to advocate for appropriate prescribing.

Some very dangerous drugs are widely sold over the counter, mostly by unlicensed practitioners. It is imperative that people are informed of the use and potential side effects of modern drugs enabling them to make informed decisions. In the absence of effective pharmacy regulations, promotion of consumer education and drug awareness should be a priority.

The MoH should also work with the existing Cambodian professional associations to advocate for responsible and appropriate ethical practices, including prescribing.

52 Oudong district, Kompong Speu province, July 1993.
6.6. The MoH needs to develop specific strategies to advertise what public health services have to offer.

The survey shows that supplying the buildings and equipment for public health facilities alone will not increase utilization. The MoH should effectively communicate the possibilities and limitations of the public health system. It is important to emphasize the individual's place within the health system and essential knowledge such as when to seek a higher level of care.

Broad and active dissemination of MoH policy documents and strategies could help to mobilize other organizations and encourage them to work more closely with the MoH, especially for village level activities. Media campaigns could help promote public health services that are broadly available to improve the perception of public health services. The MoH could work in cooperation with other organizations to increase the population's knowledge of the possibilities and limitations of the public health services.

People have come to expect a free government health service. Greater transparency of actual resources available to the MoH from the state could contribute to realistic expectations of what government health services could provide.
7. Areas for further research

7.1. What factors will be important determinants of "quality" services after a basic level of public health care is broadly established?

People's expectations of public services are currently low. What factors will become more important to Cambodians after a basic level of public health care is broadly established? Will behavioral and environmental factors become the most important: hygiene and cleanliness of the facility, staff attitude to patients, quality of patient food? Alternatively, will the technical aspects be more important: availability of technical equipment, injectable drugs and treatments perceived as effective?

7.2. What gender, income, and age differences influence Cambodian health seeking behavior? Distance from the health center and referral hospital? Seasonal changes? What types of care are sought for illnesses of differing severity? Perceived etiology?

The survey was not able to aggregate differences in health seeking behavior for individual predisposing factors and key characteristics of the facility and environment. The response to an illness in a man would probably differ from the response for a female infant. Clearly, the amount of disposable income influences the type of care sought. Distance affects health-seeking behavior in two ways: long distances can be an obstacle combined with poor roads and no transportation, and distance itself can act as a disincentive to seek care. (38)

In addition, people seek different types of care depending the severity of the illness and its perceived etiology. People might go to a health center for acute respiratory infection, but the pharmacy for a headache. Likewise, the decision to seek care for a chronic illness such as tuberculosis would be different from short-term illnesses. (34) The perceived cause of an illness influences where to seek care; in Cambodia, cholera is widely thought to be caused by spirits. More information is needed in this area to understand why people seek different care from different types of providers.

7.3. What are all the options available to Cambodians when ill?

An important factor in the demand for health care in public facilities is the existence of other options. More research needs to be done on the range of options available to Cambodians when they are ill. Such information can increase understanding and cooperation with traditional and private providers who might be in a better position to provide some services public health staff are unable to offer.

Further research could distinguish between the demand for drugs in the village shop and the demand for a higher level of drug seller in the district town, or at a licensed pharmacy. Van de Put described a range of private providers trained during the different political regimes. (42) The demand for an injectionist might differ from the demand for a retired health worker or one of the many different types of indigenous healers.

Alternatively, does a demand pattern exist at all? Is demand for different providers at random? One study suggests that Cambodians initially seek care at home before determining both severity and cause, natural or supernatural. (4) Perhaps “the patient is looking for any explanatory model that works, and it is money that fuels the engine on the long and winding road of health seeking”?53

7.4. Are Cambodian indigenous healers considered "poor quality" options for health care?

The survey results showed few people using indigenous healers, in contrast to qualitative and quantitative research indicating that they are the first choice for people seeking health care in rural areas. (3) Does this indicate lack of choice or a preference?

53 Willem van de Put, Transcultural Psychosocial Organization, personal communication.
Is the survey instrument biased because medically qualified interviewers asked about diseases such as acute respiratory infections and leprosy using technical terms with which people are unfamiliar? Alternatively, is the use of Cambodian indigenous healers on the decline? Are they losing power in the competition with western medicine and the proliferation of pharmacies? Do younger people view them as “poor quality” providers because they do not believe in them as their elders did? (4)

7.5. What factors are important in determining priorities for non-food household expenditures?

Some studies indicate that Cambodian household expenditure for food is static across socio-economic groups and seasons. (27) Little information exists, however, on the complexities of how people prioritize non-health expenditures and allocate resources. It is important to consider the consequences of increased health expenditures on spending for other household items.

Has the household made informed decisions allocating household expenditures based on the best possible health and non-health outcomes? Who makes these decisions? Do households prioritize the needs of adults over children or other dependents? Are they aware of the cost-benefit of investments in health promotion to reduce the risk of illnesses? Do individuals have enough information about the health services to estimate appropriate amounts for expenditure? What other social and cultural factors are important?

7.6. What areas on the supplier side need to be addressed to improve quality of care? How is the quality of staff work affected by the organizational and financing reform?

Quality of care implies that the quality of staff work is high. Of the four quality-area ratings, the behavioral rating for staff in ADD areas was slightly lower or the same as non-ADD areas. More information is needed on the range of factors and level of support to ensure that the public health staff are satisfied in their positions to reinforce positive behavioral change.

Low public sector salaries force most staff to seek work outside of their government job, often creating direct competition with the facility where they are posted. Improvements in public health services may not serve the immediate interests of staff. What mechanisms can be used to establish a clear division between public and private activities? What are appropriate salary levels and benefits for staff in public health facilities? How will the reform affect the supplier side, such as staff attitudes and practices? What will be the effects of financing reform on prices and quality of private sector care?