

RESEARCH REPORT

Study of financial access to health services for the poor in Cambodia

Phase 1: Scope, design, and data analysis

Dr Peter Leslie Annear (RMIT University)

in association with

David Wilkinson
Men Rithy Chean
Maurits van Pelt

For the Ministry of Health, WHO, AusAID and RMIT University

30 April 2006
Phnom Penh

Summary

In recent years, a number of health reform proposals have been adopted or pioneered in Cambodia, including official user fees, sub-contracting government health service delivery to non-government providers, and community based health insurance. These health reform measures have acted to reduce the burden of health costs on the poor and to improve access. Fee exemption systems have, though, failed to protect the poor, who have largely been excluded from access to health care due to cost and other barriers. Now, a new model of health financing and relief for the poor has emerged, called health equity funding. Health equity funding has been particularly successful in reducing financial barriers and increasing utilization of government services. Health equity funding appears to be an efficient and effective way to overcome inequalities and extend health service coverage. This report details the findings of new research into health and equity in Cambodia carried out by the Ministry of Health, WHO, AusAID and RMIT University.

Table of Contents

Table of Contents	2
Tables and Figures.....	4
Glossary	5
Maps.....	6
1. Introduction	9
2. Previous Studies	10
3. Scope and Methodology.....	12
4. Barriers to Accessing Health Services	15
5. Coverage of Identified Schemes.....	18
6. Health Facility Utilization and Revenues.....	26
7. Case studies of Ang Roka and Phnom Penh.....	37
8. Conclusions	43
References	45
Annex 1. Number and distribution of schemes in the Access Study	49
Annex 2. International and Local NGO agencies by type of scheme and location.....	50
Annex 3. Distribution of schemes by type, location and agencies – January 2006	52

Maps

Map 1. Health Operational Districts with Contracting.....	6
Map 2. Health Operational Districts with HEF.....	7
Map 3. Health Operational Districts with CBHI.....	8

Tables

Table 1. Number and composition of ODs selected for data collection,.....	13
Table 2. Barriers to access with Contracting, CBHI and HEF.....	18
Table 3. Population coverage by type of scheme.....	20
Table 4. Total number of current and proposed schemes, agencies, ODs.....	21
Table 5. Distribution of schemes by Donor, INGO, LNGO.....	23
Table 6. Number of households with new compared to old debt for health care.....	41

Figures

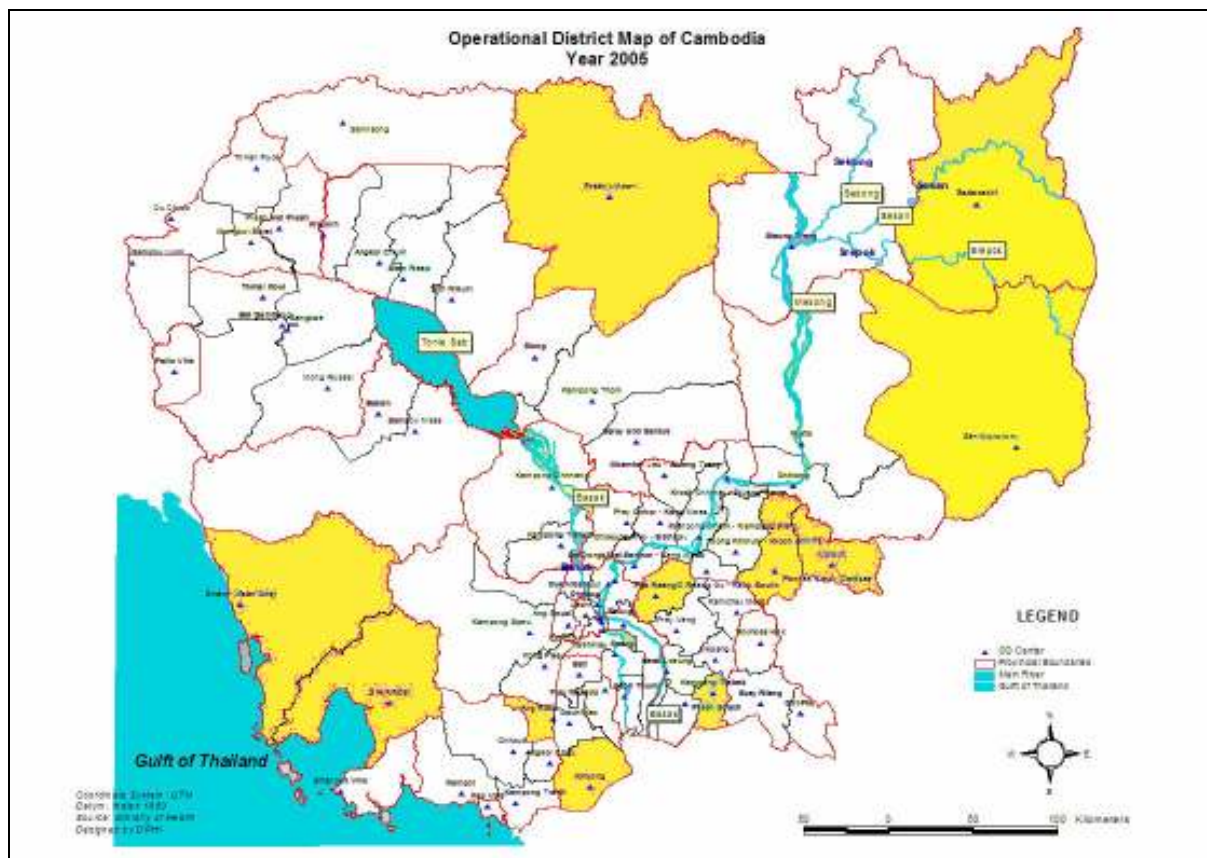
Figure 1. Average referral hospital bed occupancy rate by type of district.....	27
Figure 2. Poverty, exemptions and HEF % by type of scheme.....	28
Figure 3. Referral hospital utilization per 100,000 pop. in three selected ODs.....	28
Figure 4. Peareang RH: Utilization, fee-paying patients and HEF patients.....	29
Figure 5. Duration of HEF schemes by OD.....	30
Figure 6. Effect of HEF on referral hospital utilization rates.....	31
Figure 7. IPD admissions and number of HEF inpatients at Sotnikum Referral Hospital.....	32
Figure 8. Admissions, HEF patients and BOR at Phnom Penh Municipal Hospital.....	32
Figure 9. Admissions, referrals and BOR at Moug Russei RH.....	33
Figure 10. HEF-assisted and non-assisted patients at Samrong RH.....	34
Figure 11. HEF beneficiaries by gender and age at Svay Reing and Mongkul Borei.....	35
Figure 12. Average quarterly revenues for four MOH referral hospitals.....	36
Figure 13. User fees and HEF revenues at Peareang RH.....	36
Figure 14. User fees and HEF revenues at Chhlong RH.....	37
Figure 15. Level of recent debt for health care in Tonle Bassac and Boeungkak.....	41

Glossary

ADB	Asian Development Bank
AFH	Action for Health
AusAID	Australian Agency for International Development
BFH	Buddhists for Health
BOR	Bed occupancy rate
BTC	Belgian Technical Cooperation
CAAFW	Cambodian Association for Assistance to Families and Widows
CBHI	Community-based health insurance
CEDAC	Centre d'Etude et de Developpement Agricole Cambodgien
CFDS	Cambodian Family Development Services
CHHRA	Cambodian Health and Human Rights Alliance
CIDA	Canadian International Development Agency
CON	Contracting
DFID	Department for International Development (UK)
EF	Equity Fund
EFSC	Equity Fund Steering committee
EU	European Union
FMFA	French Ministry of Foreign Affairs
GTZ	German Technical Cooperation
GRET	Groupe de Recherche et d'Echanges Technologiques
HEF	Health Equity Funding
HC	Health Centre
HFC	Health Financing Charter
HNI	Health Net International
HSSP	Health Sector Support Project (funded by the ADB, WB, DFID, JFPR)
HU	Health Unlimited
INGO	International NGO
ID	Identification
IPD	In-patient department
JFPR	Japan Fund for Poverty Reduction
LNGO	Local NGO
MOH	Ministry of Health
MOP	Ministry of Planning
MSF	Médecins Sans Frontières
NGO	Non-government organisation
OPD	Out-patient department
OD	Operational District
RH	Referral Hospital
SHI	Social Health Insurance
SCA	Save the Children Australia
SKY	Health for Our Families (phonetic for Khmer translation)
SRC	Swiss Red Cross
UHP	Urban Health Project
URC	University Research Company
UNFPA	United Nations Fund for Population
USAID	United States Agency for International Development
USG	Urban Sector Group
VHSG	Village Health Support Group
VSO	Volunteer Services Overseas (UK)
WB	World Bank
WHO	World Health Organization

Maps

Map 1. Health Operational Districts with Contracting.



1. Introduction

This study of financial access to health services for the poor in Cambodia was conducted by Dr Peter Annear, RMIT University (Melbourne), in collaboration with WHO Cambodia and the Cambodian Ministry of Health. Financial and technical support for the study was provided by AusAID and WHO Cambodia. Phase 1 of the study was completed in the period 1 July 2005 to 30 January 2006. The preliminary results of the first phase of the study were reported to the February 1-3 National Forum on Health Equity Funding hosted by the Department of Information and Planning of the MOH (with support from WHO and Belgian Technical Cooperation) and presented formally at the Access Study Dissemination Workshop held in Phnom Penh on 6 March 2006, organised by the MOH and WHO.

The study analysed information collected from 33 health Operational Districts (ODs) in Cambodia and 44 different localized financing and service delivery schemes, comprising all those districts with Contracting arrangements (where MOH operational district health service delivery was sub-contracted to NGO providers), all those where Health Equity Funding (HEF) arrangements had begun, all those where Community Based Health Insurance (CBHI) arrangements had begun¹, and five selected MOH ODs where no such schemes were in place (to act as a control group). There are in total 76 ODs and 24 provinces across Cambodia.

The study involved the participation of international and local consultants working in collaboration with the Ministry of Health, WHO, AusAID, and RMIT University (Melbourne). The research team comprised the following people:

Peter Leslie Annear, RMIT University, Melbourne, Australia – chief researcher.

David Wilkinson – researcher, locally-based health sector consultant.

Maryam Bigdeli, WHO Cambodia, Health Economics Advisor – technical advisor.

Ros Chhun Eang, MOH, Director, Health Economics Bureau of the Department of Planning and Health Information.

Men Rithy Chean, researcher with the Centre for Advanced Studies, and

Maurits van Pelt, locally-based health sector consultant, Phnom Penh – case-study consultants.

Terri Ly and Chap Prem – research assistants.

Phase 1 of the research study compared the extent to which access to health services for the poor was improved by each of the nominated schemes (Contracting, HEF, and CBHI, in comparison to standard MOH service delivery with user fees). Thirty-six per cent of Cambodia's population is extremely poor, living below the national poverty line calculated at US\$0.40-US\$0.59 per person per day (Ministry of Planning 2001). Experience indicates that a large proportion of these people may have been excluded from access to health services in the past, particularly at referral hospital level. Exemptions from official user fees at the health facilities included in the study averaged between 2% and 24% of patients. Additionally, the cost of health care, particularly catastrophic cost for unforeseen illness, is the single most important cause of new impoverishment in Cambodia. The study investigates the extent to which financial and other barriers that prevent access to health services by the poor are reduced with the introduction of the nominated equity, financing and service delivery schemes.

¹ In Cambodia, the issue of CBHI is treated within the wider perspective of social health insurance (SHI), which is yet to be initiated. Currently, a few CBHI schemes operate independently in some locations. The Cambodian Ministry of Health has begun planning for the introduction of social health insurance procedures, for which CBHI is considered a pilot program.

The Study addressed two key research questions: Do Contracting, HEF and/or CBHI increase access to health services for the poor? Do Contracting, HEF and/or CBHI reduce the impact of health costs as a cause of poverty? It also looked at a number of supplementary questions: Do these schemes cover the most needy? To what extent do they reduce barriers to access? To what extent do they increase utilization by the very poor? To what extent do they improve health facility revenue? Do CBHI schemes cover the medium-poor adequately? To what extent do CBHI schemes prevent the medium-poor from falling into poverty? Is the treatment received by exempted, HEF or insured patients of the same standard as treatment received by patients who pay user fees? What are the common user-fee, exemption, HEF or CBHI arrangements? What is the content of the benefit packages of HEF and CBHI? What are the costs of establishing and implementing these schemes?

In answering these questions the Study faced a number of constraints. In particular, as the experience with many of the schemes involved in the study was still very new and they were yet to be adequately coordinated by health authorities, routine data collection was inconsistent and the data was very limited. Consequently, the conclusions of this study are presented here not as concrete 'findings' but as issues that pose critical questions for further discussion. The process of providing consistent administration and supervision of the various schemes through the Ministry of Health is ongoing and improvements were already being put in place.

2. Previous Studies

There have been a number of partial studies of user fees, contracting, equity funding, health insurance and demand for services in Cambodia but none that have comprehensively compared all schemes and none that have specifically addressed the question of access for the poor. Recent studies have concluded that the probability of experiencing illness was approximately five times greater for the poor than for higher income earners in Cambodia (Dalton and Peacock 2005) and that out-of-pocket spending by health service users was a major cause of indebtedness and impoverishment (particular in the absence of an official fee system) (Van Damme, van Leemput et al. 2004). On the demand side, key issues and barriers to access, health seeking behaviour, and provider practices indicated that public facilities were at one stage declining as a first-choice for those seeking care (NPHRI 1998; Wilkinson 2001).

A major study of the impact of user fees in Cambodian hospitals concluded that the imposition of official fees in the place of unofficial under-the-table charges was associated with an increase in the utilization of public health services, though exemption systems at referral hospitals had proved an inefficient way to meet the needs of the poor (Wilkinson 2001). In contrast, exemptions at health centres had been well publicized and were readily provided. In one case, at Takeo Provincial Hospital, introduction of an official fee system was associated with a 50% increase in utilization (Barber, Bonnet et al. 2004). The introduction of a regulated, official fee system at the National Maternal and Child Health Hospital was associated with increased patient satisfaction, higher utilization and bed occupancy rates, and an increased number of hospital-based natal deliveries (Akashi, Yamada et al. 2004). However, a study of the impact of user fees at Kirivong referral hospital nonetheless indicated that costs for health care could represent a 'medical poverty trap' for many users (Jacobs and Price 2004).

Exemptions for user fees for the poor have averaged around 18% nationally (World Bank 1999) compared to a national poverty rate of 36% (Ministry of Planning 2001), with no signs

of improvement.² Exemption systems have varied widely across health districts in Cambodia at places such as Peareang Referral Hospital (where no exemptions were granted), Takeo Provincial Hospital (2% exemptions), Pursat Provincial Hospital (13-15%), and Rovieng Health Centre (25%) (Espinosa and Bitran 2000). Because they drain potential revenue from facilities and reduce incentives to health staff, exemptions for user fees have proved an ineffective mechanism for protecting the Cambodian poor. It has therefore been argued that service providers need in fact to be compensated for revenue losses if exemptions systems are to function effectively (Bitran 2002; Knowles 2004).

Contracting of service delivery to non-government providers was found to be an efficient way to improve service delivery (Keller and Schwartz 2001). An evaluation of the first phase of the Contracting experiment in 1999-2001 – piloting the contracting-in of facility management and the contracting-out of service delivery models – concluded that the poor benefited more than proportionally when government health service delivery was sub-contracted to private (mostly non-government-organization) managers and providers (Bhushan, Keller et al. 2002; Loevinson undated). The Contracting model was associated with a major improvement in service delivery, as evidenced by increased immunization rates (Schwartz and Bhushan 2004) and had improved service delivery in health districts such as Peareang (Soeters and Griffiths 2003).

Several studies of health equity funding in specific locations have been made, most commonly in Sotnikum health district, the first rural site to have pioneered HEF (Van Damme, Meesen et al. 2001; Meesen, Van Damme et al. 2002; Meesen and Ir Por 2003; Hardeman, Van Damme et al. 2004). At Sotnikum, HEF improved access for the poor (Ir Por and Hardeman 2003) but was required to meet food and transport costs as well as user fees (Hardeman 2001). HEF also improved access to health centres in Kirivong, through the Pagoda-based funds (Jacobs and Price 2005) and increased community participation in health service improvement (Jacobs and Price 2003). In Phnom Penh squatter communities, equity funding was found to protect the poor from the impact of health costs (Knowles 2001) and to increase access to health services (van Pelt and Bun Mao 2004). Comparative studies have been made of HEF systems in Siem Reap, Otdar Meanchey and Sotnikum (Noirhomme 2005; Noirhomme 2005), and of the different HEF models in Sotnikum, Thmar Pouk, Phnom Penh, Takeo, and Svay Rieng (Bitran, with Turbot et al. c. 2003). One prospective study compared the possibilities for equity funds at Chhlong Referral Hospital, Pursat Provincial Hospital, Moug Russei Referral Hospital, and Mongkul Borei Provincial Hospital (Overtoom 2003).

As the implementation of CBHI was at an early stage, the opportunities for documentation and analysis had so far been limited. The most extensive discussion of social health insurance principles and practices was made by the MOH proposal for social health insurance (WHO 2003) and documented at the national workshop for the Launching of the Social Health Insurance Master Plan (Ministry of Health 2005). Other prospective studies discussing options for health financing, user fees, HEF, CBHI have contributed to planning the introduction of pro-poor schemes (Bautista 2003; Chettra 2003).

Fabricant (Fabricant 2006) calculates the additional annual expenditure required to provide adequate public health services to 31 health districts that operate below the national average for utilization (55% of the population). He offers a range of alternatives: if Contracting were used to help achieve these goals, the additional cost would be \$23.5 million; in the absence of

² Generally, exemption systems have worked more effectively at health centre level than at referral hospitals. The inefficiency of RH exemption systems was one of the main arguments for targeting HEF schemes at RH level (and not at HCs).

Contracting but with increased staff salaries and incentives the cost would be \$17.9 million; the cost of extending HEF to referral hospitals in these districts and to national hospitals would be \$1.8 million; and the cost of extending CBHI for inpatient and outpatient services would be \$5.4 million. Based on these figures, extending HEF and CBHI coverage more broadly are both affordable (though not comprehensive) initiatives. However, to meet population health needs fully, including the needs of the poor, current government health spending would have to increase threefold.

Scope and Methodology

The Access Study took a comprehensive approach, collecting comparative data on all Contracting, HEF and CBHI schemes. The study looked at the barriers to accessing health care faced by the poor (and other users). It constructed a database including all study sites to record data on utilization, revenues, costs and access to services, compiled from routine data collection. It compiled a bibliography and collected all relevant references and reports on the issues of health equity funding, social health insurance and Contracting. It produced a quantitative analysis of all the available information, and carried out in-depth, quantitative and qualitative case studies of services and service-users at two sites (the Ang Roka rural OD and the Phnom Penh urban municipality), reviewing levels of debt for health care and user behaviours.

The major methodology used by the Study was to analyse whatever routine data was already collected by the various schemes, and provided to the Study. We therefore collected all available data on a selected range of indicators from existing sources provided by the MOH and local and international agencies working in the field. Our sample for quantitative data collection was therefore 100% of all operating schemes. We collected some meaningful data from all but 9 schemes (incl. limited data from 5 CBHI sites).

For the purposes of the Study we adopted a working hypothesis as follows:

- “Increased access to health services for the poor has been achieved where:
- Levels of utilization significantly increase following the introduction of one or more of the identified schemes; and,
 - There is not a significant erosion of the fee-paying base caused by non-poor patients substituting HEF or other assistance for user fees; and,
 - The proportion of patients with exemptions, HEF or other financial support rises to the same level as average poverty in the OD.”

The Access Study used a range of intermediate indicators to provide information on utilization of health services and coverage of the poor. The first set of indicators related to utilization of services. The second set of indicators related to health facility revenues. Using time series data from the various health facilities (principally OD referral hospitals), the study looked at changes in IPD admissions (or a complimentary measure of utilization), the bed occupancy rate (or similar measure, to determine the extent to which hospital capacity is fully utilized), the level of exemptions for user fees, and the proportion of hospital patients who receive support from health equity funds. The financial indicators included measures of hospital revenue from Government and from user fees, the cost of exemptions, and revenue received from health equity funds.

Taken together, these indicators provide information on unsatisfied demand for health care and unused capacity at health facilities. The indicators also provide information on which a judgment about access to services by the poor could be based. If exemption rates were

traditionally low (as is common) and the proportion of hospital in-patients subsequently receiving HEF benefits approaches the average rate of poverty, then the hypothesis that HEF was providing increased coverage for the poor is a reasonable one. In this way the study set up a series of criteria according to which, if in a selected OD utilization was increasing, the BOR was approaching 100%, and the proportion of exemptions or HEF coverage was approaching the rate of poverty, then it was reasonable to conclude that access for the poor had improved as a result of the prevailing financing scheme. The indicators were designed to distinguish between a simple increase in utilization (for any reason) and increased access for the poor.

The research sample included a total of 44 different service delivery and financing schemes across 33 out of a total of 76 ODs nationally (comprising, 28 ODs with Contracting, HEF and/or CBHI arrangements and an additional five operated solely through the MOH), located in 21 out of a total of 24 provinces. The coverage of both the identified financial schemes and the survey is therefore significant. The breakdown of the selected ODs is summarized in Table 1 below.

For all ODs included in the sample, 11 ODs operated under Contracting arrangements, HEF schemes had commenced in 22 ODs, and five ODs had CBHI (with overlap between schemes in some ODs). Five ODs that operated under normal MOH procedures with no Contracting, HEF or CBHI arrangements were included in the study as a control group for data analysis (while HEF arrangements commenced in one of these districts, Kampong Thom, in December 2005, it was maintained in the control group for data analysis)³. There was overlap in the placement of Contracting, HEF and CBHI schemes within certain districts: 14 districts had HEF alone, five had only Contracting, and only one had CBHI alone; four districts had both Contracting and HEF, and two had CBHI together with HEF (Thmar Pouk, Phnom Penh); only two districts had Contracting, HEF and CBHI together (Ang Roka, Kirivong). Details of the number of ODs selected for the assessment and the distribution of schemes are shown in Annex 1.

Table 1. Number and composition of ODs selected for data collection, as at January 2006 (total of 33 ODs).

	HEF	CBHI	CON	MOH
HEF	14	2	..	..
CBHI	2	1	0	..
CON	4	0	5	..
MOH	..	..	..	5

In-depth case studies were made of arrangements and outcomes in two selected operational districts, Ang Roka and Phnom Penh. Ang Roka is a rural location that includes all pilot schemes (Contracting, HEF, CBHI), and Phnom Penh (with HEF and CBHI schemes) is the sole urban site. The case studies drew on data collected from poor households during pre-identification for HEF as well as key informant interviews conducted for the Access Study.

³ For this reason, the coverage of HEF schemes is counted below as 23 ODs as at January 2006, though all other data analysis includes only the original 22 ODs.

Both MOH referral hospitals and health centres commonly charge user fees under the HFC. Revenue from user fees has rarely exceeded 20% of facility expenditures. The study, however, focused almost entirely on referral hospitals (one per OD). Health centre fees are, in general, nominal, and constitute, it is argued, a much less significant financial barrier to access than do fees at referral hospitals. Moreover, using the referral hospital as the parameter for measurement provided a common denominator for comparison between Contracting, HEF and CBHI schemes (which do not uniformly include HCs in each OD).

The assessment gathered existing data from records and reports provided by the agencies and providers delivering health services at OD level. The assessment reviewed all documentation and routine data on the implementation of Contracting, HEF and CBHI activities available through the MOH and the international organizations, international NGOs, and local NGOs responsible for implementing these health financing schemes. A list of all local and international organizations involved in financing or implementing the identified pilot schemes is included in Annex 2. This quantitative analysis was supplemented by information collected through the two case studies.

The reports, surveys and evaluations provided by the implementing and financing agencies were used to gather information against a selected range of quantitative indicators designed to describe financial access by the poor to health services. These variables included: facility population coverage and local poverty rate; facility utilization and exemptions (where appropriate); HEF coverage and funding; pre-identification and post-screening of HEF clients; and HEF benefits. A detailed questionnaire was developed to gather data on these selected variables. The study created a database of this quantitative information comprising all of the 33 identified ODs including time series data on utilization of services as well as HEF and CBHI coverage. A second database comprising all 33 ODs stored details of every pilot scheme in each OD identifying the organizations supporting and implementing the pilot schemes. These databases were placed at the Department of Information and Planning at the MOH for further development and future reference as an aid to management and planning.

Additional qualitative information on barriers to access, targeting of the poor, benefits provided, levels of health-related debt, and health problems most associated with impoverishment was gathered from the two case studies. The district of Ang Roka in Takeo province was one of only two ODs which had pilot schemes for all three poverty-related health-financing schemes: Contracting, HEF and CBHI. The aim was to assess the effects of the interactions and linkages between the three approaches: in principle, Contracting provided a framework for raising revenues and improving the quality of services; HEF provided a means for providing access by the poor while protecting facility revenues; and CBHI provided the possibility that the near-poor who fail to qualify for HEF coverage may access pre-paid health insurance at an affordable cost.

The Phnom Penh Urban Health Project (UHP) provided a unique opportunity for assessing the implementation of HEF procedures in an urban setting. The UHP was implemented by a local NGO, the Urban Sector Group (USG) and in collaboration with the Municipal Health Department to meet the costs of access to municipal health services by the poor, identified as all those living in targeted squatter communities in the municipal area. The poor communities included households in the Boeungkak squatter area (which had an Equity Fund and dedicated 'Health Rooms' for the poor) and households in the Tonle Bassac squatter area (where there was no equity fund and only the Red Cross Health Center) for purposes of comparison. The Phnom Penh HEF was the first operational HEF in Cambodia, and has evolved significantly during its five years of operation. The Phnom Penh case study analysed: (i) quantitative data

drawn from the USG database of 7000 families compiled during the pre-identification for enrolling HEF beneficiaries; (ii) qualitative interviews with 43 households from Boeungkak and Tonle Bassac in debt for health care; and (iii) key informant interviews with health authorities and health staff as well as Contracting, HEF and CBHI managers in the two areas.

The data collected by these quantitative and qualitative methods was analysed to determine whether the identified schemes played a role in reducing the barriers to access to health services for the poor.

3. Barriers to Accessing Health Services

Health service users in general face a number of barriers to accessing health services in Cambodia both on the demand and on the supply side, including physical barriers, financial barriers, quality of service issues, poor user knowledge, and socio-cultural barriers. These barriers are especially difficult to overcome for the very poor, who are often therefore excluded from necessary health care. The following is a comprehensive list of barriers to access as identified in practice over a long period of time, and substantiated by the current research, including key informant interviews with MOH, Contracting, HEF and CBHI stakeholders. From client interviews in Phnom Penh squatter communities, in particular, there were strong findings supporting the difficulties posed by financial barriers as well as the poor quality of service delivery at government facilities (see also (NIS 2000; Hardeman 2001; Fabricant 2003; Hardeman, Van Damme et al. 2004; Knowles 2004). The barriers listed here (compiled first by David Wilkinson) are universal but relate in particular to service delivery at public health facilities (though they also apply in many instances to the private sector).

Physical Barriers:

- Distance to nearest public health facility
- Lack of transport
- Restricted hours of service at health facilities
- Long waiting times at facilities

For poor communities in remote areas the physical barriers to accessing public health facilities are often prohibitive. The need to travel long distances, or the excessive time taken to travel, often dissuades people from visiting facilities, particularly in conditions where it is thought the health centre or referral hospital may not be open on arrival. Especially in remote areas, facilities may only open for an hour or two each morning. This difficulty is compounded when people have no access to transport to assist with travel and must make long journeys on foot, or by boat, which is the only means of transport in some coastal areas. Users perceive the difficulty in accessing transport and the poor conditions of roads or transport facilities as the barrier, not simply distance.

Financial Barriers

- Direct and indirect costs of health services (including fees, travel, food)
- Unpredictable informal (and formal) charges in public facilities
- Opportunity costs to users due to use of time
- No system of phased or deferred payments
- Failure of exemption schemes to protect the poor

The costs of attending health services may be known or unknown, but in either case may prevent the poor from attending facilities. Even where costs are known they may not be affordable. However, it is the uncertainty about costs that is perceived as the main financial barrier. The introduction of official fees through the Health Financing Charter removed some

uncertainty and reduced costs by using a well publicised fee schedule. Nonetheless, the continued prevalence of some under-the-table charges mean the uncertainty about what patient costs will be are a barrier for those who lack an immediate source of cash income to meet health costs. The dangers of hidden costs could financially ruin a family for even routine services. Costs paid by patients include not only user fees but also drugs, transport and food costs during hospitalisation. There are also expensive opportunity costs to be met in terms of forgone income earning opportunities or work-related activities, particularly when long periods of absence are required, that would otherwise have benefited the family materially. The situation is made worse where excessive and unpredictable under-the-table charges are levied by health staff either instead of or in addition to official charges. In the absence of recent CBHI and HEF initiatives, the opportunities for making pre-payment towards health costs or deferring costs has been extremely limited, leaving the poor unable to spread health costs over longer income-earning periods. Even modest health costs can therefore be catastrophic in some cases. While exemptions for user fees have been introduced in many cases under the MOH National Health Financing Charter, at least nominally, the system has worked poorly and has failed to cover adequately those identified as very poor.

Quality of Service:

- Real and perceived poor quality of care, facilities and medication
- Uneven clinical skills of providers and lack of medical staff
- Poor staff attitudes towards patients
- Lack of diagnostic equipment and/or materials
- Inadequate drug availability
- Weak regulatory mechanisms
- Weak referral mechanisms
- Conflict of interest of public health staff with private practices
- Poorly cleaned and maintained facilities

Supply-side conditions are often a barrier to access. Commonly, health staff may be poorly trained, lack skills, or adopt a discouraging attitude towards patients (particularly those who cannot pay). Diagnostic facilities and drug supplies are often lacking. In general, the quality of care is low, and the ability to diagnose and treat common illnesses often very limited. In cases where referral for complications or serious illness is required, this is either often not understood by the staff or the ability to refer patients does not exist (due to physical and service delivery barriers). These barriers may be perceived or real, but in either case they often prevent people from attending facilities. While attempts have been made to manage these issues in various ways, the regulation of public health facilities is weak and there is little ability to implement a uniform and acceptable quality of care across facilities. Evidence from Phnom Penh (and elsewhere) suggests that it is often the conflict of interest on the part of the health staff, many of whom deny good care at public facilities in order to attract patients into their own private practices), that is at the heart of the quality of service issue.

Inadequate knowledge by users:

- Lack of confidence in public health services
- Lack of information on what services are available, where, and when
- Lack of knowledge of regulated fee schemes, exemption schemes, equity funds, or how to access these
- Uncertainty about real and hidden costs of health services
- Inadequate communication between providers and users
- Limited understanding of consumer rights
- Little awareness of community participation mechanisms (User Groups, VHSGs, etc)

According to the perceptions of both clients and health managers, inadequate information or misinformation may pose the greatest barrier to accessing public health services. Service delivery concerns often create barriers to accessing adequate health care and cause a lack of public confidence in government health services. In cases where users know services to be poor, or alternatively are not aware of recent improvements in service delivery or reduced costs, lacking information about the performance of the health system presents a barrier to access. Often, particularly in remote areas, potential users may simply be unaware of the existence of an adequate health facility, or, if it is known of, may not be aware either of the quality of service or the opening hours of the facility. When information about the financial requirements is also lacking then this prohibition often becomes insurmountable for the poor. There is, in fact, little knowledge, awareness or ability to access consumer rights and different pre-payment or community participation mechanisms. Uncertainty about what service is provided and how much it will cost is therefore a powerful barrier.

Socio-cultural Barriers:

- Preference for home-based health care
- Reluctance to travel far from the home
- Preference for traditional healers
- Belief in non-material causes of illnesses, and remedies
- Seasonal variation in disease, opportunity costs, or ability and willingness to pay for health care

Even where other barriers can be addressed, often there are still constraints on the use of public health facilities arising out of the beliefs and practices commonly evident among communities, especially in rural and remote areas. One barrier is the widespread lack of adequate formal education, illiteracy, and ignorance about disease. Generally, village people prefer to be treated at home, where they are more able to control the episode and draw on resources, and where opportunity costs are low. There is a widespread preference for self-medication (often the result of poor service quality at public health facilities) or for access to traditional healers (whose practices are known and understood and whose costs can often be met in kind rather than in cash). Often the cultural barriers are seasonal: during the rice planting or harvesting seasons the absence of family members from the household farm can be devastating, with repercussions across the whole year; after the harvest, more cash may be available from sale of produce, but at other times cash may be in short supply or non-existent.

The barriers to access are numerous and widespread, adding another dimension to the inability of the poor to access the health services they need. These barriers may be addressed in part through different financing and service delivery mechanisms, including Contracting, HEF or CBHI. These schemes are therefore thought to be valuable in improving access. However, even these schemes, separately or together, cannot address all the barriers. Table 2 lists the various barriers and how they might be addressed by the various schemes:

Table 2. Barriers to access with Contracting, HEF and CBHI

BARRIER	Addressed by Contracting?	Addressed by CBHI?	Addressed by HEF?	Affects HEF performance?
Physical	Partially	No	No	Yes
Financial	Generally not	Only for the medium poor	Yes (but not opportunity costs)	Yes
Service	Yes	Partially / indirectly	Partially / indirectly	Yes
Knowledge	Yes	Partially	Mostly (for pre-ID)	Yes
Socio-cultural	No	No	No	Yes

Findings from the Access Study indicate that Contracting, HEF and CBHI can address many of the barriers to access. Contracting particularly address service delivery, management and quality issues on the supply side, but does not address financial barriers and does not target the poor. CBHI is still new and is limited in scope, yet it has the potential to protect the almost-poor from impoverishment due to health costs, those reducing financial barriers to access for beneficiaries. CBHI is generally though not available to the very poor for financial reasons. Both CBHI and HEF address the financial barriers to access and may help to improve the quality of service for patients (including the poor) by a process of supervision of health facilities and financial leverage.⁴ In circumstances where pre-identification of the poor is carried out (and repeated regularly), it may also help to overcome the knowledge barriers faced by communities and families. Clearly, none of the identified schemes have the ability to address the socio-cultural barriers, though, with improved knowledge, more affordable financial access, and better quality of service delivery, these cultural barriers may appear to be less significant. Broader work on educational practices and cultural issues is needed to address the socio-cultural constraints. It is notable that all of these barriers will, in their turn, have a significant impact on the ability of HEF or other schemes, including Contracting, to effectively and efficiently improve access to health services for the poor. We will look at this in more detail below, but suffice it to say that all such schemes must consciously find the means to address the influence of these barriers to access. The questions investigated by this research relate especially to the financial barriers, to the ability to target the poor, and to the ability to improve service quality. In this respect, the question posed here is to what extent each of the schemes meets these objectives.

4. Coverage of Identified Schemes

The maps included at the beginning of this report illustrate the spatial coverage of the various schemes involved in the study. The analysis of coverage of the various schemes in this section includes population catchment areas (in general, the total population of the OD in which the scheme is located), the number of provinces and ODs, the number of different schemes and their location, and the different organizations involved. Counting the actual number of

⁴ Of course, CBHI and HEF work differently: CBHI represents not-so-poor fee-paying patients who are then individually reimbursed through the insurance fund, while HEF reimburses the health facility that provides free care to poor patients.

beneficiaries of the different schemes is more difficult given the nature of the data available; nonetheless, an estimate has been made below.

Population coverage:

Taken together, Contracting, HEF and CBHI schemes were operating in ODs comprising a total catchment population of more than 5.3 million people as at January 2006. The catchment areas of the various health financing and poverty-related schemes included 38% of health operational districts and 40% of the national population (not including MOH control districts).⁵ These schemes were located in various ODs within three-quarters of all provinces. The details of current population coverage by type of scheme are illustrated in Table 3 below. The situation is, though, changing rapidly, and a number of additional schemes will be introduced in 2006 and beyond, thus expanding the coverage.

The ODs targeted by the various schemes under review were, as a group, poorer on average than those ODs not serviced by such schemes. Using a uniform measurement of the proportion of the population living below the poverty line in each OD (provided by the World Food Program, based on the 2001 Cambodian Socio-Economic Survey), 46% of the OD catchment population was very poor (compared to a national average of 36%). This is to be expected as the identified schemes had been deliberately targeted on poorer areas. This is true, however, for all 29 surveyed ODs taken together, though not for each and every one individually (some less poor ODs may be included in the sample); and there may be ODs with poverty rates above the national average still not covered by any scheme.

The Access Study indicated that HEF and other exemptions given to patients accounted for 27% of aggregate hospital user-fee revenues within the OD catchment areas. If, purely for purposes of comparison on a population basis, this rate of HEF and other exemptions for patients attending health facilities is applied, OD by OD, to the OD catchment population, then a measure of the number of people who were potentially eligible for exemptions coverage of some sort under the various schemes can be estimated. This figure, however, needs to be treated with extreme caution: it is an approximation, and it is *not* a measure of the number of people receiving benefits.

As listed in Table 3, the number of such “potential beneficiaries” calculated in this way is almost 1.5 million. Compared to the number of very poor, almost 2.5 million, this may indicate that the coverage of the poor is still not adequate in the surveyed ODs. On this measure, up to 40% of those potential patients who live below the poverty line either do not access health services or do not take advantage of the benefits available. There are various reasons for this apparently uneven result, including purely statistical ones: applying an estimate based on proportion of revenues to population numbers is very imprecise; the revenue exemption figures include only referral hospitals while exemption rates at HC level may be higher; the Contracting schemes cover the full OD population as users of hospital facilities and health centres and not simply the poor (thus expanding the denominator); the Contracting and CBHI schemes do not target the very poor (thus reducing the numerator). These limitations will naturally deflate the proportion of population considered as potential beneficiaries. Moreover, it is unclear whether those who are currently receiving benefits are the very poorest, or rather are those just below the poverty line. If the very poor are being

⁵ In this section, we include all 29 ODs where different schemes had begun as at January 2006 to give an accurate picture of the coverage rather than just the 28 ODs in the Access Study where schemes had been earlier introduced. OD population figures for 2005 provided by the MOH.

overlooked, plans for coverage and expansion need careful reconsideration. Nonetheless, the results indicate that expansion of the current schemes may be warranted.

Aggregating the figures in Table 3 indicates that HEF ODs include a catchment population of 4.7 million and Contracting ODs 1.5 million. CBHI is available in ODs with a total population of 0.6 million (though only available in practice to the 17,000 who pay premiums). HEF ODs include 2.2 million people living below the poverty line, all of whom are candidates for HEF assistance when attending facilities, while Contracting ODs have a total poor population of 0.68 million. Consequently, the population coverage of all these schemes taken together, even at this stage, is significant, while the targeted coverage of the poor is achieved almost entirely through the HEF schemes.

While the data is incomplete, a rough count of the number of patients who had actually been provided with HEF benefits in the five years 2001-2005 was in the order of 50,000-80,000.

Table 3. Population coverage by type of scheme – January 2006

Type of Scheme	# of ODs	Population Catchment ¹	# of poor ²	Potential # of people eligible for benefit ³
HEF alone	15	3,571,331	1,558,087	878,967
Contracting alone	5	642,266	265,143	89,659
CBHI alone	1	20,000	n.a.	n.a.
HEF+Contracting	4	499,865	265,448	190,446
HEF+CBHI	2	229,792	198,642	104,318
HEF+CBHI+Con.	2	357,015	150,356	191,431
CBHI enrolled	..	..	..	17,053
TOTAL	29	5,320,269	2,437,675	1,471,875
Per cent	38% of all ODs	40% of the national pop.	46% of the catchment pop.	28% of the catchment pop. and 60% of the poor.

Notes:

1. Population figures for ODs provided by MOH, based on the 1998 Census and extrapolated for 2005
2. # of poor calculated as catchment pop. x poverty % for each OD; poverty % taken from WFP based on 2001 CSES
3. # of eligible beneficiaries calculated as catchment pop. x recorded av. % of the value of HEF or exemptions as a proportion of total hospital user-fee revenues in each OD: this "population" figure has been included for comparison purposes only and should not be considered as an absolute measure of those actually receiving benefits.

Number of schemes:

By January 2006, there were a total of 40 different Contracting, HEF or CBHI schemes operating within 29 different health ODs.⁶ These schemes involved 14 different donors, 11 different international agencies and nine different local organizations. While the number of new schemes will grow significantly, this expansion will be carried out in the main by the existing donor, international and local organizations. It is anticipated that only one new donor and one new local NGO will enter the field in the coming period. Consequently, the organisational structure for the implementation of the existing and new schemes is quite stable, especially in the medium term. One new element in the administrative structure in the future, however, will be the increased participation in the supervision, regulation and perhaps management of such schemes by the MOH.

⁶ Including the HEF scheme in Kampong Thom OD.

A tally of current and proposed schemes is presented in Table 4. The 'Current total' includes all those schemes in operation as of January 2006 and serving patients at referral hospitals and some health centres. The 'Proposed total' includes all current schemes and all known additional schemes that had been reported as commencing in the foreseeable future. In total, the number of schemes will increase from 40 to 53, with further expansion already being considered.

Table 4. Total number of current and proposed schemes, agencies, ODs – January 2006

All schemes/ODs/agencies	Current total	Per cent	Proposed total	Per cent
Different schemes	40		53	
Provinces out of 24	18	75%	18	75%
ODs out of 76	29	38%	32	42%
Donors	14		15	
INGO	11		11	
LNGO	9		10	
	Current total		Proposed Total	
Different schemes				
HEF schemes	24		30	
CBHI schemes	5		12	
Contracting schemes	11		11	
	Current total	Per cent	Proposed Total	Per cent
Health Equity Funding				
HEF provinces out of 24	15	63%	17	71%
HEF ODs out of 76	23	30%	28	37%
HEF donors	8		9	
HEF INGO	7		10	
HEF LNGO	9		9	
	Current total	Per cent	Proposed Total	Per cent
Community-based health insurance				
CBHI provinces out of 24	4	17%	7	29%
CBHI ODs out of 76	5	7%	12	16%
CBHI INGO	1		2	
CBHI LNGO	0		4	
	Current total	Per cent	Proposed total	Per cent
Contracting				
Contracting provinces out of 24	7	29%	7	29%
Contracting ODs out of 76	11	14%	11	14%
Contracting donors	1		1	
Contracting INGO	5		5	

For both HEF and CBHI, further expansion of the number of schemes (in addition to the proposed total listed here) has already been considered. New CBHI schemes could be established in 2007 in Kampong Cham province and Siem Reap province. The additional HEF schemes already planned for implementation are:

- MOH Health Sector Support Project HSSP (ADB, WB, DFID)⁷: HEFs will be established in up to a total of 18 ODs comprising 10 ODs contracted through the

⁷ The HSSP is a USD95 million, five-year MOH project that began in 2003 and will finish on 31 December 2007. It is the main health sector strengthening project in Cambodia. Funding comes from: ADB USD34.2 million (concessional loan and grant, incl. DFID, JFPR); WB/IDA USD57.6 million (concessional loan and grant, incl. DFID); and UNFPA USD2.9 million. The UK Department for International Development (DFID) provides funding for Contracting through the WB and ADB, the Japan Fund for Poverty Reduction (JFPR) provides funding for HEF expansion through the ADB, and UNFPA provides funding for reproductive health

- ADB where HEF funding will be provided by the Japan Fund for Poverty Reduction; 1 contracted OD supported by the World Bank; 7 ODs supported by DFID funding.
- UNFPA: in its country five-year program 2006-10 UNFPA has earmarked money to support improved financial access to reproductive health services in a number of ODs (so far not identified). The five-year program includes activities in 14 provinces and 18 districts. UNFPA may choose to establish a partnership for co-financing arrangements with other donors such as DFID or the World Bank.
- DFID: Will provide additional money to the National Strategic Framework for Equity Funds (MOH) through the HSSP for equity funds to target safe motherhood interventions, communication and operational research. Beginning in 2007, these HEFs will operate in 10 Contracted ODs (excluding Preah Vihear) specifically to finance access by the poor to the 'safer motherhood package' at RHs and HCs.

The number of Contracting schemes is, in fact, fixed by the loan agreements supporting the HSSP and will not change short of negotiating new agreements once the HSSP ends in 2007. The future of the Contracting arrangements beyond that date is not yet known. While CBHI pilot schemes have operated since 1999, their expansion has been slow to date and their coverage limited. However, with a proposed expansion from a total of five to 12 different schemes in the next year or two, it appears that CBHI may grow more quickly in the future. Health Equity Funding is clearly the most widespread and the fastest growing of the schemes that aim to relieve the effects of health costs on poverty. By January 2006, HEF schemes operated in 23 of the 29 ODs currently serviced by the various schemes and included 24 different HEF schemes – of which 23 were based at OD referral hospitals (five of which also covered some health centres), while 1 additional scheme (the Pagoda funds, Kirivong) covered health centres only.

Donor, international and local support organizations:

The various schemes were supported by a well established group of donor, international and local organizations, working independently and in collaboration with the Ministry of Health. Due to the budget constraints faced by the MOH, the different schemes would not have emerged without the support of international donor and development agencies. In most cases, these agencies have initiated, supervised or managed the various pro-poor schemes. The distribution of the various schemes by donor, international and local agencies is summarized in Table 5 below.

A list of every scheme detailing donor, international agency and local NGO by OD is presented in Annex 3. The strongest donor support for the various schemes, and particularly for HEF, came from BTC (seven schemes), HSSP (currently 5 and in future 11 schemes), and USAID (5 schemes). DFID and UNFPA will also strongly support HEF in the future for specified maternal health programs. At the time of the study, CBHI was managed solely by the French NGO GRET (Groupe de Recherche et d'Echanges Technologiques) with support from the French Ministry of Foreign Affairs and GTZ. Contracting schemes were exclusively managed through the HSSP. While the range of donors for these schemes will not change much in the near future, a number of local NGOs will begin new schemes in HEF and CBHI (with four new INGO schemes and three new LNGO schemes); where the donor funding

activities. The project has three main components: i) improved delivery of health services (for the benefit of the poor and rural populations); ii) strengthening of the institutional capacity; and iii) improved programs addressing public health priorities (STI and HIV/AIDS, malaria, tuberculosis, dengue fever, nutrition and the reduction of maternal mortality). HSSP is the sole source of funding for Contracting activities. The HSSP is managed by a Project Management Unit located at the Ministry of Health.

comes from to support these schemes is yet to be determined but is likely to be from among the current group.

Table 5. Distribution of schemes by Donor, INGO, LNGO – January 2006

Donors:	Number of different schemes		
	HEF	CBHI	Contracting
Belgian Technical Cooperation	7		
European Union	2		
EU/Canadian IDA	1		
Canadian IDA		1	
French Ministry Foreign Affairs		2	
GRET ⁸		1	
German Technical Cooperation GTZ ⁷		1	
HSSP (ADB/WB/DFID/JFPR)	5		11
Swiss Red Cross	2		
UNICEF	1		
USAID	5		
Volunteer Services Abroad UK	1		
International agencies:	HEF	CBHI	Contracting
Belgian Technical Cooperation	7		
CARE Cambodia			2
GRET		4	
German Technical Cooperation GTZ	1		
Health Net International	7		4
Health Unlimited			1
Save the Children Australia			2
Swiss Red Cross	2		2
UNICEF	1		
University Research Company	5		
Volunteer Services Abroad UK	1		
Local NGOs:	HEF	CBHI	Contracting
Action For Health	11		
Buddhists For Health	1		
CAAFW	2	1	
CFDS	5		
CHHRA	1		
EF Steering Committee (Svay Rieng)	1		
Hospital committee (Stung Treng)	1		
Pagoda Funds	1		
Urban Sector Group	1		

Three international agencies dominated the management of HEF schemes: BTC (with seven schemes), HNI (seven schemes) and URC (five schemes), and management of the 11 Contracting schemes was shared between five agencies. Currently, only GRET (through the SKY, 'Health for Our Families', Insurance Program), as well as the LNGO, CAAFW, offer CBHI, but in future both GTZ and SRC will begin schemes.

⁸ Technically, GRET and GTZ are implementing agencies and not 'donors', but each provides their own funding for these schemes.

Local NGOs had been contracted to implement and administer each one of the 24 HEF schemes, with AFH the most prominent (a total of 11 schemes) and CFDS also active (five schemes). In two cases, the local administrator was a committee established at the provincial referral hospital to manage the scheme (Svay Rieng and Stung Treng). In one instance (in Kirivong OD), the administration was carried out by local Pagodas (or Buddhist temples), which had strong links to the local community (this was the only HEF scheme that exclusively supported health centres and not the referral hospital).

The model of sub-contracting to independent ‘third-party payers’ in a managed ‘purchaser-provider split’ for HEF and CBHI schemes had therefore been well established. For Contracting the purchaser is the MOH (with donor funding) and the provider is the subcontracted NGO. Whether this is the most efficient method of administration of such schemes was a matter of ongoing discussion. In some cases the overhead costs of this model of administration were relatively high (up to 40% of total HEF expenditures in some cases). Moreover, the MOH had indicated that it preferred a model in which its own institutions (OD administrative offices or health facilities) administered the equity funds without an NGO ‘third party’. It was argued that this would bring gains in administrative efficiency and cost reduction. A mixed system of administration may emerge. The MOH had recently drafted policy and management frameworks for both HEF and social health insurance (including supervision of CBHI) and intended to extend its participation in these areas in the future.

MOH frameworks for health insurance and health equity funding:

The coverage of HEF and CBHI schemes in particular has grown in a somewhat ad hoc manner at the initiative of various donor and NGO groups, working in collaboration with the MOH. This represented a spontaneous response to an obvious need: to extend health coverage to the very poor, who otherwise had mostly been excluded. Contracting is also a donor-inspired procedure. The Ministry of Health has nonetheless followed and supervised these activities closely. The implementation of Contracting procedures is managed by the MOH, and national plans have been developed for health equity funding and social health insurance.

In 2003 the MOH developed a Master Plan for Social Health Insurance (including CBHI), which was officially launched by the MOH in March 2005.⁹ The master plan provided for the introduction of public health insurance, as and when possible, in three areas: compulsory social health insurance through a social security framework for public- and private-sector salaried workers and their dependents (via an amendment to the Social Security Law 2002 and administered by the National Social Security Fund; voluntary community-based health insurance (CBHI) sponsored by different development partners, national non-government organizations and health care providers for non-salaried workers and their families; social assistance through the use of equity funds and later government funds to purchase health insurance for non-economically active and indigent populations. The Master Plan calls for accreditation of all community schemes, regardless of sponsorship and proposes that social health insurance schemes offer a comprehensive range of health care benefits, including primary health care in the community and hospital based outpatient and inpatient care, provided equally to all patients regardless of the source of their insurance coverage.

⁹ See: Social Health Insurance In Cambodia: Proposal For A Master Plan. Prepared in collaboration with the Ministry of Health Cambodia. World Health Organization, Phnom Penh, September 2003; “Launch of the Master Plan for Social Health Insurance in Cambodia”, MOH, WHO, GTZ and GRET, 14 March 2005, Sunway Hotel, Phnom Penh.

The Master Plan provided that, for formal-sector salaried workers covered by a compulsory national social security system, monthly premiums should be calculated as a percentage of salary, to be shared equally by employer and employee. Low-waged civil servants, it was argued, may require a salary increase equal to any deduction of social health insurance contribution. For the population covered by voluntary insurance, a flat-rate contribution was recommended, equal to about 4% of family income. It was strongly recommended that the compulsory and voluntary schemes not apply patient co-payments. The proposed SHI schemes were to run in parallel with HEF.

A national framework for health equity funding was drafted in 2005 and subsequently revised and adopted by the Ministry of Health.¹⁰ The framework recognised the HEF as a third party payer to purchase health care for the poor and determined the main lines of responsibility for management, administration, financing and supervision among the different actors. Under the revised framework, the MOH has been designated to supervise, manage and monitor the HEF system through Ministry institutions (mainly the Department of Planning and Health Information and its Bureau of Health Economics and Financing). What is called the Equity Fund Implementer (EFI, i.e. the international NGO that sponsors the scheme in each OD) would be responsible for overall contract management and for accountability to the MOH, it would define the beneficiary identification system for the local EF at OD level (based on the national guidelines for beneficiary identification), it would oversee the operations and performance of the local EF at each OD, and would develop an M&E system based on the national M&E framework. The Local EF (i.e. the Local NGO actually managing the fund day-to-day) would identify the beneficiaries according to the guidelines provided by the EFI, carry out a baseline assessment of health facility use in each OD (including both referral hospitals and health centres) with special focus on what the barriers to access, make payments to the facilities for patients identified as poor, and monitor facility performance and patient satisfaction. Health facilities, or health service providers, would be required to establish a unified, stable and transparent user-fee system, a clear and transparent system for the distribution of user-fee revenues allocated to staff salaries and recurrent costs, and provide health services of an agreed quality to all patients, including EF patients.

The performance of the various HEF schemes was publicly summarised and presented at the National Health Equity Fund Forum organized by the MOH, WHO and BTC in Phnom Penh in February 2006. This was the first time that all HEF implementers and local fund managers had come together, to take stock of the growth of HEF schemes and to begin the process of developing common procedures, and to unify processes under the guidance of the MOH. The issues discussed by the forum included a summary to date of HEF operators and their various schemes, procedures for the identification of beneficiaries, common methods for HEF information management, the content of benefits packages and services provided, the impact of HEFs on service delivery and quality of care, the impact on access to health services, monitoring and evaluation procedures, links with social health insurance, and methods of community participation and fund sustainability. The information on coverage and access to health services presented in detail in this report was first summarised at this Forum.

A subsequent Workshop for the dissemination of the preliminary findings of the Study of Access to Health Services for the Poor (sponsored by the MOH, WHO, AusAID and RMIT University) was held at the MOH in March 2006 with representatives of the international and

¹⁰ See: Bitran & Associates, Implementation and Monitoring Framework for the Equity Funds in Cambodia – Draft Implementation Plan, ADB/MOH, April 2005; Ministry of Health (2006), National Equity Fund Implementation and Monitoring Framework, Department of Planning and Health Information, Phnom Penh.

local organizations implementing the various identified schemes and MOH officials. The Workshop heard presentations on barriers to access, common features of HEF schemes, coverage of pro-poor schemes, effects on utilization and revenues, and findings from case studies in Phnom Penh and Ang Roka. In the next section, these findings are presented in detail.

5. Health Facility Utilization and Revenues

The analysis of facility utilization and revenues constitutes the main quantitative part of the data collection and analysis. Taken from routine reports from health facilities, international agencies and local NGOs administering the schemes, the data was used to test the hypothesis that where exemption levels rise to the level of average poverty it can be assumed that access for the poor has been improved. The study analysed data from 33 ODs and 44 different localized financing and service delivery schemes.¹¹

A major constraint to the analysis was the limited and inconsistent nature of the data. There was, at the time of the research, no uniform system of reporting between all schemes and all ODs. Certain routine data was collected against common indicators, such as the data for MOH districts or those with Contracting. Even so, the data collected for these schemes was often incomplete and inconsistent. Between HEF districts there was no common reporting methods and at times no satisfactory data collection at all. No CBHI data on utilization of health facilities was available to the research. This may change in the future as operators agree on common monitoring and measurement tools. Because the data comes from different sources, there was often little consistency between the data from different districts. Consequently, the opportunity for aggregation of data across schemes frequently did not arise. Similarly, the disaggregation of data by gender or socio-economic status was mostly not possible, except for one or two indicators, or across a limited number of districts.

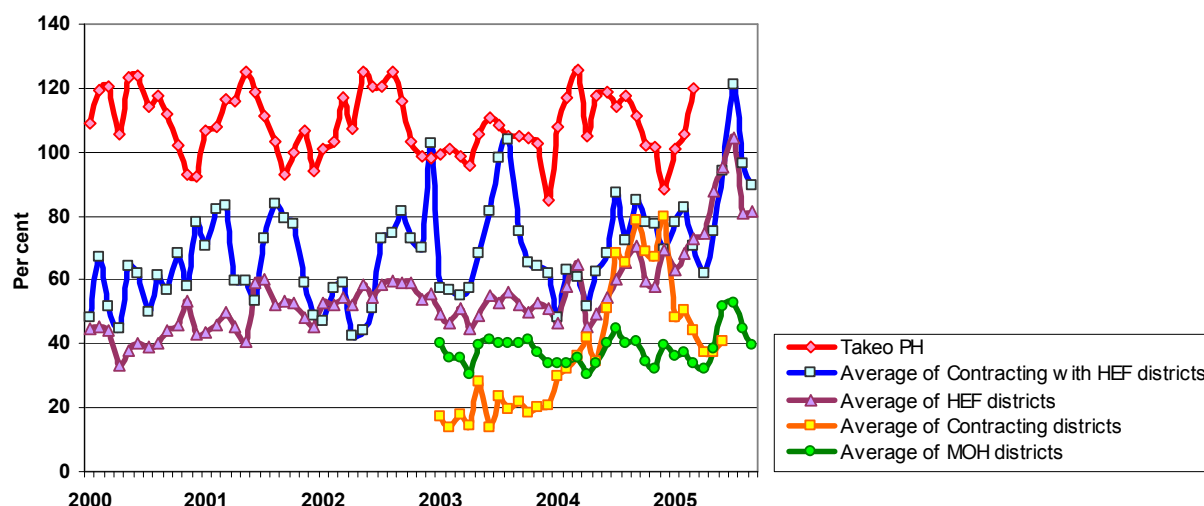
Consequently, much of the analysis here is case-by-case, or district-by-district, and where similar patterns emerge between districts this is regarded as a trend worth further investigation and research. It has not been possible to eliminate ‘confounders’ in the analysis (neither those known about nor those yet to be revealed), with the exception of district measurements of the level of poverty. The findings of this analysis, then, are presented here not as firm conclusions based on reliable data but as evidence that further research is warranted.

In the analysis that follows, we will first look at a few common indicators to see how the main schemes compare, and then we will look more closely, either jointly or individually, at various MOH, Contracting and HEF districts.

Utilization of hospital capacity:

The bed occupancy rate (BOR) is the only indicator of utilization that is consistent across all schemes and ODs, so it is very useful for purposes of comparison. Generally, Cambodian health facilities are characterized by under-utilization and excess capacity, often due to poor quality of service and high costs to users. Falling user costs and rising BOR can be regarded as an indicator that access has increased. The BOR data allows a direct comparison between MOH, Contracting, and HEF districts (though there was not sufficient data to include CBHI), as illustrated in Figure 1.

¹¹ For the purposes of this data analysis, Kampong Thom was treated as an ‘MOH’ district and not an ‘HEF’ district.

Figure 1. Average referral hospital bed occupancy rate by type of district.

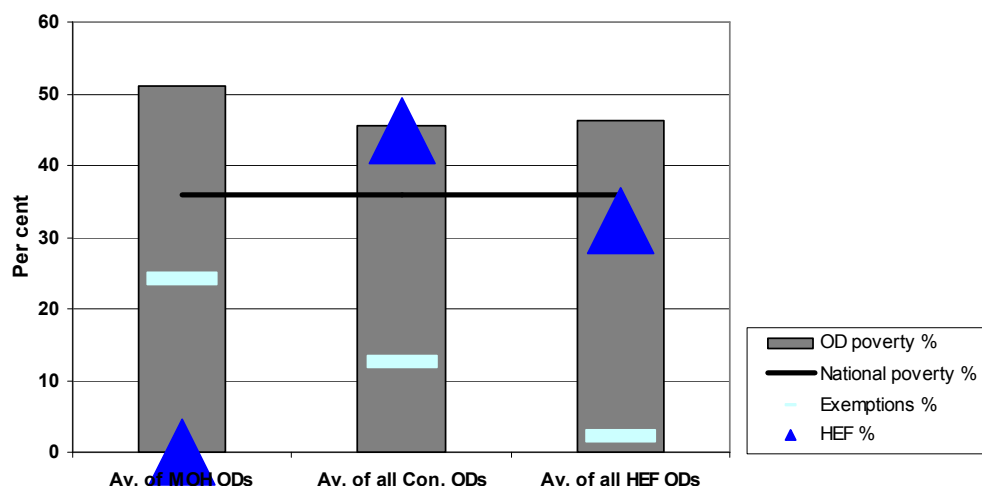
Operating at full capacity for a number of years, Takeo Provincial Hospital provides a benchmark for measuring service delivery and utilization. MOH district referral hospitals not receiving other support operated at about 40-50% capacity. Contracting schemes were purposely implemented in poorly performing ODs that subsequently show a steep increase in capacity utilization, particularly when combined with HEF.¹² Similarly, HEF districts show a consistent increase from a low base with a further sharp rise from 2004 and finally reaching 100% BOR. It appears therefore that HEF in particular is very effective (and cost-effective) in raising utilization rates and achieving full use of RH capacity. The combination of Contracting and HEF also seems to be an effective way to raise capacity utilization.

Measures of poverty and exemptions:

As the poorer operational districts have been targeted for implementation of the various schemes, poverty in all districts is above the national average (poorer districts were selected also for the MOH group). Typically, 40-50% of the population in the selected districts lived below the poverty line. It was assumed that the same proportion would be eligible for exemptions or HEF benefits, or would otherwise generally be excluded from health care. The results illustrated in Figure 2 indicate that exemptions alone are not a satisfactory way to meet the needs of the poor; though a relatively high level, exemptions granted by MOH districts both fail to meet the needs of the poor and deny facilities a much needed revenue supplement from user fees. Perhaps due to better management, equity fund coverage is greater in the Contracting districts. It does appear therefore that these schemes improve access to health services for the poor; to confirm this we need to look in more detail at different schemes.

¹² The bulge in Contracting data in 2004 is caused by Ponhea Krek OD (for which BOR exceeded 100% at this time). Memut OD, where BOR was consistently over 100%, has been excluded from the analysis as it distorts the data (further investigation of Memut is warranted).

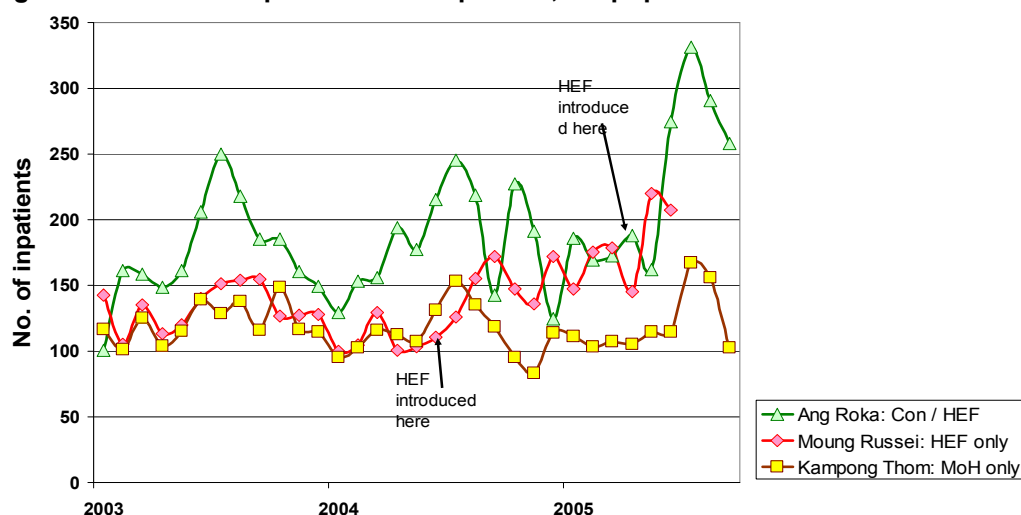
Figure 2. Poverty, exemptions and HEF % by type of scheme, c.2003-5.¹³



Comparative rates of facility utilization:

The data indicates that both Contracting and HEF are associated with an increase in facility utilization (Figure 3), which shows especially the marked increase in utilization following the introduction of HEF at Ang Roka and Moug Russei referral hospitals. In comparison, the graph for Kampong Thom OD (MOH) remains low and flat. During these years, on average only half the available capacity at Kampong Thom referral hospital (measured as the BOR) was utilized, while exemptions for the poor averaged 20-40% of hospital inpatients. The introduction of HEF was associated with increased utilization also at Banlung, Chhlong, Kirivong, Moug Russei, Peareang, Preah Sdach, Sotnikum and Svay Rieng, in Phnom Penh squatter communities, and also perhaps at Kampong Cham and Siem Reap provincial hospitals. In all other cases either the data is incomplete or it is too early to tell.

Figure 3. Referral hospital utilization per 100,000 pop. in three selected ODs.

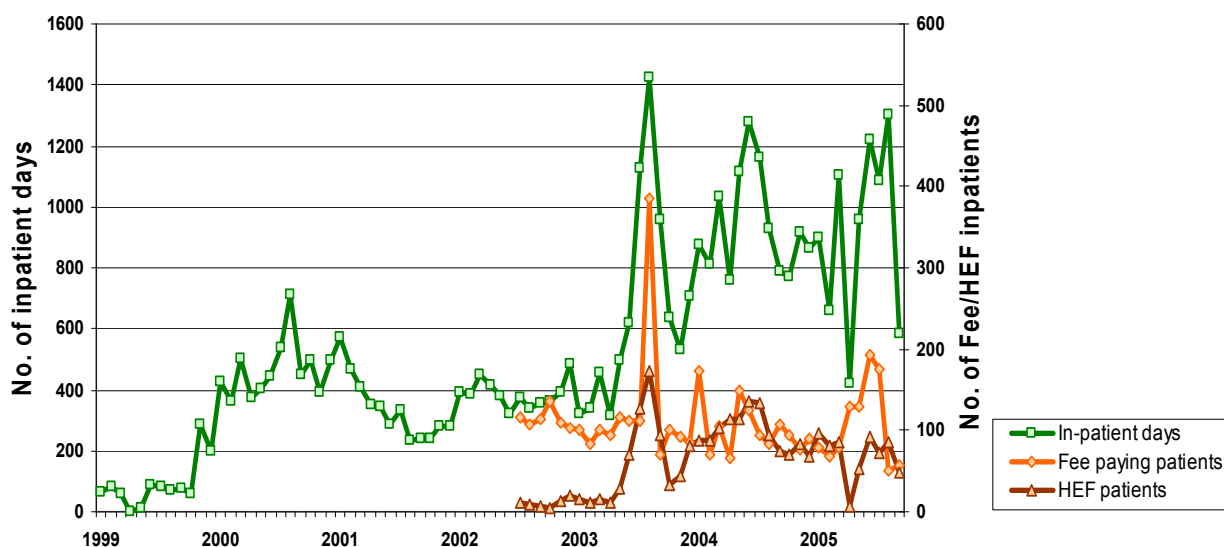


¹³ In Figure 2: Contracting ODs include those with HEF; HEF ODs include those with Contracting; Population figures are based on WFP estimates for 2005 extrapolated from the 1998 Census; The national poverty rate is taken from the Cambodian Human Development Report 2001; Exemptions % includes the average of five MOH ODs, the average of 3 Contracting ODs, and only one HEF OD; HEF % for ‘Av. of all Contracting ODs’ is the average for five of the six Contracting ODs that have HEF schemes; HEF % for ‘Av. of all HEF ODs’ is the average of fourteen ODs with HEF; the figures should be treated with caution as the data is incomplete.

There is, though, no consistent pattern of utilization even among Contracting ODs. The number of RH inpatients in Contracting districts ranges from about 50 to 300 per 100,000 population per month (with a maximum recorded level at one referral hospital of 450 during 2004 and 2005). Some of these ODs have had Contracting for a number of years and some only since 2005; all have, though, shown an increase in utilization over time, particularly when combined with HEF. Utilization at the referral hospital appears to be highest in Memut and Sen Monorom, both of which are Contracting ODs. Despite this, exemptions at health facilities in Memut (RH and HC; without HEF) are low, averaging only 5-15%. It is not known how, if at all, the poor are protected, and further investigation of the situation at Memut is warranted. Sen Monorom referral hospital has had HEF since late 2002.

Data from Peareang OD provides an interesting comparison. The OD has had Contracting since January 1999 and HEF since July 2002. From the data illustrated in Figure 4, it appears Contracting quickly produced a significant increase in utilization from a very low base to more than 600 inpatient days per month in 2000, and then plateaued at a level around 400 inpatient days. However, with the introduction of HEF it appears another steep increase occurred, taking utilization to a range between 600 and 1200 inpatient days a month in 2004 and 2005. Much of this increase (about 200 inpatient days per month) can be attributed to HEF-supported admissions, while the number of fee-paying admissions remains stable. On the face of it, it appears that these HEF patients (who are identified as the very poor) may have been previously excluded from access to services.

Figure 4. Peareang RH (Contracting and HEF): Utilization, fee-paying patients and HEF patients.



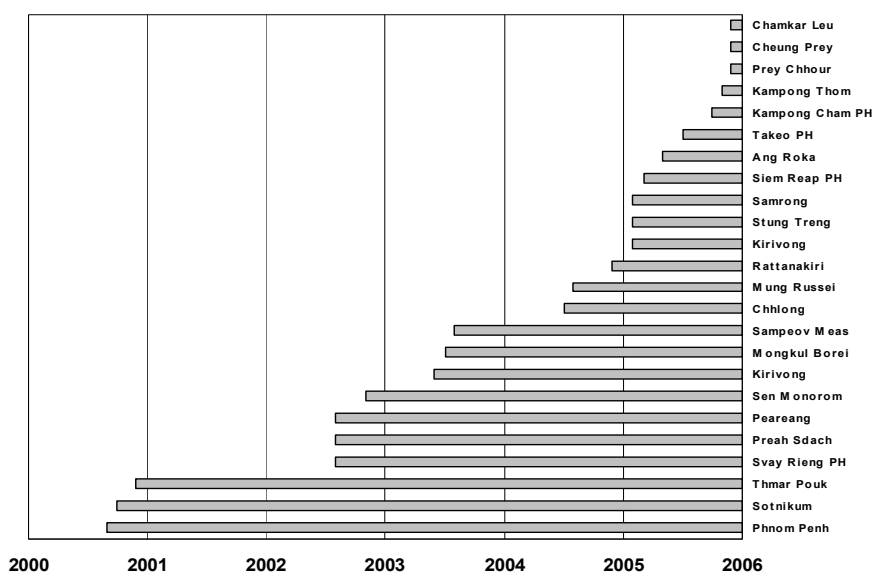
Community based health insurance is available through schemes in both Ang Roka OD (at nine health centres, with access to the referral hospital) since June 2001 and in Kirivong OD (at only one health centre, with access to the referral hospital) since April 2003. There is not sufficient data to discern the effect of CBHI on utilizations rates. During 2005 in Ang Roka OD, however, there was a steep rise in RH and HC admissions together with a sharp increase in HEF enrolled candidates and HEF revenues as well as a steep increase in the number of beneficiaries paying CBHI premiums.

Duration and rapid spread of HEF schemes:

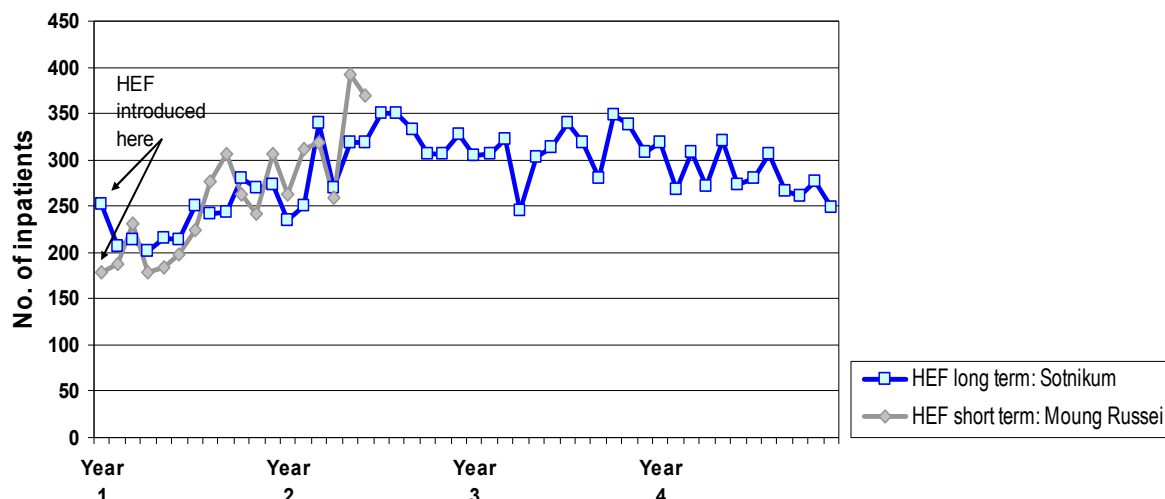
Health equity funding appears to have a positive impact on facility utilization and to provide access to services for the poor. HEF schemes are the most numerous of the sites included in the Access Study, and the number of schemes is rising rapidly, as Figure 5 shows. The first schemes began in 2000 in Phnom Penh and Sotnikum OD. Expansion of HEF schemes was slow initially, but the number of schemes increased sharply in 2005, when 11 new HEF began operation. Further increases in the numbers are expected in 2006 and 2007. This expansion reflects a wide-spread feeling among donors and non-government organisations that HEF addresses the needs of the poor to access health facilities. The data analysed here confirms this impression.

Health equity funding stands out as the most effective, and most efficient, means to target the poor for the provision of public services such as health. The model could, of course, be used in other social areas. In a large number of the districts surveyed for this report it appeared HEF had led to an immediate and substantial increase in utilization, and that the increased utilization came from poor people who previously had not accessed services. To verify this a sample population survey in a representative number of districts is needed. Our reasoning is deductive: if the increased utilization follows the introduction of HEF while the level of paying inpatients remains relatively steady (or increases) then it is safe to assume that the upsurge in demand is from people who previously did not pay for services (and consequently did not attend the facilities). This trend was evident to some degree in a number of ODs including: Ang Roka, Chhlong, Kampong Cham, Mongkul Borei, Moug Russei, Peareang, Phnom Penh, Preah Sdach, Rattanakiri, Siem Reap, Sotnikum.

Figure 5. Duration of HEF schemes by OD.



[Note: Health Equity Funding at Takeo Provincial Hospital first began in 1999 through Swiss Red Cross; the scheme currently operated by Cambodia Family Development Services (CFDS) began in 2005.]

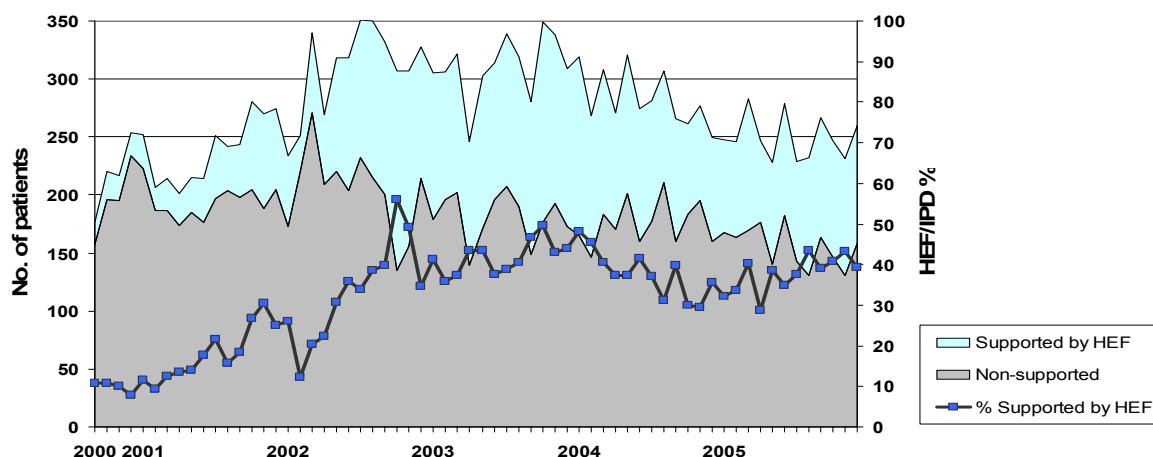
Figure 6. Effect of HEF on referral hospital utilization rates at Sotnikum and Moug Russei.

The evidence suggests that the sharp increase in utilization following the introduction of HEF covers a period of about 18 months, and then utilization plateaus and may even decline. Figure 6 compares utilization rates in two ODs where HEF alone is implemented (without Contracting or CBHI), Sotnikum (where HEF began in 2000) and Moug Russei (where HEF began in 2004). One indicates the longer-term impact of HEF on utilization and the other the effect in the shorter term. By plotting each graph on a common time scale beginning with Year 1 of the introduction of HEF schemes, it is clear that the duration and the gradient of the increase in utilization, in these two examples at least, is almost identical. The evidence is not conclusive, but it suggests a common trend. Understanding why utilization rates could fall after the first 18 months past HEF implementation is important and requires investigation. Among the possible explanations are: previously unsatisfied demand for health care is satisfied and demand falls away; the quality of service provision does not support the increased utilization, causing disillusionment among patients; the ‘curiosity’ effect of newly introduced HEF disappears; the early rise represents in part over-servicing and over-utilization of facilities, which health staff subsequently learn to manage and moderate.

Rural and urban settings:

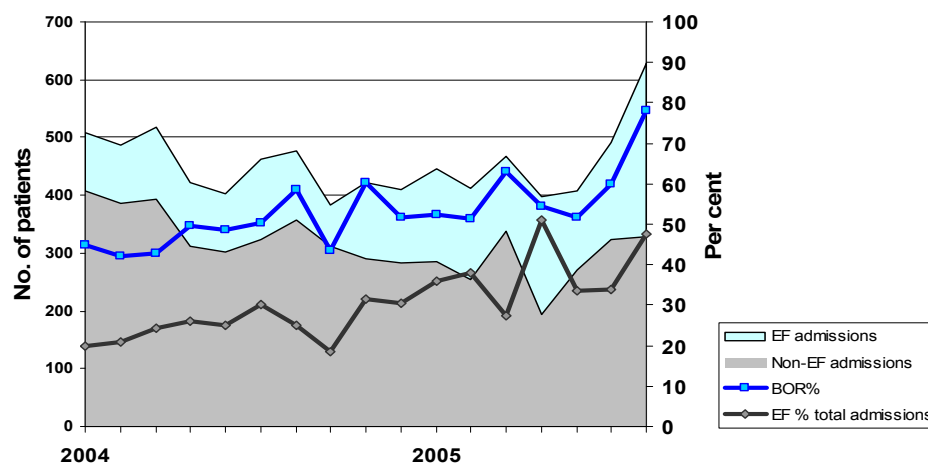
Of the 24 different HEF schemes operating as of January 2006 all but one (the Phnom Penh urban health project in squatter communities) operated in rural areas, where 80% of the Cambodian population resides. Sotnikum referral hospital provides the longest time series data of the rural schemes, as illustrated in Figure 7. The rise in total admissions from 2000, when HEF was introduced, is attributable mainly to HEF admissions, which rose to an average of around 40% of inpatients while non-supported (i.e. fee-paying) admissions remained relatively constant. HEF admissions then stabilized. It appears after 2004 the total of HEF admissions began to taper off while fee-paying admissions remain stable. It therefore appears the HEF provided access for the poor who otherwise were excluded from services and the effect on increased utilization is now moderating. There is reason to believe that the pattern in Sotnikum provides a pattern that other schemes may follow.

Figure 7. IPD admissions and number of HEF inpatients at Sotnikum Referral Hospital.



While it also began in 2000, limited time-series data was available for Phnom Penh, with admission figures only for 2004 and 2005, after pre-identification of the poor to assess eligibility for HEF had commenced. Based at the Phnom Penh Municipal Hospital (one of a number of referral hospitals in Phnom Penh), the HEF scheme serves poor communities in squatter areas providing access to services where it had previously not existed. The HEF scheme is one part of a broader USG project assisting the urban poor to receive health care. Figure 8 illustrates total admissions and HEF admissions at the hospital. IPD admissions include patients not from squatter areas who use the hospital. A further discussion of the situation in Phnom Penh is included later as a case study. It appears that HEF admissions have provided access for the urban poor in addition to other fee-paying users of the hospital, and has helped to increase the utilization of hospital capacity.¹⁴ It also appears that the introduction of pre-identification procedures in 2004 has encouraged an increase in admissions, the proportion of IPD with HEF support, and the BOR.

Figure 8. Admissions, HEF patients and BOR at Phnom Penh Municipal Hospital.



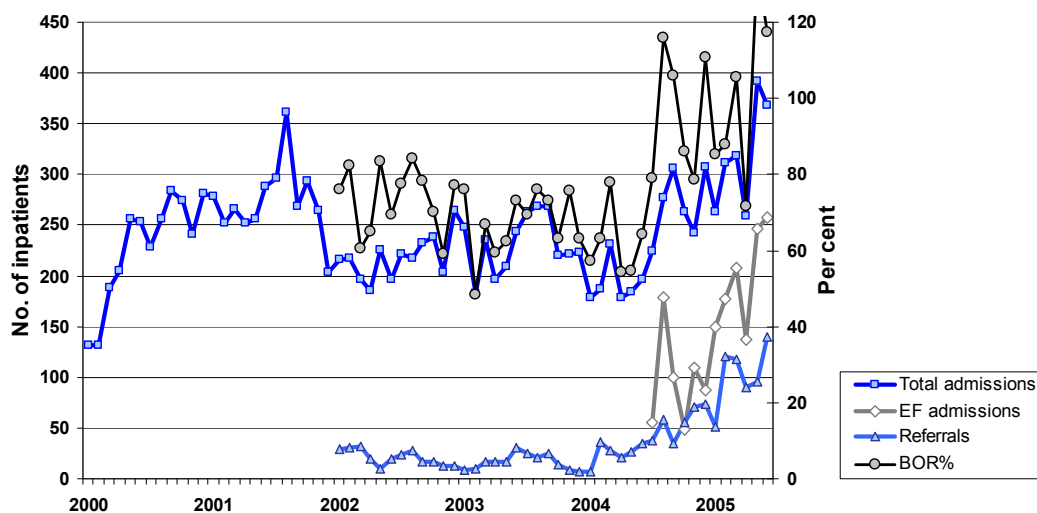
¹⁴ The catchment population of the Phnom Penh Municipal Hospital (PPMH) is difficult to calculate as it does not include the total population of the Municipality. For secondary and tertiary care most Phnom Penh residents use the national hospitals. Also, IPD and OPD numbers at PPMH include general patients who are not from squatter areas, who prior to HEF commonly did not use the PPMH at all. Therefore, the catchment population for PPMH can be thought of as a patient 'market' comprising the HEF users, USG-related people, and others who take advantage of good delivery services at a reasonable cost. The catchment population for HEF beneficiaries can be regarded as 100,000 poor people living in squatter areas (out of a city population of 1m.) as identified in the National Poverty Reduction Strategy.

HEF and the health referral system:

At the time of the study, health equity funding was offered principally to inpatients (and in some cases outpatients) at referral hospitals; in only seven of the 24 schemes was equity funding offered at some health centres (primary level services). It was argued that fee levels at health centres were so low they did not in most cases prevent the poor from attending. However, a concern was that, by providing free referral hospital (secondary level) care, HEF beneficiaries would by pass the primary level services. The evidence suggests that this may occur in some cases but is not universally true. In fact, increased referrals from HC to RH may indicate the effective working of the HEF scheme; or, it may represent over-servicing (there is insufficient data to say which may be true).

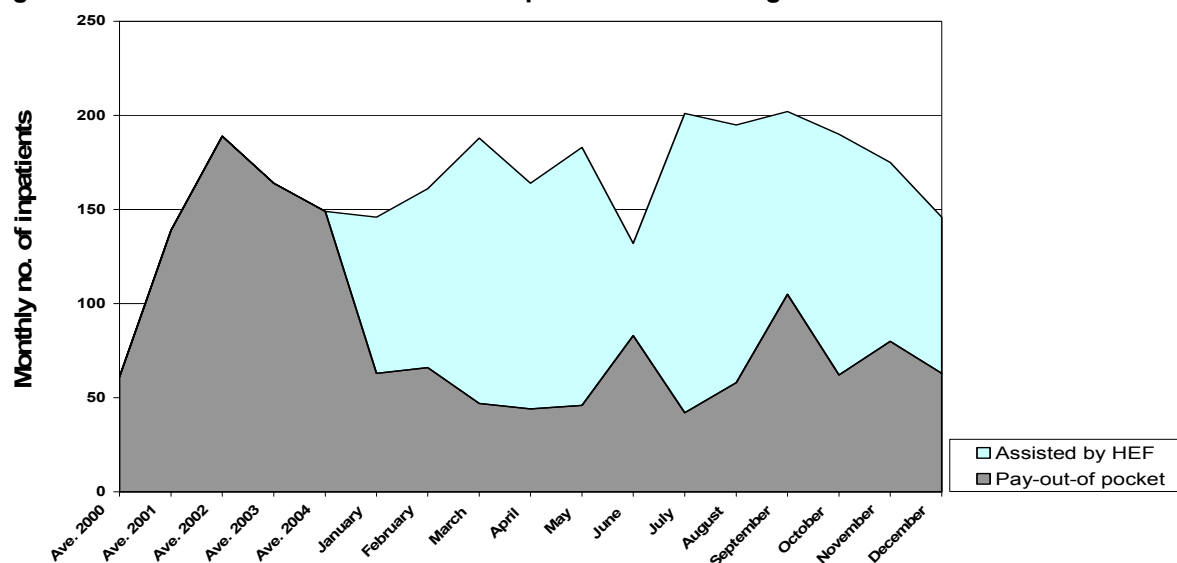
In at least two cases, at Moug Russei RH and in Samrong OD, the number of inpatients referred to the referral hospital from health centres actually increased. Figure 9 illustrates the situation in Moug Russei. It appears that the introduction of HEF there in mid-2004 was associated with a significant increase in utilization and the use of full capacity at the RH together with an increase in referrals from inside the OD. Further research is needed to determine the precise cause of the increase in referrals. In Samrong OD, HEF is provided at the referral hospital and one health centre. Nearly all patients arriving at the referral hospital have traditionally been self-referrals, indicating that health centres have generally been bypassed. While there had not yet been a noticeable impact on admissions following the introduction of HEF in January 2005, the number of referred inpatients actually rose to almost a quarter of admissions. Again, further investigation is needed to determine the reasons for this.

Figure 9. Admissions, referrals and BOR at Moug Russei RH.



Erosion of the fee-paying base:

Another concern was that the introduction of HEF may lead to a situation in which HEF admissions simply replace previously fee-paying patients (that is, people who previously paid for services are subsequently given free care). This would indicate no increase access and would have serious implications for the revenue base at facilities. In at least one case, at Samrong RH, where HEF admissions had risen to 64% of total IPD compared to an average rate of poverty in the district of 56%, this was clearly the case, as Figure 10 illustrates. This replacement of fee-paying by HEF patients needs further investigation.

Figure 10. HEF-assisted and non-assisted patients at Samrong RH.

It is interesting that the level of fee-paying admissions returned to average-2000 levels and that HEF beneficiaries had been pre-identified as poor in the district. In principle, the erosion of the fee-paying base could mean either that many people who could actually afford to pay fees had unfairly taken advantage of the HEF system to avoid payment, or that the HEF scheme was being poorly administered by staff who were too liberal in allowing concessions. In such circumstances a tightening of management procedures would be called for. Another possible explanation is that many poor people in the district had previously paid for health services they could not, in fact, afford and had found relief through HEF.¹⁵ In such a case, it could be argued that HEF had acted to reduce widespread impoverishment due to health costs.

At Chhlong RH too, the introduction of HEF in June 2004 was associated with a very steep increase in utilization over all and an erosion of the fee-paying base. In other districts the situation was different. At Mongkul Borei Provincial Hospital, where HEF began in June 2003, both the level of utilization and fee-paying admissions showed a steady increase during 2004 and 2005 while the number of HEF admissions remained relatively constant. At Siem Reap Provincial Hospital, total admissions increased following introduction of HEF in February 2005, while about half of those who received HEF benefits appear to have previously been fee-paying patients. At Kampong Cham Provincial Hospital, in the four months after the introduction of HEF in September 2005, total admissions had increased, fee-paying admissions had increased, and HEF patients were a growing proportion of total inpatients.

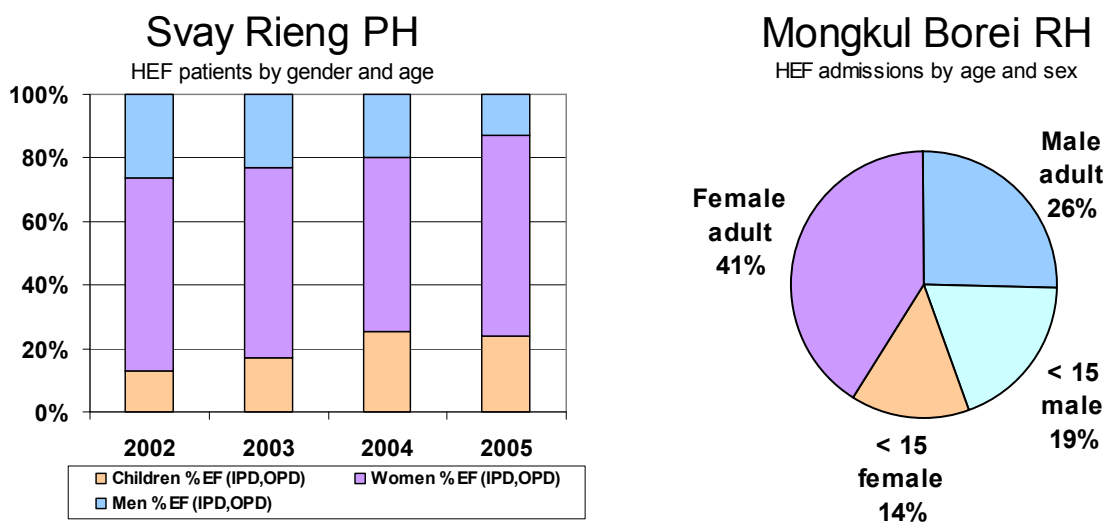
Disaggregation for gender:

Little data was available to allow gender disaggregation of service utilization, nor to compare trends prior to the introduction of the various pro-poor schemes. Traditionally, the largest proportion of health service users has been women and children. Data from two cases, however, indicates that women comprise the largest group of HEF beneficiaries, and that

¹⁵ The nature of the coping mechanisms used by the poor to meet health costs in the absence of subsidization through HEF or other schemes needs further investigation. Some additional insight on this is provided below in the section on debts related to health care.

women and girls together comprise much more than half the number of recipients. Figure 11 presents the available data for Mongkul Borei RH and Svay Rieng PH.

Figure 11. HEF beneficiaries by gender and age at Svay Rieng PH and Mongkul Borei RH.

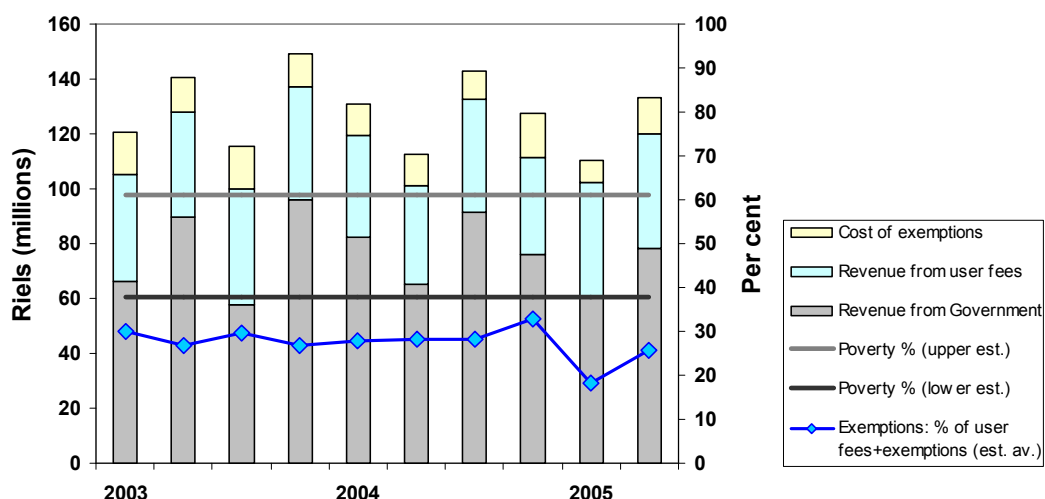


Hospital revenues and HEF costs:

The schemes involved in the study all have the advantage of providing additional revenue to health facilities. The first phase of the Contracting pilot 1999-2001 raised public health spending in the targeted districts from approximately \$2 to approximately \$4.50 per capita of the catchment population, with a consequent increase in facility revenues (Keller and Schwartz 2001). Financed through premiums and donor support, CBHI spreads the burden of health costs across time and across beneficiaries, but no data is available to indicate the overall effect on facility revenues. Where CBHI substitutes for other facility exemptions, though, revenue would rise. HEF appears in many cases to be a subsidy to health facilities that replaces the exemptions ‘tax’ on them and, particularly with increased utilization, adds significantly to facility revenues.

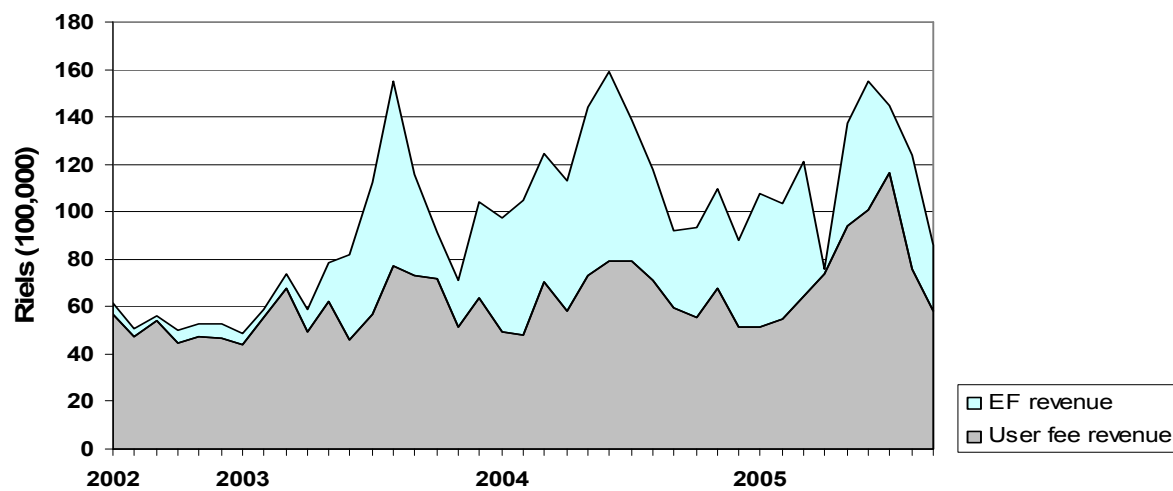
Figure 12 shows average revenues for four MOH study districts where revenue data was available. Revenue from government continues to be the main part of total facility revenues, averaging around 50% from 2003 to 2005. User fees, however, are a significant source of revenue averaging around 30% of the total. Included here as notional revenue, exemptions from user fees are in fact revenue lost to facilities at a cost (or tax) of approximately 20% of revenues-plus-exemptions. Consequently, exemptions meet the needs of only proportion of the poor and are a significant drain on facility revenues. Exemptions neither assist facilities nor fully protect the poor.

Figure 12. Average quarterly revenues for four MOH referral hospitals, 2003-2005.¹⁶

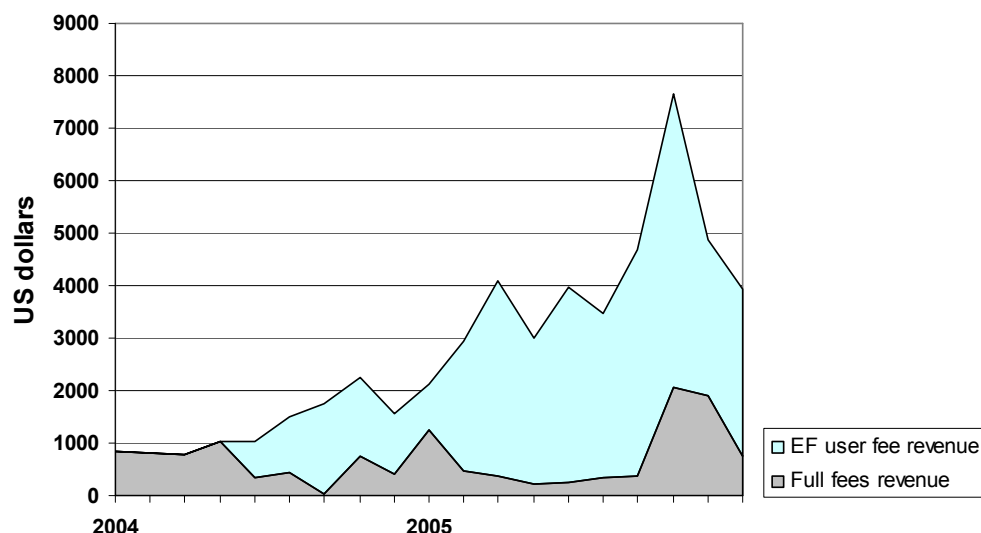


In a number of districts HEF payments provide a clear subsidy to health facilities. As Figure 13 indicates, at Peareang referral hospital HEF revenues add significantly to user fee incomes, which continue to increase, in a situation where there is strong management and a well established user-fee system with no exemptions. In these circumstances HEF increases revenue and provides access for the poor. Peareang receives additional revenues from the MOH under Contracting, from HNI subsidies and from other sources. At Chhlong RH (Figure 14), which has HEF alone without Contracting or other assistance, HEF provides an especially large subsidy on top of an established but modest user-fee incomes, without apparently eroding the fee base.

Figure 13. User fees and HEF revenues at Peareang RH.



¹⁶ Battambang, Kampong Thom, Kampot, Bakan.

Figure 14. User fees and HEF revenues at Chhlong RH.

6. Case studies of Ang Roka and Phnom Penh¹⁷

The aim of the case studies was to assess the extent to which existing health financing and pro-poor schemes (including Contracting, HEF and CBHI) in the Ang Roka Operational District in Takeo Province and in squatter areas in Phnom Penh addressed: 1) The barriers to access to public health services for the poor; 2) Coverage of target groups; 3) Benefit packages provided by HEF and CBHI; and, 4) The main health issues causing poverty. The Access Study drew on a quantitative analysis of equity fund users in two Phnom Penh squatter communities, and qualitative research among health-service users and providers in Phnom Penh and Ang Roka.

The qualitative study involved in-depth interviews and focus-group discussions to investigate stakeholder perceptions of each scheme. The key informants were four urban and four rural stakeholders, including MOH officials, public health staff, Contracting agencies, and HEF and CBHI managers in Phnom Penh and Ang Roka. One focus-group discussion was held with HEF beneficiaries in Boeungkak squatter area in Phnom Penh, and two focus-group discussions were held in Ang Roka, one with HEF beneficiaries and one with non-beneficiaries. The quantitative analysis drew on data on 'indebtedness for health care' collected by Urban Sector Group (USG) community volunteers from more than 7000 households in squatter communities in late 2004 and early 2005 during the first routine annual household survey for HEF identification.¹⁸ This information was supplemented by qualitative interviews with 43 indebted poor households living in the two selected squatter areas from May to July 2005, with a revisit to some households in September, and the results compared with data recorded by the USG. The interviews comprised 19 households in the Boeungkak area and 24 in the Tonle Bassac area.

¹⁷ This section summarises the findings of the case-study research; a copy of the full report can be provided on request to Maurits van Pelt, email maurits@online.com.kh.

¹⁸ The Urban Sector Group, a Cambodian NGO based in Phnom Penh, manages the Phnom Penh HEF, which began at the Municipal Hospital in 2000. Quantitative data was collected from Boeungkak (which had an HEF) and Tonle Bassak (which had no HEF).

The urban poor:

USG activities in Phnom Penh were centred on the Municipal Referral Hospital (one of a number of national and referral hospitals in Phnom Penh) and on five adjacent squatter communities.¹⁹ Health facilities including health centres and the Municipal Hospital charge user fees. By January 2006, the HEF scheme managed by the USG covered the five squatter communities for attendance at the Municipal Hospital, and the scheme was expanding. Pre-identification of the poor began in some of these communities in October 2004 with support from URC, and a subsequent re-identification began in late 2005 with support from the Rockefeller Foundation. With support from GRET, a French NGO, the SKY CBHI scheme supports service delivery solely at its own SKY Health Centre based at the Municipal Hospital, including referral services at the hospital. The SKY scheme began in December 2005 (after data had been collected for this case study).

The qualitative research identified and confirmed the barriers to access to health services for the poor outlined in Section 2 of this report, including a lack of knowledge of health services and pro-poor schemes and a lack of money to pay for services and associated costs. The research confirmed that for minor illness patients prefer self-medication or private services. Importantly, the findings emphasized that supply-side constraints, including efforts by health staff to divert patients to their private practice and requests for under-the-table payments, were significant barriers to access.

Through a pre-identification process, involving local authorities and a 'User Group' (or community network), 8154 poor households had so far been identified as eligible for HEF. Pre-identification and re-identification were continuing and the number of identified families was constantly in flux due to in-out migration and changing socio-economic circumstances. The SKY CBHI scheme was not limited to the squatter communities and did not target the very poor. Rather, its target groups more broadly across Phnom Penh were those with slightly more disposable income, such as motor cycle taxi drivers (or 'moto-dop'), rickshaw (or 'samlor') drivers and market vendors.

Benefits provided by the USG's HEF at the Municipal Hospital differed for level of service. For secondary-level inpatient hospital services, the benefit covered 100% of user fees, transportation costs for emergency cases, and in exceptional circumstances costs for additional food (the MH routinely provides two meals a day). Chronic diseases were covered only for acute episodes. For primary-level outpatient services only user fees were covered (though transportation costs may be covered only in exceptional, emergency cases). The SKY insurance scheme covered health-centre (primary-level) services, including health-centre patients referred to the Municipal Hospital. SKY covered only emergency hospitalization (i.e. acute episodes) for chronic diseases, and emergency surgery. Traumatology cases too complex for the Municipal Hospital were referred to Kosamak Hospital with SKY coverage. User fee revenues at the Municipal Hospital were used to provide staff incentives, but dissatisfaction among staff about the distribution of these incentives was evident.

Coverage of the schemes was still limited. Many squatter communities and other poor people living outside these areas were not yet covered by HEF or by CBHI. Many poor families had eluded pre-identification for HEF due to the high rate of in-out migration. Moreover, some families already pre-identified as poor (and other re-identified) had not received ID eligibility cards.

¹⁹ Boeungkak, Anlong Kagan, Anlong Kong, Samaki, Tonle Bassac and Bori Kila.

The rural situation:

Ang Roka was one of only two districts having four different financing schemes operating simultaneously, including user fees, Contracting (through Swiss Red Cross since October 2004), HEF (through Action for Health since March 2004) and SKY CBHI (in two pilot projects since 2000 and 2004). Respondents in Ang Roka reported the same barriers to access to health services for the poor as in Phnom Penh, except that the remoteness of many communities accentuated access problems, particularly transport and information.

Pre-identification of the poor for HEF had been initiated in Ang Roka in 2003 through the local NGO, CEDAC, before the scheme began. Patient dissatisfaction was evident when AFH subsequently took over administration of the scheme that provided benefits only at the referral hospital and not at health centres, which CEDAC had promised. Some beneficiaries consequently disposed of their HEF ID cards, and so many potential beneficiaries had been excluded. Moreover, the population had changed significantly since 2003, some becoming impoverished and other rising out of poverty. The 'false inclusion' and 'false exclusion' errors of the pre-identification were therefore likely to be significant. The lack of a community network made it difficult and challenging to implement HEF successfully. A new re-identification exercise was needed but remained an expensive activity.

As in other areas, CBHI in Ang Roka did not target the very poor. For this reason, CBHI had little direct impact on the population taken as a whole and on poor people in particular. The SKY scheme, which began in 2001, covered nine health centres and HC referrals to the Ang Roka Referral Hospital and the Takeo Provincial Hospital. The scheme had enrolled 3269 policy holders as of January 2006.

The HEF scheme managed by AFH provided a two-tier benefit structure depending on the degree of poverty of recipients: level 1 – 50% payment for user fees (up to a maximum of 5000 Riels, with no benefits for transport or food) for the not-so-poor; level 2 – 100% payment for user fees plus cost of transport from the HC to the RH and food for family assisting the patient for the very poor. The benefits mainly covered acute diseases, with only an incomplete package for chronic disease care.

SKY benefits included patient transport costs to health centres for distances beyond 15km., user fees for consultations, birth spacing, delivery, and minor operation at the HC, ambulance costs from the HC to Ang Roka Referral Hospital (up to 15km), costs of hospitalization with no limit on length of stay, costs for diagnosis and tests (lab test, x-ray, echogram), cost of medicines, and food for patients (two meals a day). For patients who died at the hospital, SKY met transportation costs and provided 5000 Riels to assist funeral expenses.

The absence of a community-based network to support HEF and other activities remained a constraint in Ang Roka and made the pre-identification process more difficult. It appeared, too, that the two-tiered HEF benefits structure may have created a sense of two service systems and fostered discrimination among the patients by health care providers.

Common rural-urban features:

The evidence suggests that, in both Phnom Penh and Ang Roka, HEF worked to increase access to health services by the poor and to reduce out-of-pocket expenses for health care (including costs of transport, food and medication). Generally, recipients greatly valued their HEF entitlement and often felt more empowered to demand better quality of service. However, a small number of recipients, especially in Ang Roka, remained confused and

doubted the benefit of their HEF entitlement, and some felt they had been discriminated against by the health providers. HEF and Contracting both worked to improve staff behaviour toward patients, to make services more responsive to the poor, and to increase the accountability of providers. HEF implementers believed they could intervene in health care delivery to ensure the accountability of the providers, though only within certain constraints. Service providers felt they were unjustly put under pressure at times when they believed the patients were at fault. Interviews confirmed that stakeholders generally regarded HEF and CBHI as complementary, serving different social groups, but also regarded CBHI as potentially more financially sustainable. In some cases CBHI proponents suggested that HEF be used to buy insurance premiums for the very poor; and in some cases it has been suggested that HEF schemes graduate to become CBHI.

Households in debt for health care:

The Phnom Penh case study revealed that the level and duration of household debt incurred to meet health-care costs is a reliable indicator of the impact of health-care costs on poverty and of relief provided through the pro-poor financing schemes. This finding was indicated by the quantitative research (with 3209 households) and was verified by qualitative interviews (with 43 households). The qualitative research also confirmed the reported household debt levels and helped clarify the distinction between recent and older debts. The evidence suggests that HEF significantly reduced the need to borrow money to meet health-care costs and reduced the impact of health costs on impoverishment.

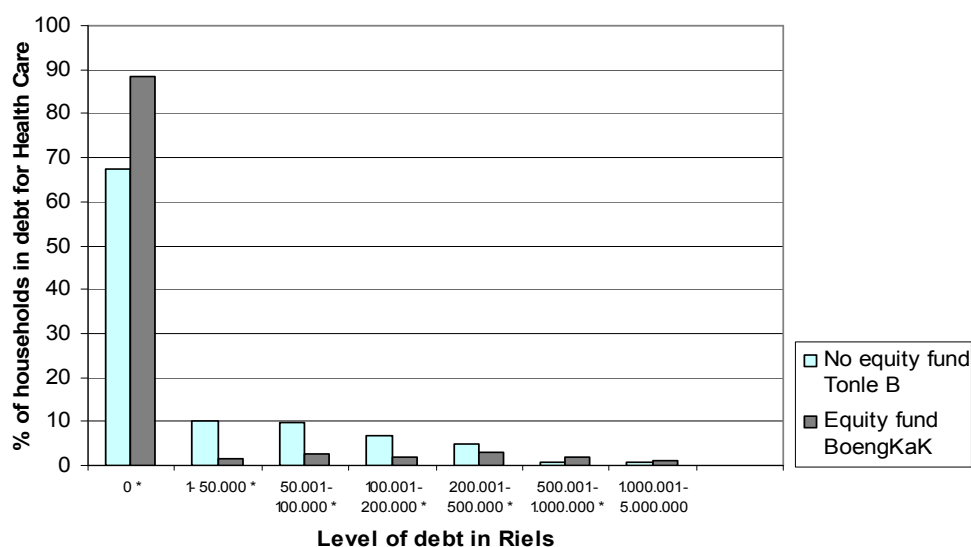
The sample for the quantitative research, taken from the 2004-2005 USG household's database, included 1704 poor households in the Boeungkak squatter community, which then had HEF coverage, and 1505 poor households in the Tonle Bassac squatter community, where HEF had not yet begun. In the USG database, households were categorized as either non-poor, medium-poor or very poor based on the data collected. The data analysed here is from medium-poor and very poor households. This sample comprised all those households from the USG database which had reported a debt related to a reported health care problem. Respondents were asked if the household had borrowed any money over the past month and, if so, how much, the identity of the lender (friend, family member or money lender), whether interest payments were required, and whether the debt was incurred to meet health care costs. The same questions were asked also in relation to longer-term debt. The data, which was used to make a direct comparison between the two areas, included information on household composition, income and expenditures, assets and debts.

As illustrated in Table 6., the proportion of sampled households with debt for health care (long- and short-term) was significantly less where HEF was implemented, in Boeungkak (17%), than where there was no HEF, in Tonle Bassac (47%). This was most pronounced for recent debt (incurred within the previous 30 days: 9% c.f. 26%) but was also true for longer-term debt. Using a logistic regression analysis and controlling for age, sex, years of schooling, and chronic disease, those living in the squatter community without HEF were 3.4 times more likely to have a recent health care debt and 2.5 times more likely to have an old debt.

Table 6. Households with recent and old debt for health care, with and without HEF.

	Households with debt:			
	with HEF (Boeungkak)		without HEF (Tonle Bassac)	
	(n=1704 poor households)	% of all households (p<0.001)	(n=1505 poor households)	% of all households (p<0.001)
Recent debt only	160	9%	394	26%
Recent + old debt	37	2%	113	8%
Old debt only	100	6%	198	13%
Total indebted HH	297	17%	705	47%

Figure 15 illustrates the distribution of households by the level of *recent debt* for health care. For all levels of debt between 1 Riel and 500,000 Riels the proportion of households with debt was lower in the HEF area than in the non-HEF area. As well, the proportion of households with zero debt was greater in the HEF area than in the non-HEF area (c.f. Table 6). These results remain after using logistic regression to adjust for differences in income levels between the two slum areas (for all levels of debt between 0 and 1,000,000 Riels the difference is statistically significant, indicated by an asterix* in Figure 16).

Figure 15. Level of recent debt for health care in Tonle Bassac and Boeungkak

Surprisingly, there was a significant and opposite effect for debt levels between above 500,000 Riels where the proportion of households was greater in the HEF-supported area. Moreover, for those households with debt, the size of the average debt per household was significantly greater in the HEF-supported area (Boeungkak: Riel 277,558) than in the non-HEF area (Tonle Bassac: Riel 248,593). The reasons for this difference are unclear, but it may be a statistical reflection of the success of the HEF in reducing the number of small loans, thus driving up the per capita average among debt holders. Analysis of this household data at an earlier stage showed that the debt profile in the HEF and the non-HEF areas differed.²⁰ In the HEF area there were few borrowers of small amounts (up to 50,000 Riels) while the majority borrowed large amounts. In the non-HEF area almost half of the households in debt had borrowed 50,000 Riels or less, while only some had borrowed more than 100,000 Riels.

²⁰ This data was collected earlier, when the number of households in the quantitative sample was much smaller (about one-third of the current sample).

The results illustrated in Figure 15 may also perhaps reflect behaviour related to prevailing interest rate conditions (see below).

The analysis suggests that equity funds positively addressed the debt-for-health-care problem. HEF appeared especially to eliminate a large proportion of smaller debts for health care but was less likely to do so for very large debt amounts. It also appeared that HEF did not adequately cover the debt problem related to ongoing care for chronic diseases.

For the analysis of data from the qualitative research with 43 households in the two squatter communities, the interviewees were stratified by level of debt (50,000 Riels, 100,000 Riels, and larger amounts) and three groups of debtors were identified: those completely ruined by the debt, those trapped by it (in poverty because they can not meet repayments), and those coping with it. It is likely that those families with only recent debt for health care had been able to pay off that debt quickly through earning extra income or economizing on expenditures; households with only an old debt were those who had most likely failed to meet their debt repayment. Onerous interest rates on borrowed money, up to 46% *per month*, are the likely cause of this inability to repay debt for health care, as debtors often must use all their resources just to meet interest payments without ever being able to repay the principal. A reasonable hypothesis, therefore, is that the level of interest rates and repayments are frequently a more important cause of impoverishment than simply the size of the debt itself.

Interest rates charged on money borrowed for health costs were in general lower in the HEF-supported area (Boeungkak 7-15% per month) than in the non-HEF area (Tonle Bassac 27-46% per month). More people living in Boeungkak reported use of the public health system than in Tonle Bassac. The people supported by HEF in Boeungkak often used private services only after unsuccessfully trying the public sector. For this reason, these people had more time and opportunity to plan their transactions with money lenders, resulting in a more favourable rate of interest. Among those with debt for health care in Tonle Bassac there was very little attempt to use public health centres or the referral hospital, though many people went directly to national hospitals. However, while interest rates were often lower in Boeungkak than in Tonle Bassac, people in Boeungkak tended consequently to borrow larger amounts as their calculation was often based on their ability to meet the cost of repayments rather than on the size of the loan. Similarly, in Tonle Bassac, where interest rates were higher, people were able to borrow only smaller amounts. The end result is a similar debt burden in each area.

In the non-HEF area, where households with both small and large debts were interviewed, the households commonly consumed about one-third of their income simply on interest payments (and perhaps a similar amount in the HEF area). Among the large group of borrowers of small amounts in this area (less than 100,000 Riel), some could cope with the debt, some were caught in a debt trap unable to meet repayments, and some were even ruined by their health costs. Similarly, in the HEF area, where there were few borrowers of small amounts and only households with large debts were interviewed, some households had been ruined by health costs, some were in a debt trap, and some were coping, all with debts greater than 100,000 Riels.

A finding of each of the case studies was the need to recognize the importance of chronic disease, both to health care needs and to household expenditures associated with health care (particularly as a cause of impoverishment). Stakeholders generally believed that the public health services were not equipped to deal with chronic diseases. In general, health facilities provided inadequate services for chronic disease patients beyond care for acute episodes and individual patient contacts or hospitalizations. In both areas, Phnom Penh and Ang Roka, there was no clear policy regarding the coverage of poor people for chronic-disease care.

Patients with chronic disease, particularly diabetes, were commonly referred to the Center of Hope in Phnom Penh (with the lottery system) or the MSF chronic diseases clinic at the Takeo Provincial Hospital, or used private providers.

The likelihood of being in debt for health care was significantly greater for people reporting a particular chronic disease such as diabetes, HIV-AIDS, heart disease or hypertension.²¹ In these cases, too, the equity fund appeared to reduce the problem of indebtedness for health care (indebtedness was lower in Boeungkak than in Tonle Bassac). In Ang Roka, there was evidence that the lack of financial coverage for patients with chronic disease may be a cause of impoverishment. Care for and coverage of chronic diseases remains uncertain. The HEF and CBHI schemes (including the SKY insurance scheme) do, though, offer cover in some cases for acute episodes of chronic disease. The study indicates that chronic disease patients are more vulnerable and more likely to slip through the safety net of financial support for the poor (HEF and CBHI).

7. Conclusions

This study set out to investigate whether the identified financing and pro-poor schemes would increase access to health services for the poor and help to prevent further impoverishment as a result of health costs. The purpose of this study was to investigate access for the poor to public health services and it did not consider the private sector. In Cambodia, the evidence indicates that public health services are underutilized while communities at the same time have extensive unmet health needs.

The findings indicate that Contracting increased utilization, reduced average health costs to users, improved service quality, made public health services more accessible, acted indirectly to benefit the poor, and was most effectively implemented in conjunction with HEF. Significantly, the planning and funding to implement HEF in all Contracting districts had already been assured.

Health Equity Funding was expanding rapidly and spontaneously indicating that it was believed to meet the real needs of the poor for access to health services. HEF had replaced the previous system of officially-sanctioned, though largely ineffective, exemptions for user fees at government facilities. HEF significantly increased utilization of facilities, targeted the poor, provided access for the poor who previously could not attend due to cost, reduced debt and interest payments for health care, reduced the impact of health costs on impoverishment, and provided a needed subsidy to facilities.

Community Based Health Insurance had, as yet, very limited coverage, but may expand more quickly in the near future. Within the MOH strategy for the introduction of Social Health Insurance, CBHI is selected to play an important pioneering role in introducing many communities to the insurance concept and will become an essential element of the wider SHI framework. In general, CBHI works to prevent the not-so-poor from falling into real poverty due to health costs, especially for catastrophic events.

More particularly, the following conclusions can be drawn from the study:

- Taken together, the Contracting, HEF and CBHI schemes covered a catchment population of approximately 5.3m. people.

²¹ Importantly, this data was not based on epidemiological records but on the perceptions of the patients themselves.

- There were 40 different health financing and pro-poor schemes (including HEF 24, SHI 5, Con 11) in 29 different ODs and 18 provinces.
- The total number of all schemes taken together will expand in the next 12-24 months to 50 and increase further, showing rapid growth and expansion.
- The total number of Provinces and ODs will not expand greatly, indicating that while the number of beneficiaries will grow, the population catchment area will not significantly increase.
- The Contracting scheme had finite coverage (limited to ODs included in the HSSP), high entry costs, and significant administrative barriers, and is unlikely to expand significantly.
- In general, Contracting works to improve the supply side of the health care equation but does not address conditions of health care demand.
- The poor may derive benefits from improved service delivery at lower user cost with Contracting, but the scheme does not target the poor.
- HEF had spread spontaneously and rapidly.
- HEF operated alone (without Contracting or CBHI) in more than half of all identified ODs (that is, in 15 out of 29 ODs), indicating that it was the main means for providing health care access for the poor.
- HEF worked to reduce poverty due to health care costs.
- For those incurring debt for health care, HEF provided the opportunity to reduce onerous interest rates by providing the time to 'shop around'.
- Provision of HEF was low cost and required a low capital investment with few barriers to entry.
- There is a clear need to develop and expand HEF systems and to strengthen management practices.
- CBHI had more limited coverage and was expanding more slowly (with an enrolment of 17,000 policy holders across all programs).
- CBHI operated, and will continue to operate under current plans, only in locations that included HEF, with the exception of Roulos HC in Kandal Province.
- While CBHI needs to be developed and the coverage extended, HEF will be required at least for 5-10 years before CBHI or SHI can provide adequate coverage.
- There is a common view that CBHI and HEF schemes should develop in parallel.
- Sustainability of the HEF schemes will require ongoing financial commitment by donors and international agencies.

The analysis has been as complete and as accurate as the data allows. Health providers, non-government organizations and donors in Cambodia met recently to agree upon simple reporting procedures (particularly for HEF schemes) that will improve the completeness, consistency and accuracy of routine data collection. With more reliable data the sort of analysis that has been conducted here can be made more complete and more rigorous. Moreover, the methodology here has used intermediate indicators to determine questions of population access and coverage, questions that can be ultimately determined only by direct population surveys. For these reasons the conclusions presented here must be treated with care. Even so, the results can be treated with the confidence that they have identified a number of trends and many issues that provide a firm basis for further applied research.

The questions listed on page 10 of this report remain relevant and require further investigation. This report has laid the basis for further research by identifying the main hypothesis, that HEF and other schemes improve access to health services for the poor. This hypothesis now needs to be tested by reference to more complete and more reliable data. The

most effective means to collect this data and provide answers to these questions is by sample population surveys that reveal how the poor themselves receive these schemes. There are, however, a number of different ways to continue this investigation, and some are listed here. The following are alternative approaches to further research, listed in order of priority from the most likely to produce significant results to those that may make less of a contribution to improving our knowledge:

- Population coverage and access to health services: Carry out random-sample population surveys in selected health districts to determine, directly, the levels of coverage of the pro-poor schemes, their appropriateness and acceptability, and levels of access to health services by the poor.
- Access to health services for the poor: Further quantitative analysis of health facility utilization and revenues, with aggregation of data across health districts, based on the development and strengthening of the quantitative database through the improved routine data collection methods currently being planned.
- Costs and benefits of the pro-poor schemes: Assessment and documentation of the common and comparative costs of providing HEF, CBHI and Contracting to determine efficiency and effectiveness.
- Lessons learned from existing practice: New case study research in health districts where significant progress on improving coverage for the poor has been achieved, or where particular experiences warrant further investigation.
- Best practice implementation of pro-poor schemes: Conducting extensive key informant interviews to determine the general experience, validity, and best-practice approaches to the implementation of pro-poor health financing schemes.

The study looked at three models: Contracting, Health Equity Funding and Community Based Health Insurance. Cambodia provides a unique example where both this form of Contracting for health services delivery and the HEF model were pioneered. All schemes successfully addressed different barriers to access to health services to some extent but could not, even taken together, overcome all barriers. The analysis indicates that HEF is the most effective scheme for providing increased health coverage for the poor and for the alleviation of poverty. It is likely that these schemes will, over time, develop into more complete and more robust means for alleviation of poverty due to health costs involving targeting of the poor within a broader framework of social health insurance coverage.

References

- Akashi, H., T. Yamada, et al. (2004). "User fees at a public hospital in Cambodia: Effects on hospital performance and provider attitude." *Social Science and Medicine* **58**(3): 553-564.
- Barber, S., F. Bonnet, et al. (2004). "Formalizing under-the-table payments to control out-of-pocket hospital expenditures in Cambodia." *Health Policy and Planning* **19**(4): 199-208.
- Bautista, M. (2003). *Health Financing Schemes in Cambodia: Reaching the Poor with Quality Health Services*. Phnom Penh, University Research Co.
- Bhushan, I., S. Keller, et al. (2002). *Achieving the Twin Objectives of Efficiency and Equity: Contracting Health Services in Cambodia*. Manila, Asian Development Bank, Economics and Research Department.
- Bitran, R. (2002). *Protecting the poor under cost recovery for health care in Cambodia*, World Bank.
- Bitran, R., V. with Turbot, et al. (c. 2003). *Preserving Equity in Health In Cambodia: Health Equity Funds and Prospects for Replication*.
www.worldbank.org/wbi/healthandpopulation/oj_bitran.pdf.
- Chettra (2003). *Existing Health Financing Schemes in Cambodia - Lessons Learned and Perspectives*. Phnom Penh, University Research Co.
- Dalton, A. and S. Peacock (2005). *Study of the Link Between Health and Poverty: Technical Report*. Phnom Penh, World Health Organization.
- Espinosa, C. and R. Bitran (2000). *Health Financing Report: Draft report of a World Bank Identification Mission to Cambodia*.
- Fabricant, S. (2003). *Secondary Analysis of CDHS 2000: Selected Variables Disaggregated by Wealth Ranking, Urban/Rural Differentials. Final Draft Report to WHO/Cambodia under DFID Contract Number DCP/SEA/02-18*. Phnom Penh.
- Fabricant, S. (2006). *Millennium Development Goals and Poverty Reduction Strategy: Estimating Costs of Increased Utilisation of Health Services by the Poor in Cambodia, Final Draft*. Phnom Penh, WHO.
- Hardeman, W. (2001). *Considering equity in health sector reform: Case study of a New Deal in Sotnikum, Cambodia*. The Hague, Institute of Social Studies.
- Hardeman, W., W. Van Damme, et al. (2004). "Access to health care for all? User fees plus a Health Equity Fund in Sotnikum, Cambodia." *Health Policy and Planning* **19**(1): 22-32.
- Ir Por and W. Hardeman (2003). *Health Equity Funds: Improving access to health care for the poor - MSF's experience in Cambodia*. Phnom Penh, Médecins sans Frontières.
- Jacobs, B. and N. Price (2003). "Community participation in externally funded health projects: lessons from Cambodia." *Health Policy and Planning* **18**(4): 399-410.

Jacobs, B. and N. Price (2004). "The impact of the introduction of user fees at a district hospital in Cambodia." Health Policy and Planning **19**(5): 310-321.

Jacobs, B. and N. Price (2005). "Improving access for the poorest to public sector health services: insights from Kirivong Operational Health District in Cambodia." Health Policy and Planning (in press).

Keller, S. and J. B. Schwartz (2001). Final Evaluation Report: Contracting for Health Services Pilot Project (CHSPP), A Component of the Basic Health Services Project. Phnom Penh, Asian Development Bank.

Knowles, J. (2001). An Economic Evaluation of the Health Care for the Poor Component of the Phnom Penh Urban Health Project. Phnom Penh.

Knowles, J. (2004). The Poverty Reduction Impact of Cambodia's Health Programme. Phnom Penh, Oxford Policy Management, UK Department for International Development.

Loevinson, B. (undated). Contracting for the Delivery of Primary Health Care in Cambodia: Design and Initial Experience of Large Pilot-Test. Washington DC, World Bank.

Meesen, B. and Ir Por (2003). Decentralisation of Health Equity Fund in Sotnikum district: Assessment of the pilot schemes in Kvav and Samrong health centres. Phnom Penh, Médecins Sans Frontières Belgium.

Meesen, B., W. Van Damme, et al. (2002). The New Deal in Cambodia: The Second Year, Confirmed Results, Confirmed Challenges. Phnom Penh, Médecins Sans Frontières and UNICEF.

Ministry of Health (2005). Launching of the Social Health Insurance Master Plan for Cambodia. Phnom Penh.

Ministry of Planning (2001). Cambodia Human Development Report. Phnom Penh, Kingdom of Cambodia.

NIS (2000). Cambodia Demographic and Health Survey 2000. Phnom Penh, National Institute of Statistics, Ministry of Planning.

Noirhomme, M. (2005). Panorama of four Health Equity Funds in Cambodia: Review of the experiences, main lessons and perspectives, Draft for discussion, Prince Leopold Institute of Tropical Medicine.

Noirhomme, M. (2005). Proposal for Harmonization of Health Equity Funds in Siem Reap, Otdar Meanchey and Sotnikum Referral Hospitals. Phnom Penh, Belgian Technical Cooperation, Prince Leopold Institute of Tropical Medicine.

NPHRI (1998). The Demand for Health Care in Cambodia: Concepts for future research. Phnom Penh, National Public Health and Research Institute in collaboration with WHO and GTZ.

Overtoom, R. (2003). Report on the Possibilities for Equity Funds - Chhlong RH, Pursat PH, Mong Russey RH, Mongkol Borei PH. Phnom Penh, University Research Co.

Schwartz, B. and I. Bhushan (2004). "Improving immunization equity through a public-private partnership in Cambodia." Bulletin of the World Health Organisation **82**(9, September): 661-667.

Soeters, R. and F. Griffiths (2003). "Improving government health services through contract management: a case from Cambodia." Health Policy and Planning **18**(1): 74-83.

Van Damme, W., B. Meesen, et al. (2001). *Sotnikum New Deal: The first year*. Phnom Penh, Médecins Sans Frontières.

Van Damme, W., L. van Leemput, et al. (2004). "Out-of-Pocket Health Expenditure and Debt in Poor Households: Evidence from Cambodia." Tropical Medicine International Health **9**(2): 273-280.

van Pelt, M. and Bun Mao (2004). *A Contextual Evaluation of the Urban Sector Group Equity Fund*. Phnom Penh, University Research Co., The Health Systems Strengthening in Cambodia (HSSC) Project, U.S. Agency for International Development.

WHO (2003). *Social Health Insurance in Cambodia: Proposal for a Master Plan*. Phnom Penh, World Health Organisation.

Wilkinson, D. (2001). *Promotion of appropriate health service utilization in Cambodia*, Phnom Penh, MOH/WHO, Health Sector Reform Phase III Project.

Wilkinson, D., Holloway, J., and Fallavier, P. (2001). *The Impact of User Fees on Access, Equity and Health Provider Practices in Cambodia*. Phnom Penh, MOH/WHO Health Sector Reform Phase III Project.

World Bank (1999). *Cambodia Poverty Assessment*. New York, World Bank.

Annex 1. Number and distribution of schemes in the Access Study by Province and Operational District (incl. MOH)

# of Prov	Province	# of ODs	Operational District	All schemes					All Provinces				All ODs					
				Total	HEF	CBHI	Con	MOH	HEF	CBHI	Con	MOH	HEF	CBHI	Con	MOH		
1	Banteay Meanchey	1	Mongkul Borei	1	1					1				1				
	Banteay Meanchey	2	Thmar Pouk	2	1	1					1			1	1			
2	Battambang	3	Moung Russei	1	1					1				1				
	Battambang	4	Battambang	1				1				1						1
3	Kampong Cham	5	Chamkar Leu/ Stung Treng	1	1					1				1				
	Kampong Cham	6	Cheung Prey/ Batheay	1	1									1				
	Kampong Cham	7	Prey Chhour	1	1									1				
	Kampong Cham	8	Kampong Cham PH	1	1									1				
	Kampong Cham	9	Memut	1			1					1					1	
	Kampong Cham	10	Ponhea Krek	1			1										1	
4	Kampong Thom	11	Kampong Thom	1				1				1						1
5	Kampot	12	Kampot	1				1					1					1
6	Kandal	13	Roulos HC	1		1					1				1			
7	Koh Kong	14	Smach Meanchey	1			1					1					1	
	Koh Kong	15	Sre Ambel	1			1										1	
8	Kratie	16	Chhlong	1	1					1				1				
9	Monduliri	17	Sen Monorom	2	1		1			1		1		1			1	
10	Otdar Meanchey	18	Samrong	1	1					1				1				
11	Pailin	19	Pailin	1				1					1					1
12	Phnom Penh	20	Municipality	2	1	1				1	1			1	1			
13	Preah Vihear	21	Thbeng Meanchey	1			1					1					1	
14	Prey Veng	22	Peareang	2	1		1			1		1		1			1	
	Prey Veng	23	Preah Sdach	2	1		1							1			1	
15	Pursat	24	Sampeov Meas	1	1					1				1				
	Pursat	25	Bakan	1				1										
16	Rattanakiri	26	Rattanakiri	2	1		1			1		1	1	1			1	1
17	Siem Reap	27	Siem Reap PH	1	1					1				1				
	Siem Reap	28	Sotnikum	1	1									1				
18	Stung Treng	29	Stung Treng	1	1					1				1				
19	Svay Rieng	30	Svay Rieng PH	1	1					1				1				
20	Takeo	31	Ang Roka	3	1	1	1			1	1	1		1	1	1		
	Takeo	32	Takeo PH (Daun Keo)	1	1									1				
	Takeo	33	Kirivong	4	2	1	1							1	1	1		
20	TOTAL	33		44	23	5	11	5		14	4	7	5	22	5	11	5	

Annex 2. International and Local NGO agencies by type of scheme and location

A. International NGOs

INGO	LNGO	Donor	Type	Province	Operational District	Facility
Belgian Technical Cooperation	Action for Health	BTC	HEF	Kampong Cham	Chamkar Leu/ Stung Treng	Referral Hospital
Belgian Technical Cooperation	Action for Health	BTC	HEF	Kampong Cham	Cheung Prey/ Batheay	Referral Hospital
Belgian Technical Cooperation	Action for Health	BTC	HEF	Kampong Cham	KC Provincial Hospital	Provincial Hospital
Belgian Technical Cooperation	Action for Health	BTC	HEF	Kampong Cham	Prey Chhour	Referral Hospital
Belgian Technical Cooperation	CAAFW	BTC	HEF	Otdar Meanchey	Samrong	PH and HC
Belgian Technical Cooperation	CFDS	BTC	HEF	Siem Reap	Sotnikum	RH and HC
Belgian Technical Cooperation	CHHRA	BTC	HEF	Siem Reap	Siem Reap PH	Provincial Hospital
CARE Cambodia		HSSP	Con	Koh Kong	Smach Meanchey	RH and HC
CARE Cambodia		HSSP	Con	Koh Kong	Sre Ambel	RH and HC
GTZ German Technical Cooperation	Action for Health	GTZ	HEF	Kampong Thom	Kampong Thom	Referral Hospital
Health Net International		HSSP	Con	Rattanakiri	Rattanakiri	RH and HC
Health Net International		HSSP	Con	Mondulkiri	Sen Monorom	RH and HC
Health Net International		HSSP	Con	Prey Veng	Peareang	RH and HC
Health Net International		HSSP	Con	Prey Veng	Preah Sdach	RH and HC
Health Net International	Action for Health	HNI	HEF	Prey Veng	Peareang	Referral Hospital
Health Net International	Action for Health	HNI	HEF	Prey Veng	Preah Sdach	Referral Hospital
Health Net International	Action for Health	HSSP	HEF	Rattanakiri	Rattanakiri	Provincial Hospital
Health Net International	Action for Health	EU	HEF	Takeo	Ang Roka	Referral Hospital
Health Net International	Buddhists for Health	EU	HEF	Takeo	Kirivong	Referral Hospital
Health Net International	CFDS	HSSP	HEF	Mondulkiri	Sen Monorom	Provincial Hospital
Health Unlimited		HSSP	Con	Preah Vihear	Thbeng Meanchey	RH and HC
Save the Children Australia		HSSP	Con	Kampong Cham	Memut	RH and HC
Save the Children Australia		HSSP	Con	Kampong Cham	Ponhea Krek	RH and HC
Swiss Red Cross		HSSP/SRC	Con	Takeo	Ang Roka	RH and HC
Swiss Red Cross		HSSP/SRC	Con	Takeo	Kirivong	RH and HC
Swiss Red Cross	CFDS	Swiss Red Cross	HEF	Takeo	Takeo PH (Daun Keo)	Provincial Hospital
Swiss Red Cross (formerly EED)	Pagoda funds	Canada	HEF	Takeo	Kirivong	Health Centres
UNICEF	EFS Committee	UNICEF	HEF	Svay Rieng	Svay Rieng PH	Provincial Hospital
University Research Company	Action for Health	USAID	HEF	Battambang	Moung Russei	Referral Hospital
University Research Company	Action for Health	USAID	HEF	Kratie	Chhlong	Referral Hospital
University Research Company	CFDS	USAID	HEF	Banteay Meanchey	Mongkul Borei	Provincial Hospital
University Research Company	CFDS	USAID	HEF	Pursat	Sampeov Meas	Provincial Hospital
University Research Company	Urban Sector Group	USAID	HEF	Phnom Penh	Municipality	Municipal RH
UK Volunteer Services Overseas	Provincial Hospital	VSO	HEF	Stung Treng	Stung Treng	Provincial Hospital

GRET		GRET (AFD from 2007)	SHI	Kandal	Rolous HC	HC Roulos only
GRET		GTZ (AFD from 2007)	SHI	Phnom Penh	Municipal RH	RH/HC Municipal RH
GRET		FMFA (AFD from 2007)	SHI	Takeo	Ang Roka	RH and HC
GRET		FMFA (AFD from 2007)	SHI	Takeo	Kirivong/Prey Rumdeng HC	RH and HC

B. Local NGOs

LNGO	INGO	Donor	Type	Province	Operational District	Facility
Action for Health	Belgian Technical Cooperation	BTC	HEF	Kampong Cham	Chamkar Leu/ Stung Treng	Referral Hospital
Action for Health	Belgian Technical Cooperation	BTC	HEF	Kampong Cham	Cheung Prey/ Batheay	Referral Hospital
Action for Health	Belgian Technical Cooperation	BTC	HEF	Kampong Cham	KC Provincial Hospital	Provincial Hospital
Action for Health	Belgian Technical Cooperation	BTC	HEF	Kampong Cham	Prey Chhour	Referral Hospital
Action for Health	GTZ German Technical Cooperation	GTZ	HEF	Kampong Thom	Kampong Thom	Referral Hospital
Action for Health	Health Net International	HNI	HEF	Prey Veng	Peareang	Referral Hospital
Action for Health	Health Net International	HNI	HEF	Prey Veng	Preah Sdach	Referral Hospital
Action for Health	Health Net International	HSSP	HEF	Rattanakiri	Rattanakiri	Provincial Hospital
Action for Health	Health Net International	EU	HEF	Takeo	Ang Roka	Referral Hospital
Action for Health	University Research Company	USAID	HEF	Battambang	Moung Russei	Referral Hospital
Action for Health	University Research Company	USAID	HEF	Kratie	Chhlong	Referral Hospital
Buddhists for Health	Health Net International	EU	HEF	Takeo	Kirivong	Referral Hospital
CAAFW	Belgian Technical Cooperation	BTC	HEF	Otdar Meanchey	Samrong	PH and HC
CAAFW	..	..	CBHI	Otdar Meanchey	Thmar Pouk	RH and HC
CFDS	Belgian Technical Cooperation	BTC	HEF	Siem Reap	Sotnikum	RH and HC
CFDS	Health Net International	HSSP	HEF	Mondulkiri	Sen Monorom	Provincial Hospital
CFDS	Swiss Red Cross	Swiss Red Cross	HEF	Takeo	Takeo PH (Daun Keo)	Provincial Hospital
CFDS	University Research Company	USAID	HEF	Banteay Meanchey	Mongkul Borei	Provincial Hospital
CFDS	University Research Company	USAID	HEF	Pursat	Sampeov Meas	Provincial Hospital
CHHRA	Belgian Technical Cooperation	BTC	HEF	Siem Reap	Siem Reap PH	Provincial Hospital
EFS Committee	UNICEF	UNICEF	HEF	Svay Rieng	Svay Rieng PH	Provincial Hospital
Provincial Hospital	UK Volunteer Services Overseas	VSO	HEF	Stung Treng	Stung Treng	Provincial Hospital
Pagoda Funds	Swiss Red Cross (formerly EED)	Canada (CIDA??)	HEF	Takeo	Kirivong	Health Centres
Urban Sector Group	University Research Company	USAID	HEF	Phnom Penh	Municipality	Municipal RH

Abbreviations:

CAAFW	Cambodian Association for Assistance to Families and Widows	EFS	Equity Fund Steering committee
CFDS	Cambodian Family Development Services	EU	European Union
CHHRA	Cambodian Health and Human Rights Alliance	GRET	Groupe de Recherche et d'Echanges Technologiques
CIDA	Canadian International Development Agency	HSSP	Health Sector Support Project, funded by the ADB, WB and DFID

Annex 3. Distribution of schemes by type, location and agencies – January 2006

Type	Province	OD	Facility	Donor	INGO	LNGO
Current schemes in operation:						
Contracting	Kampong Cham	Memut	Referral Hospital	HSSP	Save the Children Australia	
Contracting	Kampong Cham	Ponhea Krek	Referral Hospital	HSSP	Save the Children Australia	
Contracting	Koh Kong	Smach Meanchey	Referral Hospital	HSSP	CARE Cambodia	
Contracting	Koh Kong	Sre Ambel	Referral Hospital	HSSP	CARE Cambodia	
Contracting	Preah Vihear	Thbeng Meanchey	RH and HC	HSSP	Health Unlimited	
Contracting	Mondulkiri	Sen Monorom	RH and HC	HSSP	Health Net International	
Contracting	Prey Veng	Peareang	RH and HC	HSSP	Health Net International	
Contracting	Prey Veng	Preah Sdach	RH and HC	HSSP	Health Net International	
Contracting	Rattanakiri	Banlung	RH and HC	HSSP	Health Net International	
Contracting	Takeo	Ang Roka	RH and HC	HSSP	Swiss Red Cross	
Contracting	Takeo	Kirivong	RH and HC	HSSP	Swiss Red Cross	
HEF	Banteay Meanchey	Mongkul Borei	Provincial Hospital	USAID	University Research Company	CFDS
HEF	Banteay Meanchey	Thmar Pouk	RH and HC	EU/Canadian IDA	Health Net International	CAAFW
HEF	Battambang	Moung Russei	Referral Hospital	USAID	University Research Company	AFH
HEF	Kampong Cham	Chamkar Leu	Referral Hospital	BTC	Belgian Technical Cooperation	AFH
HEF	Kampong Cham	Cheung Prey	Referral Hospital	BTC	Belgian Technical Cooperation	AFH
HEF	Kampong Cham	Kampong Cham	Provincial Hospital	BTC	Belgian Technical Cooperation	AFH
HEF	Kampong Cham	Prey Chhour	Referral Hospital	BTC	Belgian Technical Cooperation	AFH
HEF	Kampong Thom	Kampong Thom	Referral Hospital	HSSP	German Technical Cooperation	AFH
HEF	Kratie	Chhlong	Referral Hospital	USAID	University Research Company	AFH
HEF	Mondulkiri	Sen Monorom	PH and HC	HSSP	Health Net International	CFDS
HEF	Otdar Meanchey	Samrong	PH and HC	BTC	Belgian Technical Cooperation	CAAFW
HEF	Phnom Penh	Municipality	Municipal RH	USAID	University Research Company	USG
HEF	Prey Veng	Peareang	RH and HC	HSSP	Health Net International	AFH
HEF	Prey Veng	Preah Sdach	Referral Hospital	HSSP	Health Net International	AFH
HEF	Pursat	Sampeov Meas	Provincial Hospital	USAID	University Research Company	CFDS
HEF	Rattanakiri	Banlung	Provincial Hospital	HSSP	Health Net International	AFH
HEF	Siem Reap	Siem Reap PH	Provincial Hospital	BTC	Belgian Technical Cooperation	CHHRA

Type	Province	OD	Facility	Donor	INGO	LNGO
HEF	Siem Reap	Sotnikum	RH and HC	BTC	Belgian Technical Cooperation	CFDS
HEF	Stung Treng	Stung Treng	Provincial Hospital	VSO	Volunteer Services Overseas	Hospital
HEF	Svay Rieng	Svay Rieng PH	Provincial Hospital	UNICEF	UNICEF	Hospital EFSC
HEF	Takeo	Ang Roka	Referral Hospital	EU	Health Net International	AFH
HEF	Takeo	Kirivong	Referral Hospital	EU	Health Net International	BFH
HEF	Takeo	Kirivong	Health Centres	SRC	Swiss Red Cross	Pagoda funds
HEF	Takeo	Takeo PH (Daun Keo)	Provincial Hospital	SRC	Swiss Red Cross	CFDS
CBHI	Kandal	Rolous HC	HC Rolous	GRET (and AFD 2007)	GRET	
CBHI	Phnom Penh	Municipality	SKY HC and Municipal RH	GTZ (and AFD 2007)	GRET	
CBHI	Takeo	Ang Roka	RH and HC	FMFA (and AFD 2007)	GRET	
CBHI	Takeo	Kirivong	HC Prem Rumdeng	FMFA (and AFD 2007)	GRET	
CBHI	Banteay Meanchey	Thmar Pouk	RH and HC	..	..	CAAFW
Proposed additional schemes to be implemented:						
HEF	Banteay Meanchey	Thmar Pouk	Proposed scheme HC			CAAFW
HEF	Kampong Cham	Memut	Proposed scheme RH	HSSP	Save the Children Australia	
HEF	Kampong Cham	Ponhea Krek	Proposed scheme RH	HSSP	Save the Children Australia	
HEF	Koh Kong	Smach Meanchey	Proposed scheme RH	HSSP	CARE Cambodia	
HEF	Koh Kong	Sre Ambel	Proposed scheme RH	HSSP	CARE Cambodia	
HEF	Preah Vihear	Thbeng Meanchey	Proposed scheme RH	HSSP	Health Unlimited	
CBHI	Kampong Thom	Kampong Thom	Proposed scheme RH	GTZ	GRET	
CBHI	Phnom Penh	Municipality	Proposed scheme RH			NYEMO
CBHI	Prey Veng	Peareang	Proposed scheme RH			AFH
CBHI	Prey Veng	Preah Sdach	Proposed scheme RH			AFH
CBHI	Pursat	Pursat	Proposed scheme RH	USAID		RACHA
CBHI	Takeo	Kirivong AD	Proposed scheme RH	SRC	Swiss Red Cross	BFH
CBHI	Takeo	Takeo province	Proposed: RH, PH	AFD	GRET	