A comprehensive review of the literature on health equity funds in Cambodia 2001-2010 and annotated bibliography

Peter Annear
Nossal Institute for Global Health, The University of Melbourne

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A comprehensive review of the literature on health equity funds in Cambodia 2001-2010 and annotated bibliography.

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Corresponding author: Peter Annear
Address: The Nossal Institute for Global Health, University of Melbourne, pannear@unimelb.edu.au

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A NOTE ON THE SPELLING OF CAMBODIAN PLACE NAMES
There are a number of different systems for transliterating Khmer words into English orthography. In this publication, place names in the title of publications are reproduced as in the original. In all other cases, the spelling is based on a modified version of the database of provincial, district, commune and village names compiled by the Cambodian government’s.
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ABBREVIATIONS

AFD  Agence Française de Développement
AFH  Action for Health
ANC  Antenatal care
AusAID  Australian Agency for International Development
BOR  Bed occupancy rate
BTC  Belgian Technical Cooperation
CAAFW  Cambodian Association for Assistance to Families and Widows
CAS  Centre for Advanced Studies, Phnom Penh
CBHI  Community-based health insurance
CFDS  Cambodian Family Development Services
CPA  Complementary package of activities
DOTS  Directly Observed Treatment Short course (for TB)
FGD  Focus group discussions
GTZ  Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)
GRET  Groupe de Recherche et d’Échanges Technologiques (SKY manager)
HEF  Health equity fund
HEFI  Health equity fund implementer
HEFO  Health equity fund operator
HC  Health centre
HIS  Health Information System (MOH)
HSSP  Health Sector Support Project
ID  Identification
IPD  In-patient department
MCH  Mother and child health
MH  Municipal hospital (Phnom Penh)
MOH  Ministry of Health
MPA  Minimum Package of Activities
MSF  Médecins Sans Frontières
NGO  Non-government organisation
OOP  Out of pocket
OPD  Out-patient department
OD  Operational district
PHD  Provincial Health Department (MOH)
PH  Provincial hospital
RH  Referral hospital
SES  Socio-economic status
SHP  Social health protection
SKY  Health for Our Families (phonetic for Khmer translation)
SRC  Swiss Red Cross
SUBO  Subsidy operator (MOH)
URC  University Research Company
UNFPA  United Nations Fund for Population
UNICEF  United Nations Children’s Fund
USG  Urban Sector Group
VSO  Volunteer Services Overseas
WHO  World Health Organization
SUMMARY

During the last decade, a significant body of evidence has been produced regarding the design, implementation and effectiveness of health equity funds (HEFs) in Cambodia. This paper reviews the published and grey literature on the effectiveness and operation of HEFs. The purpose is to provide an evidence base to inform the ongoing national policy dialogue in Cambodia about the scaling up of HEFs for national coverage and to identify priorities for further research. The paper discusses only what has been established in the literature; it does not attempt to comment on other issues, practices and policies that may be current and important but for which there is no documented evidence.

Health equity funds are autonomous, district-based schemes that reimburse health facilities for the cost of user-fee exemptions at public health facilities provided to the identified poor and which also subsidise the poor for the costs of transport and food required during health-seeking episodes. HEFs originated in Cambodia in the years after 2000, and by the end of the decade provided coverage for the poor population in more than half of the country’s health districts.

Health equity funds appear in a variety of forms but are generally implemented under guidelines provided by the Ministry of Health, with donor support and some government funding. Most HEFs have been implemented through local and international NGOs as third-party schemes purchasing health services from district health facilities and national hospitals on behalf of the poor. The MOH also funds fee exemptions for the poor in a number of districts and hospitals. While the various HEFs fall into different groups according to funding and management arrangements, there are common design features, characteristics and implementation arrangements.

It has been shown that Cambodia’s national health program contributes indirectly to poverty reduction. Studies have shown that, depending on the quality of facility management, the introduction of authorised user fees in Cambodia could help to control under-the-table charges, improve staff incentives, reduce out-of-pocket payments at the point of service, improve accountability and quality of service and raise facility utilisation levels. However, user fees have also deterred poor and vulnerable patients from seeking care (particularly at referral hospitals). Health equity funds are funded fee-exemption schemes designed to help the poor overcome these financial barriers.

The Comprehensive review draws on an Annotated bibliography of health equity funds in Cambodia 2001-2010, comprising 92 titles relevant to HEFs, presented here as an annex. The bibliography, which is confined to titles on Cambodia, was compiled by the author over a period of ten years working on research related to HEFs since their inception in Cambodia. The bibliography was then presented to 25 key informants involved in the design, implementation, monitoring and analysis of HEFs for their consideration and addition. The list was verified also by a search of the PubMed electronic database of titles. Subsequently, the extended list was verified by circulation among agencies providing technical support to HEF implementation in collaboration with the Ministry of Health and was presented for final verification to a meeting of donor partners and key stakeholders on 21 January 2010 (including MOH officials and representatives of non-government and other international organisations).

The Annotated bibliography is sorted alphabetically for ease of reference. It summarises the main findings of each article or report against the headings: purpose of the research, type of data used, methods of data collection, main findings and conclusions. The Comprehensive review assesses the contribution of each cited article or report to the evidence base on HEFs. In the Comprehensive review, these data are reported under thematic sections: social health protection, output and operational indicators, key aspects of HEF design and implementation environment. These sections are in turn sorted into those areas where strong evidence on aspects of HEF management and effectiveness is available, those where the evidence is suggestive but not confirmed and areas where there is little evidence available.

The results of the review address key questions related to HEFs, including utilisation of health services by the poor, impoverishment and indebtedness, quality of health services, functioning of the referral system, content of the benefit package, implementation arrangements (HEFO, SUBO, local committee etc), third-party monitoring, complementarities with other demand-side financing schemes, expanding coverage to health centres, identification of poor households and institutional constraints on scaling up HEFs.
Main Findings of the Review

On social health protection:

- Targeting of the poor is accurate and cost-effective.
- Coverage of the poor is extensive but not complete.
- Health equity funds
  - provide access to public health facilities for the poor.
  - are an effective form of financial protection for health.
  - reduce financial barriers to access.
  - increase utilisation of public health services, especially by the poor.
  - correct the underutilisation of facilities.
- Gender issues have not been well addressed in past research.

On output and operational indicators:

- There is little direct evidence on the impact of HEFs on household health expenditures.
- The evidence that HEFs reduce impoverishment due to health costs is strong but incomplete.
- There is no evidence about common financial behaviours within a subsistence economy where cash is rarely held by households.
- Little evidence is available on the impact of HEFs on household health status, wealth status and economic benefits.
- Health equity funds
  - reduce but do not eliminate debt for health care.
  - improve quality of care for the poor, but the evidence is mixed.
  - are a significant source of additional revenue to health facilities.
- The evidence shows improved staff incentives and better attitudes towards the poor.
- There is little direct research on staff attitudinal changes resulting from HEFs.
- HEF patients appear satisfied with services, but the evidence on changed health care-seeking behaviours is limited.
- The impact of HEFs on the referral system is not well understood.
On design of HEFs:
- The key elements of HEF design are well established; other design features less so.
- Little attention has been given to demographic changes.
- There is little research on the effect of changes in demographic or poverty status.
- Well-functioning health services are a prerequisite for HEFs.
- The evidence for scaling up HEF is strong, but analysis and policy development are inadequate.
- The benefits of third-party status are in contention.
- There is no evidence on the means to further HEF efficiencies.
- Pre-identification is the most effective and the most cost-effective form of poverty targeting.
- Post-identification addresses exclusion errors from pre-identification.
- A common benefits package has not been agreed but is viable.
- None of the literature discusses the relative merits of different payment mechanisms.

On implementation:
- Contextual factors are well known; institutional factors are less well understood.
- HEF coverage of health centres encourages good health-seeking behaviours.
- Contracting is a form of management strengthening and supply-side subsidy.
- There is no evidence base to support linkage between HEFs and CBHI.
- Prospects for CBHI expansion are very limited.
- Scaling up HEF schemes for national coverage is feasible, with common implementation arrangements, monitoring and oversight.
INTRODUCTION AND CONTEXT

This paper reviews the published and grey literature on the effectiveness and operation of health equity funds (HEFs) in Cambodia. The report was first presented to a national HEF forum organised by the Ministry of Health and donor partners in Phnom Penh in March 2010. The literature reviewed here includes peer-reviewed journal articles and book chapters, project proposals and reports, evaluations and other survey reports, discussions and situation analyses of various kinds. The purpose of this review is to provide an evidence base to inform the ongoing national policy dialogue about the scaling up of HEFs for national coverage and to identify priorities for further research.

Health equity funds emerged in 2000 in response to the need to fund exemptions for the poor. Unfunded official exemptions introduced at public health facilities along with user fees in 1996 had been shown not to protect the poor adequately, and user fees were known to be a barrier to access, at least to hospitals. By 2008, HEFs covered (geographically) more than half of the national target population of those living below the official poverty line. A number of studies have established that HEFs have contributed to increased access to public health services by the poor and increased revenue for health facilities. But this rapid development has been fragmented: HEFs are currently funded by eight different donors and the MOH and operated by a number of local non-government organisations (NGOs). A few international agencies, particularly the University Research Company (URC) and Belgian Technical Cooperation (BTC), play a key role as HEF implementers managing and monitoring a cluster of HEF operators (usually local NGOs).

It has been shown that Cambodia’s national health program contributes indirectly to poverty reduction (Knowles 2001). Even so, the gains in improved health status have not been equally distributed. Growing inequality in income distribution is reflected in differential childhood mortality rates, and there are significant rural-urban disparities in improved health status (Annear and Lo 2008).

Notably, the poor face numerous supply-side and demand-side barriers to health care, including physical and financial barriers, quality of service issues, poor user knowledge and socio-cultural barriers (Annear, Wilkinson et al 2006). Financial barriers in particular prevent a large section of the population from accessing essential health services (Lane 2007).

Despite the apparent success of HEFs in funding fee exemptions, the maintenance of user fee schemes remains controversial. In a Lancet exchange, Meessen, Van Damme et al compared the favourable outcomes of both user-fee abolition in Uganda and the impact of HEFs in Cambodia. Others argued that, while context-specific solutions may be attainable, international experience had shown the negative effect of user fees on utilisation of services, and even funded exemption systems begged the question of who would pay for those unable to afford the fees (Brikci and Philips 2006; Meessen, Van Damme et al 2006).

Studies have shown that, depending on the quality of facility management, the introduction of authorised user fees in Cambodia could help to control under-the-table charges, improve staff incentives, reduce out-of-pocket payments at the point of service, improve accountability and quality of service and raise facility utilisation levels (Wilkinson, Holloway et al 2001; Barber, Bonnet et al 2004; Hardeman, Van Damme et al 2004; Jacobs and Price 2004; Jacobs, Thomé et al 2009). However, user fees have also deterred poor and vulnerable patients from seeking care (particularly at referral hospitals), in some circumstances created a ‘medical poverty trap’ (leading to untreated morbidity and long-term impoverishment) and at times led more patients initially to seek care from the private sector (Wilkinson, Holloway et al 2001; Jacobs and Price 2004).

While government budget funds continued to be the main part of facility revenues, averaging around 60% from 2003 to 2005, user fees provided about 30% of the total; fee exemptions represented lost revenue to facilities averaging about 10% of total potential revenues while meeting the needs of only a proportion of the poor (Annear, Wilkinson et al 2006). Health equity funds were a programmed response to the imposition of official user fees and emerged commonly in association with broader health system strengthening activities carried out with external support (Hardeman 2001; Van Damme, Meessen et al 2001; Wilkinson, Holloway et al 2001; Bitran 2002; Booth 2003; BTC 2007; Biacabe 2008; Jordanwood, van Pelt et al 2009; Bitran, Turbat et al c. 2003). Health equity funds therefore aimed to overcome the systemic contradiction between a viable fee-exemption scheme and a viable salary-incentive scheme, the inequitable manner in which exemptions were granted and the lack of incentive for providers to grant exemptions (Wilkinson, Holloway et al 2001).
METHODS

This review is based on an inclusive inventory of publications, unpublished studies, project and evaluation reports and other relevant documents on HEFs in Cambodia. Generally, the evidence presented is taken from the findings of empirical research or evaluation. As well, some aspects of policy, analysis and lessons from HEF implementation have been included.

The review draws on an annotated bibliography of 92 titles relevant to HEF. This annotated bibliography (see Annex) was used as a data source to address a number of questions related to: utilisation of health services by the poor, impoverishment and indebtedness, quality of health services, functioning of the referral system, content of the benefit package, implementation arrangements (HEFO, SUBO, local committee etc), third-party monitoring, complementarities with other demand-side financing schemes, expanding coverage to health centres, identification of poor households and institutional constraints on scaling up HEFs. These questions are discussed in the following sections.

The bibliography, which is confined to titles on Cambodia, was compiled not from a conventional search of journals and other sources using electronic search engines. Rather, it was compiled by the author over a period of ten years working on research related to HEFs since their inception in Cambodia. The bibliography was then presented to 25 key informants involved in the design, implementation, monitoring and analysis of HEFs for their consideration and additions. The list was verified also by a search of the PubMed electronic database of titles using search terms that included ‘equity funds Cambodia’, ‘health equity funds’, ‘health financing Cambodia’ and ‘health equity developing countries’. Subsequently, the extended list was verified by circulation among agencies providing technical support to HEF implementation in collaboration with the Ministry of Health and was presented for final verification to a meeting of donor partners and stakeholders on 21 January 2010 (including MOH officials and representatives of non-government and other international organisations).

We believe the bibliography is exhaustive. The bibliographic database comprises all known references from the published and grey literature between 2001 and 2009. All those references that presented some form of survey data or evidence based on direct observation of activities and their results were included in the database. Those references were excluded that were purely descriptive or that simply presented a proposal rather than a report on results (proposing a course of action or project as a pilot based on judgment rather than documented evidence).

The bibliography was entered into an electronic database, and each of the references annotated according to its purpose, methods of data collection, findings and conclusions. For ease of reference, entries are listed in alphabetical order without distinction as to the quality of the evidence. In the review, these data are reported under thematic sections that reflect the main research questions mentioned above. These sections are in turn sorted into issues where strong evidence on aspects of HEF management and effectiveness is available, those where the evidence is suggestive but not confirmed and those where there is little evidence available.

The references in the bibliographic database include:

51 reports
19 journal articles
10 book chapters
6 MOH documents
3 conference reports
3 dissertations.
The studies employed a range of research methods, including:

- 26 surveys
- 23 situation analyses
- 19 evaluations
- 11 discussions
- 6 other reports
- 5 guidelines
- 2 proposals.

Forty-five articles used some form of primary data, and an additional 27 analysed secondary data only. Thirty-five used quantitative methods and an additional 13 relied on qualitative methods, using random sample and convenience sampling. Twenty-three references shared common sources of data for their analysis. Thirteen references were commentaries or planning documents not based on data collection, and 37 were based on information other than surveys.

The fragmentation of HEF implementation is reflected in the nature of the literature surveyed, and the limitations of the review reflect the breadth and diversity of the studies. Moreover, in nearly all cases, HEFs were introduced in conjunction with supply-side and management strengthening activities implemented with external support. There are therefore a number of confounding factors that can influence the reliability of the evidence on the impact of particular HEF implementations.

RESULTS OF THE COMPREHENSIVE REVIEW

The results of the review are arranged under a number of major headings related to:

- social health protection
- output and operational indicators
- key aspects of HEF design
- the implementation environment.

Under each of these main headings, issues relevant to HEF implementation and effectiveness are discussed. For ease of reference, these different headings and topics have been numbered in the sections below.

1. Social Health Protection

The evidence shows that health equity funds are an accurate form of targeting the poor, provide extensive coverage of social health protection and provide access to public health services for poor people who previously could not afford to attend. Generally, targeting, coverage and access have been measured using proxy indicators such as beneficiary identification methods, the number beneficiaries as a proportion of service users and levels of facility utilisation; these are discussed more fully in Section 2.

1.1. Targeting

Targeting is the process of accurately identifying beneficiaries for inclusion in the scheme. Targeting for HEFs has been shown to be accurate at the time when the targeting exercise is conducted (Van Damme, van Leemput et al 2004; Annear, Wilkinson et al 2006). Inclusion errors are relatively rare, and leakage of HEF benefits to the non-poor has been minimal, whether pre- or post-identification methods have been used. This has been shown, for example, at Sotnikom, Kiri Vong, Mongkol Borei, Peareang, Pursat, Thma Puok, Svay Rieng, Kampong Cham, Cheung Prey, Prey Chhor, Chamkar Leu, Battambang, Moung Russey, Sampov Meas, Chhlong, Kratie and Phnom Penh. However, poverty is mobile, identification is based only on proxy means testing, and, in the absence of re-identification, the initial HEF targeting becomes less accurate over time.

While false inclusions are rare, exclusion of genuinely poor people is more common, partly because the poor are often migratory workers who may not be present during pre-identification. Inclusion errors have been
recorded in rural and in urban locations at around 10% of beneficiaries and exclusion errors at around 25% (due mainly to lack of coverage rather than identification errors) (Men and Hun 2005; Ir 2008; Jordanwood, van Pelt et al 2009).

Targeting was shown to be effective when measured by socio-economic status of hospital HEF beneficiaries compared to fee-paying patients (Keller, Thomé et al 2006; Jacobs, Price et al 2007a). A survey at five different rural hospitals with HEFs revealed a patient socio-economic profile similar to the general rural population, indicating proportional utilisation by the poor, probably due to the HEFs; that is, HEF assistance was concentrated on the very poor (Meessen, Chheng et al 2008). Many studies have shown that the major proportion of HEF beneficiaries was among the poorest 25% of patients, and that many beneficiaries would not have had access to hospital services without support (Ir and Hardeman 2003; Hardeman, Van Damme et al 2004). One household survey in Kampong Cham, Siem Reap and Oddar Meanchey showed almost all HEF beneficiaries were recruited among the poorest households (Ramage and Pictet 2008), even though exclusion errors may remain.

1.2. Coverage
Coverage of the poor is extensive but not complete. Coverage for HEFs is measured here mainly by comparing the proportion of hospital patients with HEF benefits to the prevailing levels of poverty. 'Coverage' has been used to refer alternately to the poor population within a referral hospital (RH) catchment area who have HEFs and to the availability of HEF membership to those living below the poverty line nationally.

Pre-identification of the poor for HEFs commonly relies on proxy indicators of poverty and, in a HEF catchment area, may not produce the same percentage of poor as national income surveys. While pre-identification appears to be an accurate targeting mechanism, for various reasons HEF coverage is commonly below the nominal official poverty rate, indicating that part of the poor population may be excluded (BTC 2007; Ir 2008; Ir, Decoster et al 2008; Ir 2009; Ir, Horemans et al 2010).

One household survey registered HEF coverage as low as 1-38% of the poor population (measured by criteria different from both identification methods and poverty-line calculations) across eight ODs (Ramage and Pictet 2008). In earlier years, returns from HEF providers indicated that membership was lower at the beginning of implementation and grew to a peak after 18-24 months (Annear, Wilkinson et al 2006), possibly following the introduction of pre-identification.

In 2006, it was shown nationally that, of the estimated number of very poor in HEF catchment areas at the time (almost 2.5 million according to national income measures), up to 40% either did not access health services or did not take advantage of the HEF benefits available (Annear, Wilkinson et al 2006).

The results indicate that HEF identification procedures may define poverty more narrowly than national poverty-line estimates. As a proportion of hospital patients, HEF beneficiaries commonly comprised 15 to 50 per cent, while official poverty in related catchment areas ranged from 35 to 70 per cent; formal exemption rates were even lower where no official HEF exists (Meessen, Van Damme et al 2002; Ir 2004; Noirhomme 2005; van Pelt 2007; Biacabe 2008).

No study has been made of extending HEF coverage to the private sector (where the great majority of health services are delivered), and no policy has been developed on this question.

1.3. Access
Health equity funds provide access to public health facilities for the poor. There is ample evidence that HEFs improve access to services in urban and rural settings by reducing financial barriers while protecting the poor from the impoverishing effects of ill health and by providing a representative for the poor (Bitran 2002; van Pelt and Bun Mao 2004; Bitran and Associates 2005). Improved access is demonstrated by the increasing utilisation of health services by the poor, while utilisation by fee-paying patients remains constant, producing a significant increase in total utilisation (Annear, Wilkinson et al 2006; Annear, Bigdeli et al 2007). A study in one location reported a decrease in fee-paying patients (Jacobs, Price et al 2007a).

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1 The distribution of all households across wealth groups was bell-shaped, whereas the distribution of HEF members sloped downwards from left to right, which showed that HEFs successfully targeted the poorest households. Inclusion of the non-poor in HEFs was about 3% of the non-poor population (in total only six of 232 HEF households in only two out of eight ODs were from the wealthiest quintile).
According to the national HEF monitoring report for 2008, at public referral hospitals, 38% of all hospitalised patients and 25% of the deliveries were HEF-supported. At thirty-eight health centres in five operational districts (ODs) with HEF schemes, 20% of the patients were pre-identified poor (MOH 2009).

The evidence indicates that HEFs are an effective means for providing financial access to health services for the poor, have extensive donor support, are well regarded by beneficiaries and may allow discretionary spending on health care (Annear, Wilkinson et al 2006; Annear, Bigdeli et al 2007; Bigdeli and Annear 2009). Health equity funds are associated either with surprisingly little stigma against beneficiaries (Annear, Bigdeli et al 2007; Men and Meessen 2008) or feelings of shame by only a minority (Nguyen 2004; Ir 2008; van Pelt 2008; Jordanwood, van Pelt et al 2009).

Health equity funds are considered an important instrument for poverty alleviation, but with a few exceptions there is little evidence on their interaction with other health programs and other social and economic development sectors (Biacabe 2009; Em, Khim et al 2010).

2. Output and Operational Indicators

2.1. Increased use of public health services

HEFs have reduced barriers to access, increased utilisation of public health facilities, increased utilisation specifically by the poor and promoted full use of hospital capacity.

Among a wide range of barriers to access faced by the poor, HEFs reduce or remove financial constraints and address physical barriers by funding transport costs; they cannot, however, lower a range of barriers related to culture and to opportunity costs (Hardeman 2001; Van Damme, van Leemput et al 2004; Annear, Wilkinson et al 2006). As a purchasing mechanism, HEFs address barriers to access in four essential ways: financing, community support, quality assurance and policy dialogue (Bigdeli and Annear 2009).

One study showed that while only 7% of HEF beneficiaries claimed to have sufficient money to cover all expenses incurred from the condition leading to hospitalisation (in the absence of HEF), more than half of non-beneficiaries (the non-poor) confirmed they had sufficient cash (Jacobs and Lot 2006). The major benefit of HEFs may be not in funding expenditures in the public sector but in preventing ineffective expenditures in the private sector by encouraging the use of adequate public health care (Hardeman 2001). However, a recent study showed that, while HEFs greatly improved access to health facilities, the utilisation of services by the beneficiaries remained low due to the cost of transport from home, food during hospitalisation, fears regarding payment, distance, non-availability of health staff at night, preference for home-based private care, inadequate information about the benefit package and lack of empowerment (Biacabe 2009).

There is unqualified evidence that, for curative services, HEFs increase facility utilisation overall, increase the utilisation of public health facilities by the poor and provide access to services for the poor who previously did not attend (Criel, Van Damme et al 2008). In nearly all cases, HEFs have functioned within broader health systems strengthening projects with external support. While it has been difficult to isolate the impact of the HEFs on utilisation from other elements of these projects, there is consistent evidence of increased utilisation of services across all HEFs.

There is also evidence that utilisation rises steeply—between two- and six-fold—for the two or three years following HEF implementation, and then levels out (Annear, Wilkinson et al 2006). The reasons for this are unclear.

The only national survey of HEF schemes to date and case studies in Phnom Penh and Ang Roka indicated that HEFs and contracting were associated with increased IPD and OPD utilisation and in most cases led to full use of RH capacity without eroding the fee-paying base (Annear, Wilkinson et al 2006; Annear, Bigdeli et al 2007). These findings were confirmed by a recent study in URC-supported HEF ODs that revealed an immediate and sustained increase in the overall use of IPD services by a factor of 1.5-1.75(Jordanwood, van Pelt et al 2009).

Health equity funds increase utilisation especially by the poor. In various examples, utilisation rates by the poor have risen as a result of HEFs, the exempted poor commonly increasing from about 10% of total cases to 40-
50% of the higher utilisation levels, representing a dramatic increase in the absolute number of poor who attend services, including many who did not previously have access. According to one study, HEFs alone gave access to health services to poor people who had previously been excluded while CBHI, for example, had encouraged people who previously used alternate (often private) providers to move to public health facilities (Annear, Bigdeli et al 2007).

Increased utilisation attributed to HEF activities was reported in many cases, such as:

- increased hospital utilisation in association with the Phnom Penh Urban Health Project (Knowles 2001; Men and van Pelt 2006) and the New Deal project at Soutr Nikom and Thma Puok (Hardeman 2001; Ir 2004; Van Damme, van Leemput et al 2004);
- increased utilisation evident at Kiri Vong, where there was a steady increase in the use of preventive services, including immunisation, antenatal care (ANC) and assisted deliveries (Booth 2003);
- enhanced access to hospital services and a positive impact on utilisation by the poorest patients due to HEFs revealed in a comparison of HEF schemes at Svay Rieng, Peareang, Kiri Vong and Soutr Nikom (Noirhomme, Meessen et al 2007);
- increased hospitalisations, mainly due to HEFs, in association with performance contracting methods at referral hospitals in Kampong Cham province; while it appeared that the referral hospitals had become hospitals for the poor and those who could afford to pay used private clinics, an increase in unnecessary hospitalisations of HEF beneficiaries was corrected (Keller, de Jong et al 2008);
- a three-fold increase in utilisation by both HEF beneficiaries and paying patients following introduction of HEFs at Svay Rieng, with exemptions climbing to one-third (Biacabe 2008).

Within a few years of implementation, HEF beneficiaries as a proportion of total utilisation across hospitals and health centres rose to 33% of inpatients at Svay Rieng, 36% at Siem Reap hospital, 40% at Soutr Nikom, 64% at Thma Puok, 64% at Ang roka, 67% of all patients at Chamkar Leu and 90% at Cheung Prey and Prey Chhor. HEF admissions for IPD tripled at Phnom Penh Municipal Hospital, and the steep increase in utilisation at Soutr Nikom was attributed to ‘new’ patients from poor households who would not have sought care at the hospital without financial support (Ir 2004; Nguyen 2004; Van Damme, van Leemput et al 2004; Meessen and Por 2005; Annear, Bigdeli et al 2007; BTC 2007; Noirhomme, Meessen et al 2007; Keller, de Jong et al 2008).

At Ang roka and Kiri Vong, a much higher proportion of the lower 50% of the population by socio-economic status used public facilities for curative care than of the upper 50% (Keller, Thomé et al 2006). At four referral hospitals in Kampong Cham, 45% of inpatients reported they sought care in the hospital because there was a HEF (Ir 2008). At Kiri Vong, the outpatient contact rate for HEF beneficiaries moved during the initial years from 0.21 to 0.65 and IPD contacts from 18.4/1000 population to 32.5; beneficiaries rose to 28% of outpatients and 33% of inpatients (Jacobs, Price et al 2007b). At Phnom Penh and Ang roka, 28% of HEF patients then using health facilities did not attend public facilities before having an HEF card (Annear, Bigdeli et al 2007; Bigdeli and Annear 2009); the positive impact of HEFs on increasing utilisation by the poor was confirmed also by patient exit interviews and health provider testimonies (Annear, Bigdeli et al 2007).

Generally, public health facilities have been chronically underutilised. There is sufficient evidence to show that HEFs have helped to correct this. On average across HEF districts, the bed occupancy rate showed a consistent increase from a low base in 2000, reaching up to 100% BOR in 2005 (Annear, Wilkinson et al 2006; Annear, Bigdeli et al 2008). At the Phnom Penh Municipal Hospital, the monthly BOR rose from 40% in 2004 to almost 60% in 2006, and much of the increase was attributed to the HEF (Annear, Bigdeli et al 2007). At Svay Rieng, the BOR increased from 55% in 1999 to 88% in 2004 following introduction of the HEF (Nguyen 2004; see also Biacabe 2008). A steep rise in the BOR was also reported at four Kampong Cham hospitals (Ir 2008).

Gender issues have not been well addressed in past research. This is in part due to the absence of adequate gender-disaggregated data. Much of the published evidence relates to improved maternal and child health care services. The first significant study of gender-specific access to health financing schemes (HEFs and CBHI) was completed as an evaluation of the voucher-based HEF scheme implemented by UNFPA in five health operational districts (Em, Khim et al 2010). The review found that there was a positive impact on the quality of services provided from the HEF. The HEF increased utilisation by poor women at the RH, and subsequently at
HCs also. About half of women targeted benefited from HEFs and would not have attended facilities otherwise; for about one-third of these, access to a facility was life-saving, because poor women tend to use the services only as a last resort when the situation is life-threatening.

Traditionally, women and children are the main users of health services. At Svay Rieng and Mongkol Borei, women comprised the largest group of HEF beneficiaries (40-60% of patients), though coming often from less remote areas (Annear, Wilkinson et al 2006; Biacabe 2008). Nguyen (2004) reported the greatest increases in bed occupancy rates at Svay Rieng for paediatric and maternity wards, with rising numbers of HEF-exempted women, and indicated that more than three quarters of all the HEF patients in the hospital were women and children (which is the same as their proportion in the national population).

At one HC in Soutr Nikom, the HEF brought in many adult women who had previously not used the service and reversed the previous gender balance in favour of men (Meessen and Ir 2003). Jacobs and Price (2006) found a delay for care-seeking among adult women compared to men at Kiri Vong, but this difference was not found in a later survey (Jacobs and Price 2008). At HCs in Kampong Cham, the HEFs facilitated access by poor pregnant women, increased utilisation of priority MCH services and reduced health expenditure related to pregnancies while other MPA2 services remained underutilised (van Pelt 2008; see also van Pelt 2006; Ir 2008; Ir 2009).

Continuous improvement in access for deliveries for poor women relative to fee-paying patients was reported in URC-supported areas, where up to 70% of HEF women gave birth at a HC or RH (Jordanwood, van Pelt et al 2009). At Kiri Vong, an observed increase in assisted deliveries from 44% to 66% was most likely due to more equitable access to health care (Jacobs, Thomé et al 2009), although Jacobs, Price et al (2007b) found that deliveries measured per 1000 population revealed a lesser impact of HEFs. Total facility-based deliveries increased sharply from 16% to 45% of the expected number of births in three Kampong Cham ODs supported by vouchers for MCH care, HEF benefits and a midwife incentive, a more substantial increase than in other districts, while voucher holders and HEF beneficiaries accounted for 41% of the expected number of births among the poor (Ir, Horemans et al 2010).

2.2. Reduced impoverishment and indebtedness

There is little direct evidence on the impact of HEF on household health expenditures. While a substantial decrease in household health expenditure by both HEF beneficiaries and non-beneficiaries at Soutr Nikom could not be directly attributed to the HEF, the HEF did attract the poor to the public health system, prevented borrowing for private care and lowered the average out-of-pocket (OOP) payment compared to neighbouring facilities (Ir 2004; Van Damme, van Leemput et al 2004). HEFs have generally reduced under-the-table payments; at Phnom Penh Municipal Hospital, HEF patients were pressured less than non-HEF patients to pay for a variety of costs related to their hospitalisation (medicine, food, under the table) (CAS 2005). At Kiri Vong, the direct costs associated with seeking care for HEF beneficiaries were half of those for non-beneficiaries even though only 7% of beneficiaries claimed to have sufficient money to cover all expenses incurred with the condition leading to hospitalisation, significantly less than the 51% of non-beneficiaries (Jacobs and Lot 2006; Jacobs and Price 2006). Ir (2008) recorded increased levels of health expenditure by HEF beneficiaries over time in four Kampong Cham ODs. And Lane (2007) concluded that the impact of HEFs on OOP spending may be small because HEFs tend to finance health care that would not otherwise have been provided and tend not to reduce the number of own-financed treatments.

The evidence that HEFs reduce impoverishment due to health costs is strong but incomplete. In the literature, impoverishment due to health costs is measured by proxy indicators—debt levels, asset sales—and there is little direct evidence of the impact of HEFs on household impoverishment. There is, however, considerable evidence that HEFs reduce, but do not eliminate, household debt due to health costs.

HEF beneficiaries continued to fall into debt or sell assets at Sotnikum in the early years despite the HEF, and high expenditures had often been incurred prior to attending facilities; the health equity fund did not address

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2 In Cambodia, health services at government facilities are delivered under Ministry of Health regulations defining a standard package of services for different levels of service. At health centre level, the Minimum Package of Activities includes a range of primary health care services (without deliveries or surgery). At district (referral) hospital level, the Complementary Package of Activities generally includes surgery (there are, in practice, three levels of service depending on facilities: CPA1, CPA2 and CPA3).
the opportunity cost of hospitalisation, which remained an obstacle for the poor, in particular during rice planting and harvesting seasons and for people living a day-to-day existence (Van Damme, van Leemput et al 2004) [; see also Hardeman 2001; Van Damme, Meesen et al 2001; Meessen 2002]. Nor could HEFs prevent the impoverishment of the non-poor by a health care episode: it was estimated at Kiri Vong that the HEF did not prevent potential impoverishment of the 2.4% of the paying patients who had to resort to selling land to repay debts (Jacobs, Price et al 2007a); similar findings were evident in Siem Reap, Oddar Meanchey and Kampong Cham (BTC 2007; see also Ir 2008, 2009; Ir, Decoster et al 2008; Ir, Horemans et al 2010).

There is no evidence about common financial behaviours within a subsistence economy where cash is rarely held by households. Hypothetically, households may traditionally use manageable debt levels as a means to access small amounts of cash when needed, subsequently repaying by increased labour or other means. This could be true especially for illness, which is commonly not anticipated. More evidence is needed on cultural practices and on the role of HEF benefits in making debt levels manageable rather than impoverishing, on health-seeking behaviours that favour the use of self-medication, traditional healers or private services prior to seeking public health care and on the extent to which manageable debt for health care reflects behaviours that are discretionary rather than impoverishing.

HEFs reduce but do not eliminate debt for health care. The evidence that HEFs reduce debt is strong and consistent. Research in Phnom Penh indicated that the proportion of households with debt for health care was significantly less where HEF was implemented than where it was not available. This was most pronounced for debt incurred within the previous 30 days, suggesting that HEFs had an impact. Respondents living in a community without HEFs were 3.4 times more likely to have a recent health care debt and 2.5 times more likely to have an old debt than those with access to HEFs (after controlling for age, sex, years of schooling and chronic disease) (Annear, Wilkinson et al 2006; Men and van Pelt 2006). Households at the HEF site were in the previous 30 days also 2.4 time more likely to have used medical services and 1.7 times less likely to have purchased medicines without seeing a health worker (van Pelt and Morineau 2008).

In Kampong Cham province, beneficiaries attending referral hospitals were significantly less often in debt for health care than prior to HEF implementation, declining from 62% to 56% of patients (van Pelt 2006; Ir 2008; van Pelt 2008). At Svay Rieng the HEF had a positive impact on beneficiaries’ health care-seeking behaviours and prevented them from having to borrow or sell or pawn assets to pay for health services (Nguyen 2004).

In URC-supported areas with HEFs, 55-71% fewer households had a debt than in non-HEF areas, and the effect was stronger with pre-identification. HEF-assisted households coped better with debt by lowering it from original levels. The total of debt avoided due to HEFs was calculated as $7.2 million for a population of approximately 1.5 million households in 27 ODs (Jordanwood, van Pelt et al 2009). Secondary analysis of CSES 2004 and 2007 data for the MOH 2008 HEF monitoring report suggested there was a significantly lower percentage of households with debt for health care in 2007 than in 2004 in the areas where HEFs had begun compared to those without HEFs, where there was no significant reduction. While the results were not conclusive, the proportion of households with debt for health care in areas with HEFs was almost 40% lower than in areas without HEFs (MOH 2009).

Interest rates secured by beneficiaries were also significantly lower than those for non-beneficiaries in Phnom Penh (7-15% per month in the HEF community compared to 27- 46% per month in the non-HEF community) (Annear, Wilkinson et al 2006; Men and van Pelt 2006; van Pelt and Morineau 2008). Usurious interest rates are common, and were also prevalent at Sotnikum prior to HEF implementation (Hardeman 2001). HEF beneficiaries in Phnom Penh often used private services only after unsuccessfully trying the public sector and consequently had more time and opportunity to plan their transactions with moneylenders, resulting in a more favourable rates of interest (Annear, Wilkinson et al 2006).

Even so, HEF beneficiaries still incur debt for health care. This was especially true in the early years of HEF implementation, when old debt remained a more significant burden (Meessen and Ir 2003). Borrowed money was commonly used to pay uncovered costs including emergency transportation, opportunity costs, extra food, food for a caretaker, a caretaker and additional medical expenses before or after hospitalisation (Keller, Thomé et al 2006; van Pelt 2006; Ir 2008; Jacobs and Price 2008; van Pelt 2008).
At Ang roka, up to 36% of HEF patients in the rural area still borrowed money for the current episode of care (Annear, Bigdeli et al 2007; Bigdeli and Annear 2009); one estimate put borrowing in Ang roka as high as 95% of beneficiaries (Keller, Thomé et al 2006). Among hospitalised patients at Kiri Vong, more than 80% of HEF beneficiaries borrowed money for health costs (compared to almost 50% of non-beneficiaries), while the ratio of borrowed money to direct cost was three times greater for the HEF beneficiaries (Jacobs and Lot 2006; Keller, Thomé et al 2006; Jacobs, Price et al 2007a). In Kampong Cham, 27% of HEF inpatients borrowed at interest, 13% sold assets and 8% took credit from the providers to finance their health care (Ir 2008).

At Kiri Vong, reasons for continued indebtedness among beneficiaries included referral to national hospitals where no equity fund existed, becoming ill while residing in districts without an HEF and consulting public sector staff privately. Only 15% of beneficiaries were able to cover all expenses incurred with the illness episode, while due to mutual assistance only 30% of those who borrowed had to pay interest (a lower proportion than reported elsewhere in Cambodia). The amount borrowed was considerably larger than direct costs; the ratio of borrowed amount to direct costs ranged from 6.6:1 for pre-identified beneficiaries to 3.5:1 for post-identified beneficiaries and only 0.56:1 for paying patients (Jacobs and Price 2008).

Little evidence is available on the impact of HEFs on household health status and wealth status or economic benefits from HEF. Generally, the benefits from HEF coverage are evident in improved access to services, reduced debt for health care and lower average out-of-pocket spending on health care episodes. Ramage and Pictet (2008) reported that the gap in health care outcomes between the poorest and the wealthier household had decreased over time in BTC project areas in Siem Reap and Kampong Cham, especially with regard to maternal health indicators (ANC, tetanus toxoid immunisation, deliveries by trained birth attendants).

Meessen and Por (2005) calculated the wealth benefit to HEF patients at Kvav HC in Soutr Nikom as US$0.67 per contact; while this appeared small, health centre costs are low and the benefit would logically be higher at the referral hospital. Soon after HEF implementation in Phnom Penh, Knowles (2001) calculated the annual value of risk pooling benefits under the HEF at about $627 per poor resident, while $1949 was saved annually from timely treatment, and the consequent saving in poverty alleviation investments was approximately $1000 per person.

Additionally, HEF benefits allow poor patients to leverage health care of a much higher cost by accessing government-subsidised services. Meessen and Por (2005) estimated an average total health-cost benefit of US$48 for an average HEF payment of US$11.50 per beneficiary. HEFs also work to leverage improved quality of service delivery, as in URC-supported areas, where quality controls are imposed. Leveraging quality improvement (in addition to health system strengthening activities) was an early recommendation to assuage concerns about HEF sustainability (Bautista 2003) and is now widely accepted.

### 2.3. Improved quality of health services

Health equity funds improve quality of care for the poor, but the evidence is mixed. The evidence is indirect, and there are no studies dealing specifically with quality of care issues. HEFs may improve quality of care overall, and they may act to overcome poor quality care provided specifically to the poor.

Both beneficiaries and non-beneficiaries have reported improved quality of care (Nguyen 2004), and there are few reports of disparities in treatment between HEF beneficiaries and fee-paying patients. Evidence suggests that quality of care has improved for HEF patients—doctors generally present for HEF patients, waiting times are reduced and hygiene improved—even though fewer patients may have reported quality of care as the reason for their choice of hospital (van Pelt 2006; Ir 2008; van Pelt 2008). In various places, the average length of stay for HEF beneficiaries is equal to or greater than that of non-beneficiaries, indicating equality of care without overservicing (van Pelt and Bun Mao 2004; Jacobs and Price 2006). Even so, at times fewer beneficiaries than non-beneficiaries have also reported satisfaction with staff attitudes (Nguyen 2004). And focus group discussions have often revealed more discontent with staff by beneficiaries. A more purposeful approach to improved quality of care is evident in URC-supported areas where a quality control mechanism is implemented.
Health equity funds are a significant source of additional revenue to facilities, providing a supplementary income, improving their financial stability and providing money for staff bonuses and running costs (Meessen and Por 2005; Norhommme, Meessen et al 2007).

Typically, HEFs provide a subsidy to facilities equal to a quarter or more of total user fees, replacing previously lost revenues from unfunded exemptions (Annear, Wilkinson et al 2006; Meessen, Van Damme et al 2002), and have comprised from 12% to as much as a reported 77% of total facility revenues (Ir and Hardeman 2003; Annear, Bigdeli et al 2007; Ir 2008). In some cases, the rate of increase of facility revenues from HEF over time has exceeded the rate of increase in revenues from user fees (Keller, de Jong et al 2008).

This financial support is commonly amplified by management support both from accompanying health systems strengthening projects and through the activities of local NGOs working as HEF operating agencies (Annear, Wilkinson et al 2006; Annear, Bigdeli et al 2007; Biacabe 2009)

In a few cases (Kiri Vong, Ang roka, Kampot), additional funds have been mobilised through donations and community activities with support, for example, from pagodas and mosques, which also play a role in providing feedback and representing the interests of beneficiaries (Jacobs and Price 2003; Ir 2004; Keller, Thomé et al 2008; Song and Nieves 2008). There are, in addition, cases where surpluses from micro-credit operations have been used to subsidise health costs for the poor (such as the Reproductive and Child Health Alliance project in Pursat).

The evidence shows improved staff incentive and better attitudes towards the poor. There is, however, little direct research on staff attitudes towards HEFs or attitudinal changes resulting from HEFs.

Revenues from HEFs subsidise user fees and provide staff incentives. One early estimate valued the average monthly income of a government health worker with incentives from user fees at up to US$180, of which less than 10 percent came from salary (Bitran 2002; Bitran, Turbat et al c. 2003). A similar result was reported later in Kampong Cham, where an increased commitment by staff to their public-sector work was noted (Keller, de Jong et al 2008). Even so, caution has been expressed that staff incentives paid in this way can create disparities between health staff in different regions (Bautista 2003).

HEFs have created an incentive for staff to treat poor patients and to provide care equal to non-beneficiaries, without overservicing (Nguyen 2004; Jacobs and Lot 2006; Jordanwood, van Pelt et al 2009). Staff behaviour towards poor patients, responsiveness to their needs and the accountability of providers (despite some concern by mid-level managers and constraints on intervention by HEF managers) all seem to have improved due to HEF (Meessen, Van Damme et al 2002; Annear, Wilkinson et al 2006; Annear, Bigdeli et al 2008; Ir 2008; van Pelt and Morineau 2008).

HEF patients appear to be satisfied with services, but the evidence on changed health care-seeking behaviours is limited. While gaps in understanding the factors that determine consumers’ use of private and public health providers were identified early (Wilkinson, Holloway et al 2001), not enough has been done to fill these gaps.

HEFs have attracted the poor to public health facilities at a higher rate than non-beneficiaries and to use private services less than non-beneficiaries (Van Damme, van Leemput et al 2004; Annear, Wilkinson et al 2006; Jacobs and Lot 2006; Jacobs and Price 2006; Jacobs and Price 2008; Keller, de Jong et al 2008). At the same time, HEF beneficiaries may spend a larger proportion of a smaller average direct cost per episode at private providers than fee-paying patients do (perhaps because HEFs subsidise public care) (Jacobs and Lot 2006). Despite the greater use of public health services, 70% of HEF-eligible inpatients in Kampong Cham, 66% in Kiri Vong and 34% in Ang roka, for example, sought treatment before they went to the hospital, mainly from private practices and private pharmacies (Keller, Thomé et al 2006; Ir 2008).

According to the most recent MOH monitoring report, HEF patients were confident the HEF would pay for their treatment, said hospital staff gave the same treatment as for non-beneficiaries and said they would use the hospital again when sick (MOH 2009). While many surveys have recorded high levels of HEF patient satisfaction, this is often contradicted by complaints about staff attitudes (CAS 2005; Annear, Bigdeli et al 2007; Ir 2008; van Pelt 2008; Jordanwood, van Pelt et al 2009). The HEF also creates a greater village awareness.
about access to services and benefits available, particularly where there is pre-identification (MOH 2009). Criel, Van Damme, et al (2008) note the increasing HEF attention to protection of user rights, including regular hospital visits by HEF staff. However, prior awareness about HEFs in the community can be limited (BTC 2007; see also Ir 2008, 2009; Ir, Decoster et al 2008; Ir, Horemans et al 2010).

The impact of HEFs on the referral system is not well understood. On the one hand, HEFs may increase referrals from health centres to district hospitals by covering hospital referral costs, as in Phnom Penh (Ir 2004), or by subsidising transport and food costs for poor patients (Hardeman 2001). On the other hand, a lack of HEF coverage at health centres may encourage HEF patients to bypass the primary care facilities.

National HEF monitoring indicated that 40-45% of hospital HEF beneficiaries had been to a health centre before going to the hospital (MOH 2009). In some cases (for example Moung Russey, Samraong), referrals as a proportion of admissions increased sharply with the introduction of HEFs even though health centre coverage was limited; further investigation was needed to determine the precise reasons for this (Annear, Wilkinson et al 2006). Hardeman (2001) reported increased referrals at Soutr Nikom, mostly from New Deal health centres; payment of transport costs from health centre to referral hospital may have been the reason, but it was perhaps also a result of a staff referral incentive rather than the HEF. Among patients at Kiri Vong referral hospital, a higher proportion of HEF beneficiaries than non-beneficiaries had initiated care at a health centre; however, of all RH patients who had consulted a health centre at some time, only one-third came to the hospital as referrals, the remainder coming on their own initiative, and such referral was less common for beneficiaries than non-beneficiaries (Jacobs and Price 2008).

Despite a general decline in average health centre utilisation in recent years, HEF coverage raised the average level of utilisation by a factor proportional to the number of HEF beneficiaries and stabilised utilisation rates across 40 health centres with HEF in URC-supported areas; pre-identification of HEF beneficiaries reversed the decline, led to increased utilisation and made pre-identified HEF beneficiaries the main users of health centres where previously paying patients had predominated (Jordanwood, van Pelt et al 2009).

3. Key Aspects of HEF Design

3.1. Key design features

The key elements of HEF design are well established. HEFs are locally implemented by numerous different actors using a variety of organisational forms, all with the common purpose of funding fee exemptions for the poor (Annear, Wilkinson et al 2006; Noirhomme, Meessen et al 2007). Common features have been identified through planning documents, conferences and comparative studies, and through constant collaboration between implementers. Van Damme (2006) reports on the outcomes of the first HEF forum in 2006, with presentations from URC, Health Net International, SRC, BTC and UNICEF covering 22 hospital-based HEF schemes; agreement was evident on the following features:

- Target the very poor: HEFs are a mechanism for targeting the very poor, using consistent means-test criteria, which in practice vary between schemes (Ir 2004; Van Damme, van Leemput et al 2004).
- Earmarked budgets: HEFs require an earmarked budget consistent with the poverty profile of the covered population; the budget is commonly but not exclusively donor-funded (Van Damme, van Leemput et al 2004; Noirhomme, Meessen et al 2007). This is necessary even where community funds are raised (for example, pagoda-based funds) (Jacobs, Price et al 2007b).
- Third-party payer: HEFs are best managed by a third-party NGO (preferably with local community knowledge and standing), identifying the poor and purchasing services on their behalf (see below). In some cases, the third party is a hospital-based committee (Biacabe 2008), and the MOH has implemented its own subsidised exemptions through local government authorities, though their purchasing role needs further development (Meessen, Van Damme et al 2002; MOH 2003; Overtoom 2003; Ir 2004; Van Damme, van Leemput et al 2004; Jordanwood 2008; Bigdeli and Annear 2009).
- Identification of beneficiaries: Both pre- and post-identification methods are used, often in unison; beneficiaries must be fully informed of their right to free health care (Jacobs, Price et al 2007a; Noirhomme, Meessen et al 2007).
• Benefits package: Benefits typically include referral hospital (and in some cases health centre) medical services, transport costs from health centre to hospital, food for patients and carers and other ancillary items like funeral costs in some cases. There is only limited coverage of chronic diseases. To be effective, exemption schemes need to be underpinned by a range of additional interventions that enable the poor to seek health care in a timely fashion and in a way that minimises their economic vulnerability, including indirect costs, provision for post-identification at hospitals, free services at health centres and improved referral practices (Jacobs, Price et al 2007a).

Other design features are less well established:

• Health promotion: HEFs should support health promotion, referrals, quality improvement, information activities and community involvement (MOH 2003).

• Community participation: Community participation and financial support can improve the operation and sustainability of HEFs through engagement with existing community-based organisations and are effective in improving financial access for the poor as well as increasing community participation in health, though external support is still required (Booth 2003; Jacobs and Price 2003; Jacobs and Price 2006; Jacobs, Price et al 2007b; van Pelt and Morineau 2008). A HEF is best implemented by a community-mandated organisation active at both facility and community level that purchases services and engages in policy dialogue (Bigdeli and Annear 2009).

• Purchasing mechanism: As a strategic purchasing mechanism, HEFs exercise four essential roles—financing, community support, quality assurance and policy dialogue—that respond to the main barriers to access to health services and satisfy some unmet health care needs without causing stigma (Bigdeli and Annear 2009).

3.2. Key constraints and resulting strategies

Little attention has been given to demographic changes. Social and demographic changes have transformed epidemiological patterns and introduced the double burden of disease. Chronic non-communicable disease (diabetes, hypertension) is more and more prevalent, while the health care system is poorly equipped to deal with it and the costs of repeated care are onerous (van Pelt 2006; Biacabe 2008). Borrowing for health care is often for private treatment of chronic diseases where the hospital cannot deliver care and therefore a major threat of impoverishment; HEFs are not designed to deal with this (van Pelt 2008). The HEF could play an important social protection role for discharged patients by a more active role, supporting aftercare for beneficiaries prior to discharge, arranging counselling, checking prescriptions and providing information materials for the exiting patient (van Pelt 2006; van Pelt 2008).

There is little research on the effect of changes in poverty status. Poverty is a dynamic phenomenon in which households change their status over time, leading often to large exclusion errors in targeting (Ir, Decoster et al 2008; Jacobs and Price 2008). There are the ‘chronic’ poor but also the ‘transient’ poor who move in and out of poverty, sometimes in a seasonal or annual pattern, which is generally a more common status. In Kampong Cham, 13% of surveyed households improved their status and 52% got worse (van Pelt 2008). A study in Oddar Meanchey showed that more than one-third of interviewed households reported an improved living condition and about one-third reported a worse living condition, while one-third of respondents had migrated to their villages after the pre-identification survey (Ir, Decoster et al 2008).

Community-wide changes may also occur due to migration, which may occur following pre-identification. In Oddar Meanchey, 34% of interviewed households had migrated from other places, and more than half of these had arrived after the pre-identification survey. Moreover, where the HEF is effective, it may improve household socio-economic status (Ir, Decoster et al 2008; Jacobs and Price 2008).

The evidence suggests that pre-identification requires further refinement and close monitoring through regular updates of eligible beneficiaries (Biacabe 2008; Jacobs and Price 2008). Different studies have shown that poverty status is mobile over time, creating inclusion and exclusion errors in the years following pre-identification (Ir, Decoster et al 2008); in one case 75% of the survey households had changed living conditions over the last year (13% got better and 52% got worse) (Ir 2009).
Well-functioning health services are a prerequisite for HEFs. HEFs are a necessary but not sufficient condition for improved access to services; a suitable quality of care is also essential. The prerequisites for establishing a HEF include availability of CPA and/or MPA services of a reasonable quality, an appropriate numbers of hospital beds, adequate human resources, health care staff present when needed, sufficient infrastructure, drugs available, a health financing system, staff agreement on working conditions, the absence of informal charges and not excessive competition from the private sector. A credible and accessible public health system is needed to prevent catastrophic health expenditure and support social safety nets. HEFs are therefore best implemented alongside service-strengthening activities, and HEFs themselves may work to improve service delivery (Meessen, Van Damme et al 2002; Overtoom 2003; Van Damme, van Leemput et al 2004; Meessen, Chheng et al 2008).

Policy documents are strong, but analysis of national policy challenges is limited. The analysis and discussion of most national policy challenges have occurred through MOH planning documents, including the Health Strategic Plan, the Strategic Framework for Health Financing and the Social Health Protection Master Plan. This work is exemplary, and the ministry has played a strong guiding role. Most independent analysis of policy challenges has also taken place within this context, including the 2008 National Conference on Social Health Protection (Annear 2008b; Bigdeli and Annear 2009). However, beyond these documents, little independent analysis of national policy challenges has been carried out.

Ir, Bigdeli et al (2010) argue that the HEF policy making was both innovative and incremental, in which insights from pilot projects were gradually translated into national health policy according to three important factors: a policy context conducive to the creation, dissemination and adoption of lessons gained in HEF pilots; the credibility and timeliness of HEF knowledge generated from pilot projects; and strong commitment, relationships and networks among actors.

The evidence for scaling up HEFs is strong, but analysis and policy development are inadequate. The immediate challenges for HEFs are to expand population coverage nationally, extend benefit coverage, increase patient satisfaction and encourage quality improvement.

The challenges of scaling up to national coverage and translating evidence about HEF schemes into national policy have been addressed by Ir, Bigdeli et al (2010). The authors argue that knowledge locally generated through pilot projects is crucial for health policy formulation, and while international organisations and donors can take a leading role in innovative interventions, the involvement of government policy makers is essential for their scaling up.

Further consideration is needed of the means to include HEFs in national social security arrangements and to implement the provisions of the Social Health Protection Master Plan for regulating and scaling up HEF nationally (Annear 2008b). Preparations required include developing common administrative procedures among different SHP schemes (for premium levels, benefit coverage, provider payment systems), compiling a database of beneficiaries, staff capacity building, better coordination between schemes and consistent monitoring and evaluation (Annear 2008b; MOH 2009).

Assessment of the Ministry of Planning poverty identification process is needed in line with developing a more accurate and acceptable system to support expansion of HEFs along with national regulation of user fees to enable the development of uniform benefit packages and provider payment systems (Annear 2008b). Further analysis of the issues related to creation of a national HEF structure is required along with developing the role of HEFs as strategic purchasing agencies representing the poor (Bigdeli and Annear 2009).

Within the context of moving to universal coverage, approaches to HEF-CBHI collaboration must be thoroughly tested and evaluated ahead of widespread implementation. Expansion of CBHI requires improved service quality (through both greater influence over providers and increased availability of government funding), increased awareness of health insurance concepts within communities, government subsidies for informal sector health insurance and a strengthened regulatory framework (Annear 2008b).
3.3. Third-party status

The benefits of third-party status are in contention. There is a strong commitment among HEF implementers and operators to third-party payers (see, for example, BTC 2007; Ir 2008; Ir, Decoster et al 2008; Ir 2009; Ir, Horemans et al 2010). Government planners concur with the principle of separation of purchaser and provider roles but generally propose a stronger role for local government and health administrators in managing HEFs. Empirical evidence of the benefits of third-party status is not extensively documented.

NGOs were the driving agent for HEF expansion (Noirhomme, Meessen et al 2007). Acting as third-party purchasers, NGOs have built a network of formal and informal relationships (with health providers, local authorities, user groups, village committees, pagodas and mosques and beneficiaries) and have been effective in coaching poor patients, voicing feedback from users, informing health administrators, negotiating for more cost-effective service delivery and linking with broader poverty reduction activities (van Pelt and Bun Mao 2004). While some HEF operators had a limited role in bargaining for improved quality or appropriate pricing (van Pelt 2006; van Pelt 2008), it appeared that beneficiaries’ awareness of their own rights was more limited in the absence of an NGO third party (van Pelt 2007).

An alternate form of HEF administration has been piloted at the Svay Rieng referral hospital, where the HEF is managed by a provincial HEF support committee (comprising pagoda achars, local NGOs, UNICEF and the PHD). This and the Kiri Vong pagoda-managed HEF are the only examples of the involvement of civil society in HEF management (Biacabe 2008).

There is no evidence on the means to further HEF efficiencies. Apart from project planning documents, few, if any, references provide empirical evidence on issues related to enhanced performance, improved management, increased accountability, reduced administrative cost or stronger quality monitoring. It is known that overhead costs of HEF administration can be large. An evaluation of the HEF at Svay Rieng concluded that it was not strong enough to act as a third party and make decisions on financial management (Biacabe 2008).

3.4. Method of identification

Methods of beneficiary identification have been extensively discussed and documented. Universally, HEF beneficiaries are enrolled through pre-identification, post-identification or a combination of the two. In a few cases, vouchers are issued as the authority to access services (for example, in projects implemented by BTC and UNFPA). There has been no experience with voluntary pre-registration, geographic targeting, population targeting (by group characteristic), service targeting (outside national vertical programs) or free primary care delivery (though some of these alternatives are talked about). And there has been no extensive discussion about the costs of identification. Now, questions related to beneficiary identification methods are being superseded, in part, by national implementation of the ID-Poor program through the Ministry of Planning (using pre-identification surveys).

There is clear evidence on the relative merits of pre- and post-identification. There have been four significant studies related to identification practices: at Oddar Meanchey, Kiri Vong, Phnom Penh and Kampong Cham (Ir, Decoster et al 2008; Jacobs and Price 2008; Men and Meessen 2008; Ir 2009).

The most recent evidence shows pre-identification as both the most effective in targeting and coverage and most cost effective in delivering benefits to the poor. While Biacabe (2008) observes that identification of the poor is not sufficient to ensure that poor people use public health services, the evidence indicates that HEF with pre-identification increases utilisation by the poor.

A 2009 analysis of data from seven ODs covered by URC-supported HEFs (Jordanwood, van Pelt et al 2009) showed that:

- Hospital IPD rates almost doubled in the 36-months following pre-identification compared to the same period prior, and utilisation rates during a local epidemic were stronger for pre-identified beneficiaries than for fee-paying patients.
- A significantly smaller proportion of households had debt for health care in ODs with pre-identification than in comparable ODs with post-identification.
The average annual cost of the HEF scheme per OD was US$43,000 with post-identification and US$91,000 with pre-identification.

Pre-identification was cost-effective for debt avoided compared to HEF investment (direct benefit plus administration); post-identification was not cost effective in avoiding debt (investment > debt avoided).

MOH monitoring of HEFs revealed (at some sites) a higher score for pre-identified than post-identified households against objective criteria. While post-identified households produced a higher average monitoring score than pre-ID for attitude to equity, staff attitude, perceived benefit of HEF and availability of food, it was argued that this might reflect an increased sense of empowerment and increased expectations by beneficiaries (van Pelt 2007).

Measuring criteria related to health care-seeking behaviour, out-of-pocket expenditure, ability to pay, effect on coping strategies and debts for health care, Jacobs and Price (2008) concluded that pre-identification was superior to passive identification for all indicators except timely care-seeking. Secondary analysis of Cambodian Socio-Economic Survey data indicated that pre-identification was associated with much stronger social health protection than post-identification. A cost-benefit analysis showed a return on post-identification of 14% and on pre-identification of 132% (MOH 2009).

Post-identification provides a quick start to HEF schemes and addresses exclusion errors from pre-identification. Post-identification of the poor seems to be low cost and effective (Ir 2004). Different schemes were initiated with passive- or post-identification or self-selection, but later moved to active case finding in the hospital ward and to pre-identification in villages (Ir and Hardeman 2003). Post-identification has been maintained both to address exclusion errors from pre-identification and to account for the mobility of poverty (Ir, Decoster et al 2008).

Exclusion errors are high with post-identification because only those who present at the hospital or health centre become eligible; often, village people are neither informed about the HEF nor confident of gaining free care (Hardeman 2001; Van Damme, Meessen et al 2001; Meessen, Van Damme et al 2002; Bautista 2003; Van Damme, van Leemput et al 2004; van Pelt and Bun Mao 2004; Ir 2008; van Pelt 2008).

Used alone, post-identification is therefore not sufficient (Noirhomme 2005) and ideally should be used in combination with pre-identification (Noirhomme, Meessen et al 2007). When the poverty profile changes over time, post-identification is effective: in Kampong Cham, for example, one year after pre-identification about half of all HEF beneficiaries at the three referral hospitals had been identified through post-identification, while more than half of all households recorded a decline in poverty (Ir 2009); similar results were evident at Oddar Meanchey, where 71% of respondents had changed living conditions four years after the pre-identification survey (Ir, Decoster et al 2008).

Pre-identification is accurate and effective. Pre-identification has been confirmed as an effective approach in a number of cases (Bautista 2003; Overtoom 2003; Ir 2004) and is preferable from various points of view: informing poor people who otherwise would not seek care (Bitran and Associates 2005); overcoming the distance barrier by informing remote villagers about HEF benefits (Noirhomme 2005); promoting initial care-seeking at public facilities, reducing out-of-pocket payments and more effectively dealing with debts (Jacobs and Price 2008); and increasing utilisation by the poor (Annear, Wilkinson et al 2006). One health centre survey showed that increasing access to primary care by the very poor requires active intervention (Meessen and Ir 2003).

Various studies have shown that inclusion and exclusion errors are rare in pre-identification surveys (Ir 2004)—although coverage of the poor through pre-identification appears to understate the prevailing level of official poverty. In one survey, the pre-identification was perceived as fair by 82% of beneficiaries (Men and Meessen 2008).

Encouraging community participation either to identify the poor or verify lists of eligible beneficiaries reduces administrative costs (Jacobs and Price 2003; Jacobs and Price 2006), initiates the identification process quickly (Ir 2004; van Pelt 2007), gives the process validity (Noirhomme, Meessen et al 2007) or increases its accuracy (Biacabe 2008).
The effectiveness of pre-identification is constrained over time where poverty is mobile; the reason for inaccuracies is generally not errors in survey procedures but changes in poverty status; regular monitoring is therefore necessary, and pre-identification should be used in combination with passive identification (Criel, Van Damme et al 2008; Ir, Decoster et al 2008; Jacobs and Price 2008; Ir 2009).

There has been no formal evaluation of ID methods and no assessment of common standards. Conference proceedings have been a venue for aligning procedures between schemes (Van Damme 2006), and more recently identification procedures are being standardised de facto through the Ministry of Planning ID-Poor process, which is yet to be documented. But no uniform assessment of standard procedures has been made.

Generally, the poorest households are identified through household assessments, formalised by identification criteria; but (between sites such as Svay Rieng, Peareang, Kiri Vong and Sotnikum) there are differences in the place and time of selection and the criteria, methods and tools used (Noirhomme 2005). Methods of pre-identification vary in different ways between HEF projects: health cards vs vouchers (Ir 2004); involvement of local authorities (Lanjouw 2004); preparation of initial lists by village authorities (Ir 2004); NGO checking of such lists against objective criteria (Ir 2004).

In some cases, criteria for poverty assessment may be set at a level that is appropriate for meeting the patient costs of hospital coverage; using the same level for these criteria when assessing the ability to pay for lower cost health centre services may extend coverage too broadly and produce a financial burden on the equity fund. Keller, Thomé et al (2006) argue that, in such circumstances, there may be a need to look separately at eligibility criteria for HEF benefits at health centres. Biacabe (2008) argues there is a need to move away from fragmented and isolated identification initiatives towards standardised procedures. She also argues that because poverty status is mobile, identification mechanisms need to be flexible and adapted to the evolving socio-economic situation. Yet the method of identification has not been evaluated in all cases (Noirhomme 2005).

Therefore, consistent poverty definition and assessment criteria are needed, and pre-identification must be an ongoing process (Men and Meessen 2008). Jordanwood (2008) argues that harmonisation between all HEF schemes can occur immediately on a common benefit package, its administration and an operational database, patient satisfaction and case monitoring and the purchase of services linked to quality. National implementation of poverty pre-identification procedures through the Ministry of Planning may lead to efficiencies for HEF implementation.

3.5. Appropriate benefit package

A common benefits package has not been agreed but is viable. Current benefit packages provided by the various HEF and CBHI schemes are striking in their similarity, so agreement on a common package is viable, and once agreed would permit portability between schemes, leading to eventual merger (Jordanwood 2008).

The MOH strategic framework identifies CPA and MPA services as fundamental to the package (MOH 2003). There was common and early agreement that the HEF benefit include food and travel costs in addition to user fees (Overtoom 2003; Ir 2004; Noirhomme, Meessen et al 2007). Benefit packages vary, though, between HEFs (which include MPA and CPA services, transport, food and other ancillary costs), government fee-exemption subsidies, CBHI schemes (which also exclude transport, food and ancillaries) and voucher schemes (which are currently focused principally on reproductive health), while different HEF schemes have at times scaled reimbursements by poverty status (Ir 2004; Bitran and Associates 2005; Biacabe 2009), though discounted reimbursements for the very poor have also been criticised (Knowles 2001).

Discussion continues about the extension of HEF coverage to health centres. Currently, about 120 out of 970 nationally have HEF schemes, but no uniform policy has been developed.

Financial protection for chronic disease and catastrophic events is ambiguous. While HEFs in principle provide protection for high-cost hospital services, there are implicit or explicit limits in what they cover, and the impoverishing costs of treatment for catastrophic events are covered only for existing HEF beneficiaries (Bitran 2002; Bitran, Turbat et al c.2003). Financial protection against the costs of ongoing chronic disease care (rather than symptomatic care) is not guaranteed (no continuum of care) where such treatments are outside the CPA/MPA package and national vertical disease control programs (van Pelt and Bun Mao 2004; van Pelt 2006; van Pelt 2008).
There are gaps, too, between the ambit of coverage provided by HEFs and that provided by national vertical programs. Malaria diagnosis and treatment are currently not free. TB/HIV patients need to pay monthly transport costs for DOTS and anti-retroviral treatment. Suspect TB cases may face user fees for the first course of antibiotics as well as X-ray. Laboratory tests for HIV-positive patients may not be free. People living with HIV/AIDS are in principle exempted for other illness (such as surgery), antenatal care or delivery, but more research is needed to confirm whether this policy is widely applied in absence of fee reimbursement (Biacabe 2009).

3.6. Provider payment mechanisms
There is no published or grey literature discussing the relative merits of different provider payment mechanisms (such as fee for service, capitation or case payment). However, the goal of unifying payment mechanisms by using common methods across different HEF schemes was one of the recommendations of the 2008 Second National Forum on Social Health Protection (Annear 2008b).

4. The Implementation Environment

4.1. Institutional and contextual factors
The economic, social, demographic and health context within which HEFs emerged and now operate is well described by many of the authors who appear in this bibliography. As indicated in the Strategic Framework for Health Financing, Cambodia is characterised by high, though declining, levels of poverty, an unusually high level of per capita spending on health care and high out-of-pocket spending with low government health expenditure. Health expenditures are a leading cause of new impoverishment.

Institutional factors are less well understood. Policy development through the MOH has been strong, but the policy context is not well documented. Ir, Bigdeli et al (2010) concluded that the positive development of HEF policy was due to a conducive policy context, credibility and timeliness of HEF knowledge and commitment and good relationships among actors. HEF policy was based on knowledge about the problem of access to health services and the failure of user fee exemptions, knowledge about the effectiveness of HEF pilots and knowledge about institutional arrangements and conditions for replication of the pilot schemes.

HEFs address institutional factors on both the supply side—the need to recover the cost of fee exemptions—and the demand side—the inability of the poor to cover health costs. Institutionally, purchasing and providing services must be separated. For HEF operators, the key requirements are good knowledge of the local context, managerial capacity, accountability to donors and a hospital presence (Noirhomme, Meessen et al 2007).

However, beyond the policy documents, there is almost no comprehensive analysis of the national and local institutional structures that are needed for the implementation of national HEF and other SHP programs on the path towards universal coverage.

4.2. The referral system
HEF coverage of health centres encourages good health-seeking behaviours. So far, only a small proportion of health centres are covered by HEFs, approximately 38 out of 967 health centres nationally (MOH 2009). Annear, Wilkinson et al (2006) considered there was too little evidence at the time to say conclusively what the impact of HEFs on health centre usage was. Later evidence from different sites indicated that HEF beneficiaries tended to bypass health centres when they were not included in HEF coverage, revealed often in an increased number of self-referrals to hospitals (Nguyen 2004; Sadiq, Biacabe et al 2007; Biacabe 2008). Poor health centre service further discourages their utilisation; for example, at three Kampong Cham referral hospitals 53-96% of patients had not visited a health centre (Ir 2008; van Pelt 2008).

Including health centres in HEF coverage has significantly increased utilisation (Meessen and Ir 2003; Jordanwood, van Pelt et al 2009). Health centre utilisation increased by 44 % with the extension of HEFs to Kvav and Samraong in Soutr Nikom, thus removing distance barriers for remote households and creating a new relationship between beneficiaries and the whole public health system (especially for adult women); the number of HEF-assisted inpatients at the referral hospital coming from Kvav sharply increased (139per cent, compared to 68% for areas without HEF health centre coverage) (Meessen and Ir 2003).
Providing HEF benefits at health care centres appears to have stimulated appropriate care seeking. In one such case, a significantly higher proportion of hospitalised HEF beneficiaries (27–45 per cent) than fee-paying patients (12–19 per cent) had first consulted a health centre and/or been referred by a health centre to the referral hospital, although only a third of interviewees who visited health centres prior to hospitalisation were officially referred (Jacobs and Price 2006; Jacobs, Price et al 2007a; MOH 2009). In Kiri Vong and Ang roka, pagoda- and mosque-based schemes have provided sustainable financing for health centres, but the lack of fund pooling between health centres caused disparities due to varying socio-economic conditions between HC areas.

However, in one case where health centre fees were low and pre-identification was based on ability to pay for hospital services, the extension of HEF benefits to health centres led to a four-fold increase in the proportion of HEF beneficiaries among clients, without any increase in total consultations; that is, those who previously had paid health centres fees no longer did (Keller, Thomé et al 2006).

No cost-benefit analysis of expanding HEF coverage to health centres has been made. No assessment of the proposal to provide all health centre services free of charge has been made.

Some writers have recommended extending HEF coverage to health centres (BTC 2007; Ir 2008; Ir, Decoster et al 2008; Ir 2009; Ir, Horemans et al 2010). Others have indicated that supply-side subsidies are also needed (particularly to support CBHI or HEF-CBHI in combination) (Annear unpublished; Annear, Bigdeli et al unpublished). None of the literature considers the proposal to provide all MPA services free of charge at the point of service.

4.3. Monitoring and evaluation

There has been no comprehensive evaluation of HEF arrangements. Two national HEF monitoring reports have been issued by the MOH (van Pelt 2007; MOH 2009). The reports focused on sampled HEFO schemes and beneficiaries and reported on utilisation of facilities, pre- vs post-identification, quality of care and debts for health care.

Many HEF schemes have not been evaluated. Internal project evaluations have been carried out for some HEFO-type schemes, including the BTC projects at Siem Reap, Oddar Meanchey and Kampong Cham (van Pelt 2006; BTC 2007; van Pelt 2008) and selected HEFO schemes managed by URC (Jordanwood, van Pelt et al 2009). There was an early evaluation of the USG project in Phnom Penh (van Pelt and Bun Mao 2004). An extensive household sample survey was carried out in BTC project areas in Siem Reap, Oddar Meanchey and Kampong Cham (Ramage and Pictet 2008).

Comparative analysis of HEFO-type schemes was completed for Siem Reap, Oddar Meanchey and Soutr Nikom referral hospitals (Noirhomme 2005) and for HEF arrangements at Svay Rieng, Peareang, Kiri Vong, and Soutr Nikom (Noirhomme, Meessen et al 2007).

Implementation of HEF through different types of local committee or community-based arrangements was evaluated at Svay Rieng (Nguyen 2004; Biacabe 2008). A number of publications by Jacobs and others have surveyed results of HEF implementation at Kiri Vong (Jacobs 2003; Jacobs and Price 2003; Jacobs 2004; Jacobs and Price 2004; Jacobs and Lot 2006; Jacobs and Price 2006; Jacobs, Price et al 2007a; Jacobs, Price et al 2007b; Jacobs and Price 2008; Jacobs, Thomé et al 2009)

There has been no monitoring, evaluation or analysis of SUBO schemes under which government subsidies are provided to selected facilities to meet the cost of fee exemptions granted to the poor.

While the findings of all these reports are valuable to guide future planning, policy making and the implementation of HEF local and national arrangements, there has been no comprehensive national evaluation of HEF implementation. The findings from all the reports listed in this section have been reported in this bibliography and comprehensive literature review.
4.4. Contracting
Contracting is a form of management strengthening and supply-side subsidy. There has been no comprehensive independent evaluation of the contracting experience in Cambodia.

A national review of HEFs by Annear, Wilkinson et al (2006) reported that the best outcomes for HEF implementation were in districts with contracting, resulting mainly from improved management and supply-side subsidies. Initial piloting of the contracting model produced variable results depending on location and type of contracting but recorded increased RH utilisation among the poorest half of the population by as much 2600 per cent, from a very low base, and reduced out-of-pocket expenditure by as much as 77% (Crossland and Conway 2002).

A review of contracting commissioned by AFD found that access to health care for ethnic minorities, women and vulnerable groups was greatly improved through contracting; contracting combined with HEFs improved coverage of and utilisation by the poor; and the role of HEFs in financing future rounds of contracting must be regarded as questionable (Sadiq, Biacabe et al 2007). The review concluded there was a ‘perverse solidarity effect’ in which funding for the poor (through HEFs) subsidised service provision for the wider community.

Annear, Bigdeli et al (2007) reported that contracting at Ang roka provided a more reliable stream of income, improved staff incentives, strengthened management and improved service quality. At Kiri Vong, increased revenues came from user fees and HEF payments (11% of total revenues) and this provided for increased staff incentives (Jacobs, Thomé et al 2009; see also Keller, Thomé et al 2006; Keller, Thomé et al 2008).

An assessment of performance contracting under the BTC project at Kampong Cham found that increased hospitalisations and improved facility revenues (which supported increased staff incentives) were due mainly to the HEF, while less poor patients continued to use principally private services (Keller, de Jong et al 2008).

There has so far been no assessment of the government’s special operating agencies, a form of internal contracting in the health sector.

4.5. Community-based health insurance
There is no evidence base to support linkage between HEF and CBHI. While linking HEF and CBHI schemes has been often proposed, experience with such linkage is limited, and there is no evidence base in the literature (internationally or in Cambodia) to support it. The results of an AusAID-funded study of experiences with HEF-CBHI linkages in Cambodia (principally in Kampot OD) and in the Lao PDR (principally in Nambak district) during 2008-09 have not yet been published (Study of Financial Access to Health Services for the Poor in Cambodia and the Lao PDR, Phase 3).

However, preliminary reports of this research indicated that using HEF money to buy CBHI premiums for the poor, combined with capitation provider payment, inevitably led to negative cross-subsidisation from the HEF to the CBHI scheme and/or health providers in the short term, principally because the facility contact rate by HEF beneficiaries (who tend to live in more remote areas) was commonly well below that of CBHI voluntary payers (who tend to live close to facilities) (Annear unpublished; Annear, Bigdeli et al unpublished). HEF population coverage tends to be large and CBHI membership small. Based on the preliminary findings of this research, it was recommended that caution was needed and, within the context of moving to universal coverage, models of HEF-CBHI collaboration should be extensively tested and evaluated before any policy on combination of the schemes is adopted (Annear 2008b).

Different forms of HEF-CBHI collaboration have been proposed. Hardeman (2001) proposed that health insurance and micro-credit should be complementary to the HEF in Phnom Penh, the last supporting those unable to make use of these services. In one case (Thma Puok), a successful HEF scheme was phased out in favour of recruiting beneficiaries into a subsidised, local NGO CBHI scheme to reduce dependence on external funding (CAAFW 2008) although a recommendation that a third party be recruited to pay premiums for the poor was not in fact realised (Ir and Hardeman 2006) and no account of the number of former HEF beneficiaries who subsequently joined CBHI has been made. Jordanwood (2008) recommended incorporation of HEF and CBHI activities into a common ‘unified scheme’, sharing management and administration without either the purchase of premiums by the HEF or sharing financial resources, as a means of extending coverage in the informal sector.
Using HEFs to purchase CBHI premiums for the poor is often recommended. The most comprehensive case favouring the use of HEFs to purchase premiums for the poor was put forward in a Tropical Medicine and International Health editorial (Jacobs, Bigdeli et al 2008). The idea of purchasing CBHI premiums for the poor was raised earlier within the HSSP (Crossland and Conway 2002) and during discussion of possible social health insurance initiatives (Bautista 2003). Advisers have argued in favour of HEF-CBHI linkages in GTZ project areas (Jowett and Nieveras 2005), at Kiri Vong (Criel 2006) and within the BTC project (BTC 2007; Ir 2008; Ir, Decoster et al 2008; Ir 2009; Ir, Horemans et al 2010).

The in-principle arguments favouring the purchase of premiums by the HEF include: to produce administrative efficiencies, to broaden the risk pool, to increase purchasing power, to increase equity in access, to improve quality of service, to provide sustainability, to provide a kick-start to struggling CBHI schemes, to enable the schemes to mature financially and managerially together, to strengthen local and/or national solidarity arrangements, to make solidarity mechanisms socially and politically more acceptable in a unified fund, to reduce fragmentation of funds, to reduce stigma and to create democratic structures.

These aims have not been widely tested and were not universally achieved during piloting in Kampot OD (Annear, Bigdeli et al unpublished), where there was a rapid increase in HEF coverage, a slow growth of CBHI enrolment and a facility contact rate for CBHI members much higher than for HEF beneficiaries (Song and Nieveras 2009).

Prospects for CBHI expansion are very limited. There is no evidence of plans or prospects for the rapid expansion of CBHI population coverage into new areas or for a substantial increase in membership within existing schemes as a proportion of the target population. The most extensive CBHI population coverage (of the informal sector and the poor, including 19% of the catchment population) has been achieved at Thma Puok since 2005, where a civil society organisation offers cheap, subsidised premiums (CAAFW 2008); one study at Thma Puok found that high levels of trust for the insurer within the community were vital in the success of the scheme (Ozawa and Walker 2009).

Other options for increased coverage have not been explored. While there has been informal discussion of proposals for the provision of free (that is, government-funded) primary care delivery or free maternal and child health care, such proposals have not been documented or assessed in the literature.

4.6. Scaling up

The expansion of HEF schemes to new operational districts has occurred under guidelines provided by the Ministry of Health and through the activities of several international NGOs. This process has been partially but not completely documented (Annear, Wilkinson et al 2006; Annear 2008a; Jordanwood, van Pelt et al 2009).

By 2004 it was argued that scaling up HEF was appropriate and feasible (Ir 2004). The marginal cost of nationwide provision of HEF was estimated at between US$1.8 million and $4.9 million annually (for a total cost of up to US$7.3 million or US$0.50 per capita per year) (Fabricant 2006; Lane 2007). Combining contracting with HEF nationally would cost a total of US$44 million annually (Fabricant 2006), while government financing alone could cover the extra costs from 2013 (Lane 2007).

The MOH Strategic Framework for Health Financing proposed scaling up HEF for national coverage. Annear, Bigdeli et al (2008) argued that scaling up implied the need for a financial commitment by government and donors and should be implemented without damaging the decentralised, third-party and independent nature of the HEF arrangements. Jordanwood (2008) argued there was a need to harmonise and standardise operational policies and procedures across all sites to prepare for a national uniform system. Lane (2007) concluded that much of the policy and financing framework for scaling up health services was in place, infrastructure and staff were sufficient, donor funds and public spending were rising and per capita national health expenditures were adequate, though institutional fragmentation and rigidity in both the external aid community and domestic health system remained barriers to progress.

No recommendations for a future national HEF agency have been developed. The MOH’s 2009 draft Social Health Protection Master Plan, which is awaiting approval by the government to become national policy, notes that HEF national guidelines have been adopted and proposes that administration of the HEF and CBHI
schemes be moved under a single umbrella as a step towards the eventual consolidation of all SHP schemes in a single national agency. However, no studies have been conducted, and no recommendations developed, for the creation of a single national HEF agency.

CONCLUSIONS AND RECOMMENDATIONS
During the last ten years, HEFs have been conceived, initiated and piloted and now cover more than half of all health districts nationally. This review of the published and grey literature has identified the established evidence and the outstanding theoretical and practical issues related to HEF implementation.

The Evidence Base
There has been no uniform, national evaluation of HEF implementation
HEF schemes have been implemented, at least since 2003, within a framework and guidelines established by the MOH. But implementation has been decentralised, autonomous and determined principally by donor agencies and supporting NGOs. Some of the major donor projects have been evaluated in some way, but few of the many different HEF projects have themselves been formally evaluated, and no national evaluation of HEF schemes has been attempted (other than an earlier review through the Study of Financial Access to Health Services for the Poor, Phase 1 and 2–see Annear, Wilkinson et al 2006; Annear, Bigdeli et al 2007).

There is an evidence base for HEF implementation
The reports, reviews, commentaries and peer-reviewed articles that constitute this review provide a broad evidence base for moving towards a more unified system of HEF implementation. While the evidence is strong in some respects, there are many gaps, and there is wide variability in the nature and quality of evaluations and research that have been conducted.

The strongest evidence comes from peer-reviewed publications and the more broadly based quantitative surveys. Most research data collection and analysis have focused on HEF projects implemented by the most prominent donor partner agencies, particular those with strong subsidiary support from a research institute. In this review, we have focused on evidence that is objective and empirical and supported by reliable quantitative and qualitative primary data collection.

Much of the documented evidence comes from localised studies using small samples, generally within a single OD or comprising a few health centres or villages. The quantitative evidence on facility performance is drawn mainly from routine HIS or project-related sources. With only a few exceptions, quantitative and qualitative data on household behaviours, benefits and perceptions are limited to small samples that cannot be easily generalised to a wider population.

To a large extent, knowledge to support policy development and practical implementation has been derived from the experience of the implementers, often shared and generalised in forums and conferences, rather than in the documented literature.

Nonetheless, the accumulation of evidence from a large number of localised studies provides consistent evidence of the effectiveness of HEFs and the lessons from their implementation. A sense of best practice on design features has emerged from this broader discussion.

Findings from the Review
Conclusive evidence exists on some issues of implementation and effectiveness
The contextual factors affecting HEF implementation are well known, including the socio-economic context, the political context, fiscal constraints and donor partner relations. There is conclusive evidence that HEFs have been effective for accurately targeting the poor and reducing financial and physical barriers to public health services. HEFs have enabled poor patients who previously had not been able to use health services to gain access and have reduced but not eliminated debt incurred to pay for health care. By bringing new people into the facilities without in general reducing the fee-paying base, HEFs have corrected the underutilisation
of facilities and provided significant additional revenue for staff incentives and facility running costs. As a result, staff attitudes have improved and facilities tend to open for longer hours. Clearly, improvements on the supply side are a prerequisite for effective HEF implementation, and arrangements that strengthen facility management, including different forms of contracting, work particularly well in combination with HEFs. While HEFs have worked as effective third-party payers for public health services, their purchasing role is as yet not fully exploited and their social role has not been fully developed. In general, the basic elements of HEF design are well established. Pre-identification is the most accurate, effective and cost-effective form of poverty identification and targeting and is well supported by post-identification to account for changes in the beneficiary population caused by the mobility of poverty over time.

Evidence needs to be verified on a range of other issues
A range of issues for which the evidence is partial suggests the need for further investigation. HEFs reduce debt for health care and associated interest rates, but the reasons beneficiary households continue to incur debt for health care (though reduced) is not well understood. HEFs appear to lessen the burden of health costs on the household, but the extent to which equity funds reduce household poverty is more difficult to establish. Further research is needed to understand the financial behaviours of subsistence households that are generally unable to access any cash.

Similarly, a better understanding of indirect costs of access and of exclusion errors (generally due to the absence of coverage rather than identification errors) is needed. While HEFs have improved the quality of care at many facilities, the evidence relating to methods and results is incomplete. Beneficiaries appear to be satisfied with the quality of services, but no rigorous test has yet been made.

HEF design elements that need more attention include issues related to health promotion, community participation and the purchasing mechanism. More analysis is needed of the extent (rather than the content) of the benefits package on issues related to scaling according to poverty level, exclusions, coverage of health centres and gatekeeping functions at first-line facilities. While health centre coverage appears to produce good results for the referral system, no cost-benefit analysis of health centre coverage nor any analysis of free provision of primary care services has been made. The initial evidence suggests that linkages between HEF and CBHI schemes run a high risk of negative cross-subsidisation, principally because of the low coverage rates achievable under voluntary CBHI; further evaluation of such pilot projects is needed before such linkages are generalised.

Issues not previously researched or resolved
Issues that have so far not been adequately researched relate to households, service provision, HEF management and institutional arrangements. As well, there are wider gaps in the evidence base. There is little evidence on the impact of HEFs on household health expenditures and financial behaviours, particularly why beneficiaries continue to borrow money for health care. Little is known about the impact of HEFs on health seeking and health care-seeking behaviours. The impact of HEF on the referral system is not well understood, and the need for and potential impact of financial protection for chronic diseases and catastrophic events is ambiguous. There is no documented evidence on the means to further HEF efficiencies and no discussion of different provider payment methods. Little is known regarding controls on over-consumption or overservicing (or underservicing) or on satisfying unmet needs. Broader national institutional factors are not well understood, including issues related to institution building and the development of national and local capacity.

Gaps in the Evidence
Among the main gaps in the evidence are an understanding of demographic changes, changed poverty status and their impact on HEFs. The impact of HEFs on household health status, wealth status and economic benefits has not been documented. No research has been conducted on staff attitudinal change as a result of HEFs, nor of staff needs and motivations. There has been no national evaluation of HEF arrangements, and national monitoring systems, while in place, are under-resourced. To date, there has been no evaluation of the role of HEF providers (including the government subsidy scheme) with respect to beneficiary identification, benefits administration, their social role or fundraising potential. There has been no formal independent evaluation of contracting and no analysis of the design or implementation of special operating agencies.
**Remaining Policy Issues**

National policy documents related to health planning, health financing and health equity funds are relatively strong (Health Strategic Plan, Strategic Framework for Health Financing, SHP Master Plan and HEF and CBHI guidelines), but the published analysis of national policy challenges is limited. It appears the evidence for scaling up HEF for national coverage is strong, but analysis and policy development in this area are incomplete. No official decision has yet been made to establish a national HEF agency, and the role to be played by the MOH and the government is not yet well defined. While the third-party role of HEFs is well established, issues related to third-party status are still in contention, particularly the respective roles to be played by independent NGOs and by government-related agencies and authorities. Pre-identification of beneficiaries will in future pass into the national process conducted through the Ministry of Planning, which therefore needs to be evaluated and refined from a policy point of view along with a better understanding of the means for periodically updating pre-identification. Policy related to a common national benefits package across various SHP schemes, while a viable option, has not yet been defined, and an approach to extending coverage to the informal sector has not been developed. A key issue for further policy development is the need for and the means of extending supply-side subsidies to health providers in order to improve quality of care and establish a firm base for the extension of social health protection measures.
Annex: Annotated Bibliography of the Published and Grey Literature on Health Equity Funds in Cambodia 2001-2010
INTRODUCTION

This annotated bibliography is presented as an annex to A Comprehensive Review of the Literature on Health Equity Funds in Cambodia 2001-2010, which provides a broader analysis of the references included here.

The bibliography is sorted alphabetically by author for ease of reference and summarises the main content of each article or report. Each reference is summarised against the headings: Purpose of the research, Type of data used, Methods of data collection, Main findings and Conclusions.

The bibliography is inclusive of every reference in the published and grey literature that provides evidence on HEFs and their impact. The methodology for selection of references is explained in the Comprehensive Review. No attempt is made here to sort the references according to the robustness of their research methods or the strength of the evidence provided. However, the description of type of data used and methods of data collection is intended to indicate those references that used more reliable research methods. The Comprehensive Review provides a further indication of which references provide more reliable results.

Articles and reports here may present evidence from different points of view about the same study site or location. All are considered as contributing evidence on different issues. Some of the references report on the same research activity or evaluation in different forms, for example, as a project report and later as a published article. All are included for comprehensiveness. Where there is overlap of this kind between references, the citation includes the phrase “[See also …]”.

In a review of this scope, errors of omission and commission are inevitable, and we welcome corrections. We would especially like to hear from researchers and authors cited in this review where our reference is incorrect or incomplete.

Please send all comments to Peter Annear at pannear@unimelb.edu.au.

ANNOTATED BIBLIOGRAPHY


Purpose of the research: To analyse demand-side health financing issues as background analysis relevant to the development of an implementation plan for the draft national Strategic Framework for Health Financing and the updating of the Social Health Insurance Master Plan.

Type of data used: Secondary.

Methods of data collection: Document review.

Main findings: The development of a comprehensive strategy for national health financing is at an early stage, and implementation of innovative demand-side financing schemes is a major achievement that provides a basis for further movement towards universal coverage. Development of a new Social Health Protection Master Plan is an opportunity to cement these achievements. HEFs are currently the most widespread and the most effective form of social health protection provided in Cambodia. The documented evidence indicates that HEFs are an effective means for providing financial access to health services for the poor, have extensive donor support, are well regarded by beneficiaries, may allow discretionary spending on health care (as opposed to ‘non-essential’ consumption) and are associated with surprisingly little social stigma.

Conclusions: HEF schemes should not be phased out as earlier planned by the Social Health Insurance Master Plan; include HEF in national social security arrangements; consider mechanisms within the proposed Social Health Protection Master Plan for regulating and scaling up HEFs nationally. Within the context of moving to universal coverage, pilot test and evaluate models of HEF-CBHI collaboration extensively before making plans for the combination of these schemes.

**Purpose of the research:** To report the outcomes of proceedings at the National Conference on Social Health Protection.

**Research questions:** Conference themes included issues and challenges in scaling up social health protection coverage to the poor and the informal sector.

**Methods of data collection:** Report of conference proceedings.

**Main findings:** This is a report of presentations, discussions and resolutions of the Second National Forum on Social Health Protection. Common administrative procedures between different SHP schemes for premium levels, benefit coverage, provider payment systems, compiling a database of beneficiaries and capacity building are needed along with better coordination between the various schemes. Linkages between HEF and CBHI schemes need to be further tested. The immediate challenges for HEFs are to expand population coverage nationally, extend benefit coverage, increase patient satisfaction and encourage quality improvement, and for CBHI to base expansion on improved service quality (through both greater influence over providers and increased availability of government funding), increase awareness of health insurance concepts within communities, provide government subsidies for informal sector health insurance and strengthen the regulatory framework. A more accurate and acceptable poverty identification process is required for expansion of HEFs as well as national regulation of user fees to enable the development of uniform benefit packages and provider payment systems.


**Purpose of the research:** To assess policy making for implementing, combining and scaling up of autonomous demand-side health financing schemes along the path towards universal coverage.

**Research questions:** What are the implications for equity, effectiveness and efficiency of targeting mechanisms? What are the financial implications of combining such schemes? What does this mean for planning and policy making?

**Study sites:** Kampot and Thma Puok health districts in Cambodia; Nambak district and Vientiane Province in the Lao PDR.

**Type of survey:** Quantitative and qualitative.

**Type of data used:** Primary and secondary.

**Methods of data collection:** Key informant interviews, routine data.

**Sample size:** 25 key informants in Cambodia and 40 key informants in the Lao PDR.

**Main findings:** International agencies played a key role in determining the approach to such questions. The MOH played a role in both countries in developing supporting policies to facilitate the development of these schemes. Policy makers relied more on their experiences in the field in implementing such schemes to determine policy settings and used the published evidence less directly where it was useful in decision making.


**Purpose of the research:** To assess the impact of combining voluntary community insurance and health equity fund programs as an option for expanded insurance coverage and sustainability of demand-side financing schemes by purchasing insurance premiums for the poor.
Research question: What are the financial implications for demand-side schemes of purchasing community health insurance premiums using funds earmarked to provide access to health services for the poor?

Study sites: Kampot and Thma Puok health districts in Cambodia; Nambak district and Vientiane Province in the Lao PDR.

Type of survey: Quantitative and qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Key informant interviews, routine data collection.

Sample size: 25 key informants in Cambodia and 40 key informants in the Lao PDR.

Main findings: Cross-subsidisation from the poor to the less poor is likely where the capitation payment system is used by the insurer for provider payments. This is due mainly to the lower contact rate among HEF members compared with voluntary insurance subscribers. Discounting the premium may not eliminate this cross-subsidy but may shift it from the insurer to the health provider.

Conclusions: Provider subsidies for health care delivery may be necessary but should be managed in a way that is purposeful, transparent and accountable.


Purpose of the research: To discuss the origins, nature and impact of HEFs and their role in national health financing strategy.

Research questions: How and why did HEF schemes emerge, what conditions enabled their growth and why are they effective?

Type of data used: Secondary.


Main findings: HEFs were first launched at district level in 2000, and the district coverage has grown rapidly. HEFs now exist in more than half of all health operational districts in Cambodia. NGOs have implemented HEFs while the MOH develops the national policy. Evidence of increased utilisation and reduced debt for health care from HEF implementation is established in the grey and published literature, including the Access Study reports. Unfunded fee exemptions are not effective. HEFs raise the fee exemption level (percentage of attendances) approximately to the level of prevailing poverty percentage of population). Coupled with strong management procedures (such as contracting), the exemption level equalled the level of poverty. HEFs bring new people (those previously unable to attend) into the public health system. HEF and CBHI schemes are complementary in reducing health costs and increasing access for the poor. HEFs (and CBHI) provide significant additional revenues and staff incentives at facilities and improve quality of service delivery. Under-the-table charges are reduced.

Conclusions: Targeted demand-side financing strategies are essential if public health services are to be fully utilised and the poor are to gain equitable access to the health services they need. The main impact on improving access to health services for the poor has been achieved by the HEFs. HEFs appear to be most effective when they are linked to the community and adopt a pro-active social approach. HEFs are often particularly effective in providing increased access to health services for the poor when used in combination with complementary supply-side and demand-side financing initiatives like contracting and CBHI. HEFs require donor support until government can accept financial responsibility. However, compared to other donor investments in the health sector, the HEF is a relatively low-cost program with significant benefits and strong externalities continuing for a long period into the future.

**Purpose of the research:** To assess the impact of various health financing schemes on access to public health services for the poor in Cambodia.

**Research questions:** Are user-fee systems applied according to regulations? Do user fees exclude the poor from health services? Do exemptions, HEF and CBHI schemes provide increased access to services? Is the quality of care the same as for those who pay fees? What are the public perceptions of user fees, HEF, CBHI and health services? Are there significant rural-urban differences?

**Study sites:** Phnom Penh (official user fees, HEF and CBHI); Ang roka (official user fees, HEF, CBHI and contracting).

**Type of survey:** Quantitative and qualitative.

**Type of data used:** Primary and secondary.

**Methods of data collection:** Focus group discussions, patient exit interviews, key informant interviews, routine data collection. Structured questionnaire to collect routine facility data on utilisation and financing. Coded questionnaire used for patient exit interviews. Open-ended question guide used to prepare and lead focus group discussions. A semi-structured, open-ended questionnaire used for key informant interviews.

**Sample size:** 679 patient exit interviews in Phnom Penh (429) and Ang roka (250); 12 focus groups (PP 6, AR 6) with 166 participants (PP 78, AR 88); 42 key informant interviews (PP 22, AR 20).

**Main findings:** HEFs and CBHI provided coverage for about 30% of patients attending the facilities in Phnom Penh and Ang roka. HEFs and SKY provided access to public health services for people who did not previously have it. HEFs alone appeared to give access to health services to poor people who had previously been excluded. SKY had encouraged people who previously used alternate (often private) providers to move to public health facilities. According to exit interviews, about a quarter of respondents receiving either HEF or SKY did not previously attend the facility. Utilisation of referral hospitals in Phnom Penh and Ang roka had increased: in Phnom Penh, IPD increased from ~200 per month in 2002 to almost 500 in 2007; OPD from 500 per month in 2002 to 2000 in 2005. It appeared that HEFs had a positive effect on utilisation at the Phnom Penh MH. In Ang roka, RH IPD increased from ~50 per month in 2001 to 250 in 2006; OPD increased from ~100 per month in 2002 to 200 in 2006. The BOR at Phnom Penh Municipal Hospital rose from 40% in 2004 to almost 60% in 2006; much of the increase was attributable to the HEF. In Phnom Penh, IPD admissions for HEF patients increased from ~100 per month in 2004 to 300 in mid-2005. In Ang roka, admissions for HEF patients rose to 64% of total IPD in December 2005. Contracting was valued by the health administrators and health staff in the OD because it provided for improved staff incentives and helped to improve service quality. Contracting had provided a more reliable stream of income to the facilities than reliance on government funding alone, and it had enabled the staff to get on with management and service provision. User fees had become an important source of additional revenue to health facilities, including those in Phnom Penh and Ang roka. HEFs provided about 20% of hospital revenues.

**Conclusions:** HEF is the most effective mechanism to provide access to public health services for those people who previously could not afford to attend. CBHI encourages greater use of public health services by patients who had previously used alternate services. Supply-side mechanisms like user fees and contracting work best when used in combination with HEF and CBHI.


**Purpose of the research:** This paper discusses Cambodia’s efforts in providing primary health care to its population and in particular looks at two innovative financing schemes that have emerged (contracting and health equity funds), their contribution to extending primary care and the implications for national health and health-financing policy.
Research questions: To what extent has this health-systems approach to providing PHC been successful? What has been the contribution of innovative schemes to this process?

Type of data used: Secondary.

Methods of data collection: Document analysis, official statistics, participant observation. Evidence from official documentary sources, a review of the published literature, data from the Cambodian Demographic and Health Survey 2005, recent operational research, interviews with key informants over a number of years and the extensive experience of the authors working with and within the Cambodian health system.

Main findings: To analyse the links between selected health-outcome tracers (maternal and childhood mortality) and improvements in service delivery, the authors consider the risk factors identified as contributing to these tracers and then consider changes in proxy service-delivery indicators related to the risk factors. There have been significant reductions in childhood mortality rates, but maternal mortality has not declined, mainly due to the lack of attended births and the low utilisation of public health facilities for deliveries. The gains in improved health status have not been equally distributed, and a growing inequality in income distribution is reflected in differential childhood mortality rates. There are also significant disparities in the rural-urban distribution of health gains. Mortality rates appear to be responding to improved delivery of primary care services; supply-side initiatives such as contracting have improved immunisation rates, and demand-side initiatives like health equity funds have improved utilisation by the poor.

Conclusions: A number of factors have contributed to improved health status, and the innovative schemes have played a significant role.


Purpose of the research: The study investigated the extent to which financial and other barriers that prevent access to health services by the poor are reduced with the introduction of HEFs, CBHI and contracting.

Research questions: Do HEFs, CBHI and/or contracting increase access to health services for the poor? Do HEFs, CBHI and/or contracting reduce the impact of health costs as a cause of poverty?

Study sites: All ODs where HEFs, CBHI and contracting had begun, including 44 different service delivery and financing schemes across 33 out of 76 ODs in 21 out of 24 provinces nationally (28 ODs with HEFs, CBHI and contracting and 5 operated solely through the MOH). Case studies were conducted in two locations, Phnom Penh and Ang roka.

Type of survey: Quantitative and qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Document analysis, case studies, routine data. Qualitative data from case studies using key informant interviews and focus group discussions; secondary analysis of primary quantitative household data on debt for health care. A detailed questionnaire was developed to gather the routine data against selected variables comprising intermediate indicators of RH utilisation and financing (attendances, BOR, revenues, exemptions) provided by the MOH-HIS and scheme implementers.

Sample size: The review covered all operating HEF schemes nationally: some meaningful data were collected from all but 9 schemes (incl. limited data from 5 CBHI sites). Qualitative interviews were conducted with 43 households in two Phnom Penh squatter communities. Secondary analysis of quantitative data collected during HEF pre-identification from 1704 households in the Boeng Kak squatter community (which then had HEF coverage) and 1505 households in the Tonle Basak squatter community (where HEF had not begun).

Main findings: This was the first and only comprehensive national survey of HEF coverage and access for the poor. The study identified the key supply-side and demand-side barriers to health services, including
physical barriers, financial barriers, quality of service issues, poor user knowledge and sociocultural barriers. The study indicated that HEFs, CBHI and contracting can address many but not all of these barriers (cultural barriers remain difficult to address). By January 2006, HEF ODs comprised a total catchment population nationally of 4.7 million, including approximately 1.5 million potential beneficiaries; the number of patients who had been provided with HEF benefits during 2001-05 was in the order of 50,000-80,000. Compared to the estimated number of very poor in catchment areas (almost 2.5 million) the HEF coverage of the poor appeared inadequate, excluding up to 40% of potential patients who live below the poverty line and either do not access health services or do not take advantage of the benefits available. Health equity funds were the most effective and efficient means to target the poor. HEFs and contracting were associated with an increase in facility utilisation, measured as IPD and OPD utilisation. In most cases, facility utilisation rose significantly as a result of HEF introduction without eroding the fee-paying base and leading to full use of RH capacity. On average across HEF districts, the bed occupancy rate showed a consistent increase from a low base in 2000, reaching about 100% in 2005. HEF and other exemptions given to patients accounted for 27% of aggregate hospital user-fee revenues within the OD catchment areas; in a number of districts HEF payments provided a clear subsidy to health facilities. Evidence from Phnom Penh Municipal Hospital indicated that the introduction of pre-identification for HEF in 2004 had encouraged an increase in admissions, the proportion of IPD patients with HEF support and the BOR. There was insufficient data to assess the impact of HEFs on the referral system, but some evidence suggested an increase in referrals from health centres in some HEF areas. In Phnom Penh and Ang roka, 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. The household data from Phnom Penh indicated that HEFs helped reduce debt for health care: the proportion of sampled households with debt for health care (long- and short-term) was significantly less where HEFs were implemented and average interest rates were lower.

Conclusions: Health equity funds had expanded rapidly and spontaneously, indicating that they met real needs of the poor for access to health services. HEFs successfully targeted the poor, provided access for the poor who previously could not attend due to cost, significantly increased utilisation of facilities, reduced debt and interest payments for health care, reduced the impact of health costs on impoverishment and provided a needed subsidy to facilities.


Purpose of the research: To discuss how control of under-the-table charges can help to reduce out-of-pocket payments. Informal payments form a large proportion of total health spending; user fee systems have a potential negative impact on utilisation; formalising unofficial payments within a comprehensive resource management system has the potential to increase utilisation and reduce out-of-pocket expenditures; user fees can contribute substantially to hospital financial resources.

Research questions: What are the key aspects of organising the financing scheme at Takeo Provincial Referral Hospital regarding under-the-table payments, the global contract that stipulated the long-term financial plan and the lessons?

Study sites: Takeo Provincial Hospital.

Type of data used: Secondary.

Methods of data collection: Routine data from 1997 to 2002.

Main findings: Annual admissions increased in 1998 by about 50% from 1997 levels, and the increase was sustained. The proportion of central government funding increased from 30% of total revenues in 1998 to 61% in 2002, while donor support was removed after 2001. User fees remained remarkably stable, contributing 33-38% of total hospital revenues in 1998-2002. The major line item expenditures were staff bonuses, drugs and hospital operational costs. The individual performance evaluation system did not function consistently because civil servant salaries are low.
Conclusions: Formalising under-the-table payments by implementing user fees helped to control out-of-pocket patient expenditures, ensured patients of fixed prices, protected patients from the unpredictability of hospital fees and promoted financial sustainability. Utilisation increased by more than 50% for inpatient and surgical services, and cost recovery from user fees averaged 33 per cent. Furthermore, the hospital phased out external donor support gradually over four years and achieved financial sustainability.


Purpose of the research: Examined various approaches to health financing to determine directions for URC and investigated the health equity fund initiative as an institutional arrangement to address equity and access by the poor.

Research question: What are the appropriate health financing interventions that will increase access and utilisation of health services by the poor?

Study sites: Koh Kong OD and Pursat province.

Type of data used: Secondary.

Methods of data collection: Document review.

Main findings: Recent initiatives in equity funds have shown that more community pre-identification of poor families can enhance access. Sustainability concerns from heavy donor involvement can be addressed by not limiting equity funds to a payment mechanism but using them to leverage quality improvements in public facilities. More pro-poor initiatives can start with governance reforms that improve health personnel attitudes and interactions with poor patients. Access and utilisation barriers are three-fold: availability and effectiveness of services, patient preferences and socio-demographic variables. These interact with three health financing needs: resource mobilization, financial protection and social inclusion.


Purpose of the research: To report on the first four months of HEF operation.

Type of data used: Secondary.

Methods of data collection: Routine data, pre-identification survey.

Main findings: Pagoda-managed HEF was available at three health centres. Previously only 1.22% of the catchment population was exempted. Following pre-identification in January 2010, about 15% of the total population at the selected HCs was enrolled in HEF.


Purpose of the research: To analyse the performance of the Health Equity Fund supported by UNICEF in Svay Rieng province and draw useful recommendations for policy making.

Research questions: Key questions concerned the identification system, impact on utilisation, impact on hospital activities, performance of the HEF support committee and gradual integration into the wider universal coverage system.

Study sites: Svay Rieng.

Type of survey: Qualitative.

Type of data used: Primary and secondary.
Methods of data collection: Document review, key informant interviews, focus group discussions, routine data. Structured interviews with key informants, visits to health facilities and patient interviews, field research in 24 communes where focus groups discussions were held with beneficiaries and non-beneficiaries of the equity fund.

Sample size: Visits to the provincial hospital, the two district referral hospitals and six health centres, key informant interviews with PHD-provincial hospital, two ODs and referral hospitals, Department of Planning, UNICEF team, equity fund support committee, 98 village health support groups and six commune councils, NGOs working in the province, interviews with 52 patients (37 HEF beneficiaries and 15 non-beneficiaries) at the provincial hospital. Focus group discussions were held in 23 randomly selected villages in clustered communes, with a total of 188 persons, among which 101 HEF families.

Main findings: 27% of the total population of the province were pre-identified for HEF. Since the introduction of the HEF scheme at the provincial hospital, the exemption rate climbed from 12% to 33% and the utilisation of services by both HEF beneficiaries and paying patients increased almost three-fold. Women and children represent the majority among hospitalised beneficiaries. However, the majority of users come from the nearby district of Svay Rieng, while fewer than 10% come from the two other operational districts of Romeas Haek and Chi Phu. Perceived and objective quality of services at the provincial hospital, including availability and attitude of the providers, is good, thanks to ongoing support from UNICEF and the British Volunteer Services Overseas (VSO) technical support for two years. Health centres and district referral hospitals are not covered by the HEF scheme at the moment, leading to a situation where patients may have a strong incentive to bypass first referral levels and utilise directly the most expensive third level of health services. The community-based pre-identification has been cost-effective and generally fair, although exclusions errors were reported by key informants as the list of eligible people relied essentially on village leaders and was validated by provincial Health Department-operational district staff, without a broad community consultation. The poverty status is mobile, and poor identification mechanisms need to be flexible and adapted to the rapidly evolving socio-economic situation in the province.


Purpose of the research: To examine the parallel implementation of national programs of free diagnosis and treatment and demand-side health financing mechanisms ensuring free access at the point of care, i.e. health equity funds.

Research questions: Identify overlaps and gaps regarding incentives for the staff and access to health services for the population. Provide recommendations for appropriate linkage between these approaches in service delivery.

Study sites: Kampot and Kampong Chhnang provinces.

Type of survey: Qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Case studies based on field visits, document review, focus group discussions, patient interviews.

Sample size: Field sites for case studies: 11 health facilities (3 RHs, 8 HCs); patient interview: 32 in-patient interviews at RHs and 8 exit interviews at HCs; focus group discussion: 14 with 110 villagers.

Main findings: National Malaria Control Programme provides drugs and tests to health facilities nationwide but malaria diagnosis and treatment are currently not free. Tuberculosis and HIV-AIDS diagnosis and treatment are free, but patients need to pay monthly transport for TB-DOTS and anti-retroviral treatment (except where NGOs and home-based care teams provide social support); suspect TB cases may pay user fees for the first course of antibiotics as well as X-ray (unless the health centre writes a referral letter); laboratory tests for HIV-positive patients may be free or not depending on additional support; people living with HIV-AIDS are in principle exempted for other illness (such as surgery), antenatal care or delivery, but more research is needed to confirm if this policy is widely applied in absence of fee reimbursement. One HEF linked to CBHI with pre-identification
procedure in Kampot; one voucher scheme with pre-identification and the MOH post-ID subsidy scheme in Kampong Chhnang. The benefit package varies: it includes full MPA and CPA or is limited to reproductive health in the voucher scheme. Transport and food are not included in the MOH subsidy. According to beneficiaries, access to health facilities was greatly facilitated by the removal of user fees; however, the utilisation of services by the beneficiaries remained low due to the cost of transport, food during hospitalisation, fear of payment or other barriers such as distance, non-availability of health staff at night, preference for home-based private care, inadequate information about benefit package and lack of empowerment.

Conclusions: Recommendations for strengthening links between the national programs and HEF schemes include: Add complementary benefits to the HEF package. For TB and HIV patients, transport for monthly TB DOTS and ART, X-ray and first antibiotic treatment for TB suspect cases, hospitalisation, laboratory and treatment at referral hospital for other diseases (e.g. emergency, surgery), food for carers during hospitalisation, ANC and delivery. For malaria patients, depending on the MOH decision to enforce the policy of free treatment at health facilities, free diagnosis and treatment at health facility (subsidised) with transport and food allowances provided by HEF. Make stronger linkage between the various safety net schemes and the national programs, e.g., to ensure that poor TB and HIV patients are screened for HEF eligibility. Integrate the Health Financing Strategic Framework and National Programs Strategic Plans. Find agreement on the benefit package between national programs and HEFI to increase food allowance with regard to cost of living. Create a permanent certificate for referral for eligible patients with an entitlement and advance for monthly transport.


Purpose of the research: To examine the mechanisms by which HEFs exercise their purchasing function and the outcomes in terms of increased access for the poor.

Research questions: Identify the determinants of access that must be addressed by a purchasing mechanism such as a HEF, define the essential roles of a HEF scheme and how these roles contribute to overcoming barriers for the poor.

Study sites: Primarily Phnom Penh and Ang roka.

Type of survey: No survey.

Type of data used: Secondary.

Methods of data collection: Document review, evidence from the field provided by earlier studies, data from the Access Study Phase 1 and 2.

Main findings: HEFs are an effective purchasing mechanism that overcomes major barriers to access and satisfy some unmet health care needs without causing stigma; 28% of HEF-funded patients now using health facilities did not attend public facilities before having a HEF card. HEFs are an effective financing mechanism that reduces debt for health care and increases the margin for discretionary spending, but up to 36% of HEF patients in the rural area still borrowed money for the current episode of care. In their policy dialogue role, HEFs help to build partnerships between the public sector, civil society and non-government organisations.

Conclusions: As a purchasing mechanism, HEFs exercise four essential roles—financing, community support, quality assurance and policy dialogue—that respond to the main barriers to access to health services. Their impact is optimised when a third-party arrangement involves a community-mandated organisation active at both facility and community level that engages in purchasing services and policy dialogue. Local government authorities could also be effective fund holders if their capacity to purchase effectively were developed. A strong and supportive policy environment is needed for HEFs to exercise their active purchasing role fully.

Purpose of the research: This is a discussion paper with observations and recommendations about different possibilities for HEF implementation rather than a set of guidelines for implementation and monitoring. It presents opinions and findings from a consulting assignment financed by the HSSP to devise the institutional arrangements needed to extend HEF operations.

Research questions: The report presents the background, operation, approaches to and targeting outcomes of HEFs, the proposed institutional arrangement for HEF expansion, criteria for the selection of HEF ODs and the principle and methods for monitoring and evaluation.

Study sites: Recommendations are based mainly on secondary data reported from Sotnikum OD, Takeo provincial hospital and Phnom Penh.

Type of data used: Secondary.

Methods of data collection: Document review.

Main findings: Evaluations of early HEFs in Sotnikum, Takeo and Phnom Penh have shown good targeting outcomes. HEFs have shown positive results in allowing the poor to access hospital care by assisting them to overcome financial and other barriers. However, the timing of this waiver system limited its effectiveness: pre-identification of beneficiaries is likely to be a more effective targeting mechanism than post-identification (based on evidence from Sotnikum and Takeo). Variations in HEF operation include: management of the waiver process, who establishes eligibility, payment methods, insertion of HEF in referral systems and type and extent of financial protection provided.

Conclusions: HEFs are institutions conceived to reimburse government health care providers for income foregone from user fee waivers granted to the poor. Equity funds have been in place for only a few years and have been focusing primarily on the provision of hospital patient assistance, including both fee waivers and reimbursement of other patient costs such as travel, food and lodging. To ensure that the implementer achieves the agreed targets, a national monitoring and evaluation framework was created using internal and external monitoring.


Purpose of the research: To assess the performance of early HEFs in three locations.

Study sites: Takeo, Sotnikum and Phnom Penh.

Type of survey: Qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Unstructured interviews with facility health staff at the three study sites (Takeo, Sotnikum and Phnom Penh).

Main findings: All three HEFs provide financial protection for high-cost services in hospitals, but they have implicit or explicit limits on what they cover and therefore may not be providing true catastrophic coverage. Due to cost recovery from user fees, the average monthly income of a government health worker may be as much as US$180, of which less than 10% comes from his or her official salary, and the rest from user fees.

Bitran, R., V. Turbat, B. Meessen and W. Van Damme (c. 2003). Preserving Equity in Health in Cambodia: Health Equity Funds and Prospects for Replication. [See also Bitran 2002]

Purpose of the research: To discuss the experience of health equity funds as a mechanism to compensate providers for the revenue forgone because of waivers and exemptions provided to indigent patients.

Study sites: Draws on published information from Sotnikum OD, Phnom Penh Urban Health, Takeo hospital and other HEF sites.
Type of data used: Secondary.

Methods of data collection: Document review.

Main findings: HEFs seem to be an effective mechanism for targeting assistance to poor individuals in need of health care. Private patient costs of care other than the health professional’s fees and medicines can be substantial. The initial operation of HEFs was characterised by under-coverage. The provision of waivers at the time of care involves uncertainty for prospective beneficiaries. Paying providers for the medical services delivered to HEF beneficiaries seems a key factor in assuring access by the poor to timely and good quality care.


Purpose of the research: To describe the process, rationale and experience of establishing a structure for large-scale community participation in Kiri Vong OD working with pagodas and mosques.

Research question: To assess the use of preventive services and health knowledge among pregnant women and women of reproductive age.

Study sites: Kiri Vong OD.

Type of survey: Quantitative.

Type of data used: Primary and secondary.

Methods of data collection: Household interviews. Routine behavioural surveys within the population of 12 health centres at six-monthly intervals: baseline in July 2002 when health education and outreach activities began; follow-up surveys in February 2003 and July 2003.

Sample size: 20 interviews in two villages (one close to and one remote from the health centre) in each of 12 health centre catchment areas (n = 480).

Main findings: Survey results revealed a steady increase in the use of preventive services (immunisation, ANC, assisted deliveries, nutrition).

Conclusions: Pagoda committee and mosque structures possess the capacity to provide leadership for community participation in health.


Conclusions: Available evidence worldwide about the negative effect of user fees on utilisation of services raises the question of why Meessen et al defend user fees in Cambodia compared to their removal in Uganda. Several donors have acknowledged the failings of user fees, some at least rhetorically (World Bank), and others are adapting their aid policy (UK Department for International Development). Some countries have recently abolished user fees (Uganda, Zambia) or partly (Burundi, Niger). While health economists and donors are focusing on community-based health insurance, the fundamental question remains: who will pay for those unable to afford it? Meessen and colleagues point out that context-specific solutions are attainable, but it is time to learn from the accumulated evidence from the past two decades and follow up with action to overcome financial barriers for the world’s poorest populations.

Purpose of the research: Project mid-term review.  

Study sites: BTC-supported ODs in Siem Reap, Oddar Meanchey and Kampong Cham provinces  

Type of survey: Qualitative.  

Type of data used: Primary and secondary.  

Methods of data collection: Document review; semi-structured interviews, group discussions, participatory research, routine data, validation workshop.  

Sample size: Meetings with all operational district offices, all RHs, selected HCs, PHD offices, MOH, village health support group, patients, NGOs and development partners.  

Main findings: The project implements performance contracting, health equity funds and technical support. HEF coverage is below the official poverty rate, indicating that part of the poor population may be excluded. Awareness of HEF in the community is low. HEF third-party purchasing role is needed. Utilisation: in 2006 HEFs supported in Oddar Meanchey 64% of IPD (60-70% at some RHs and HCs), 9.4% of OPD. In Siem Reap 31% of IPD (20-40% across all RH); 19% of OPD (1% at PH to 31% at Sotnikum). In Kampong Cham 39% of IPD (PH 24 per cent, 50-60% across all RH).  

Conclusions: HEF provides access for the poor but does not prevent impoverishment of the near-poor by health costs. Recommendations include expanding HEF coverage to health centres, establishing CBHI and linking CBHI with HEF.  


Purpose of the research: Report on progress of the CBHI scheme.  

Study sites: Thma Puok OD.  

Type of data used: Secondary.  

Methods of data collection: Routine data.  

Main findings: Thma Puok is the most successful and the only genuinely community-based health insurance scheme in Cambodia. From February 2005, CAAFW scaled up CBHI with a view to replacing the previous HEF scheme to achieve financial self-sufficiency. The CBHI target group is the poor and near poor. By December 2008, the scheme had achieved coverage of 19% of the OD population. The premium was set at an affordable level and is subsidised by donors; the annual premium is US$3 per insured or a maximum of US$12 per family; the insured pay only US$2 per person or a maximum of $12 per family. Premium receipts accounted for 72% of total direct cost reimbursement and donor subsidy 28% during 2008. All 10 functional health centres and the RH are contracted to provide services and receive a monthly payment based on user fee rates and the number of CBHI cases. Capitation was piloted but no agreement could be reached because health facilities were risk averse, asking for unrealistically high capitation rates.  


Purpose of the research: To assess HEF patient attitudes towards municipal hospital services.  

Type of survey: Quantitative.  

Type of data used: Primary.  

Methods of data collection: Patient exit interviews.
Main findings: HEF patients were less pressed to pay for a variety of additional costs related to their hospitalisation (medicine, food, under the table) than non-HEF patients.


Purpose of the research: Critical reflection on the rationale, current design and operation of the Kirivong Pagoda-based Community Health Insurance (CHI) scheme. Advice to Swiss Red Cross (SRC).

Study sites: Kiri Vong Administrative District.

Type of data used: Primary.

Methods of data collection: Participant observation. Discussions with SRC staff, policy makers, district health cadres, monks from Buddhism for Health, people from the community (insured and non-insured), representatives from GRET. Observation including continuous interaction with the technical assistant to the project; listening to and discussing with people.

Main findings: Health Insurance is a complex concept, experience in Cambodia is limited and there was a lack of clarity on what was expected from the strategy. Community health insurance and health equity funds serve the same purpose of reducing/removing financial barriers to health services utilisation. Community members said that access to hospital care is hampered by other factors than only the direct cost; ‘psychological’ barriers (the hospital is a large structure with which people are not necessarily familiar); ‘helplessness’ of patients who arrive at the hospital. Objective evidence that unjustified over-utilisation takes place is not available. In Kiri Vong it makes sense to reflect on the possibilities and modalities of a linkage, even a merger, of these two types of systems.

Conclusions: The Kiri Vong community health insurance scheme has great potential and also faces challenges.


Purpose of the research: To use lessons learned from the Belgium social health experience to assist developments in Cambodia. The purpose is to describe how social assistance is used in Belgium at local government level, to assess the HEF experience in Cambodia in light of the Belgian experience, to identify the lessons learned in Belgium to assist design of social assistance in Cambodia.

Methods of data collection: Participant observation in Belgium and Cambodia, findings of the Povill study.

Main findings: Belgium has a strong legal framework, a rights-based approach, earmarked resources for social assistance. But information and service delivery are fragmented and the institutional framework is complex, the coverage of social assistance (breadth and depth) is inadequate. HEFs reduce barriers to access and increase utilisation for the poor in Cambodia; proof of financial protection is not yet conclusive (and OOP remains high). Cambodia has developed national regulations for HEF (MOH).

Conclusions: HEFs play a key social assistance role, with an increasing client focus. Stigma does not seem to be a major issue.


Purpose of the research: To review experiences to date with pilot pro-poor health financing schemes (contracting, New Deal, Urban Health Project, Takeo Hospital), focusing in particular on the use of equity funds; to make recommendations for further action under the Health Sector Support Project.

Research question: The report identifies and compares practical mechanisms for identifying the poor.
**Study sites:** Five ODs with contracting, Sotnikum, Phnom Penh, Takeo provincial hospital

**Type of data used:** Secondary.

**Methods of data collection:** Document review.

**Main findings:** Identifying the poor at the referral hospital when they require treatment is not ideal; reimbursement of posted user fees is preferable; exemptions from user fees work reasonably well at health centres; equity funds are primarily an issue for hospitals; contracting led to increased utilisation by the poor and reduced OOP expenditures; different methods of poverty identification should be piloted; potential micro-insurance schemes could be pro-poor if premiums for the poor were paid either directly or from equity funds.


**Purpose of the research:** To review and analyse implementation of the UNFPA HEF/voucher schemes for RH and HC maternal and child health services.

**Research questions:** Include improvements to quality of service, monitoring systems and supervision, use of facility revenues, lessons and recommendations.

**Study sites:** Kampong Chhnang OD, Kampong Tralach OD, Baribour OD, Tboung Khmum OD and Angkor Chum OD.

**Type of survey:** Quantitative and qualitative.

**Type of data used:** Primary and secondary.

**Methods of data collection:** Routine data, facility observation, focus group discussions, interviews with facility staff.

**Sample size:** 20 participants in FGDs, interviews with 12 local authorities, 16 Community Based Agents, 16 facility staff and four PHD or OD directors.

**Main findings:** Increased utilisation by poor women at the RH due to HEF, and subsequently at HC also. About half of women targeted benefitted from HEF; they would not have attended otherwise, and among these a third to half would see it as life saving because poor women tend to use the services only when the situation is life threatening. The HEF benefit was not maximised due to constraint in access to vouchers, poor health-seeking behaviour and costs (travel etc.). HEF covered costs of travel only in case of delivery. HEF is implementable at HCs provided there’s adequate monitoring and support. There was a positive impact on the quality of services. Providing HEF through vouchers is more complicated for the poor because the community mechanism for dissemination of information and vouchers does not work as expected. Inappropriate health-seeking behaviours are still an issue for the poor. HEF covers referral costs (transport and food), which are among major barriers to accessing services. The poor also face non-financial barriers that were not addressed by the HEF/voucher scheme.


**Purpose of the research:** To project the costs of scaling up government health services to achieve improved health status of the poor.

**Research questions:** Three interventions were considered: improved quality of care, improved access for the poor and targeting health problems that burden the poor.

**Type of data used:** Secondary.

**Methods of data collection:** Document review, routine data. Indicators from the National Health Statistics annual report, the 2000 Demographic and Health Survey and the Cambodian Millennium Development Goals report (which mainly used data from the 1998 Cambodian Socio-Economic Survey).
Main findings: Additional annual costs (2004) for expanding programs to 31 priority ODs currently below the national average for utilisation, equal to 55% of the population, to achieve the MDG targets: contracting for MPA-CPA $23.5 million per year; non-contracting boosting scenarios with salary increases and incentives US$17.9 million; increasing health centre outreach to intermediate and distant villages would actually save money overall; health equity fund for referral hospital admissions US$1.77 million (if coverage is also extended to national hospitals); CBHI for outpatient visits as well as admissions (at the same premium as currently being piloted) US$5.4 million; malaria prevention using impregnated bed nets and treatment US$0.97 million; extending dengue control to 28 priority ODs would cost US$0.5 million; increasing DOTS TB treatment by 10% in health facilities and 20% in a community setting US$560,000; extending a continuum of care to 40% of all people living with HIV-AIDS US$12.2 million; national campaign for hand washing US$3.8 million; community-based nutrition interventions US$2.0 million; increasing exclusive breastfeeding to 34% of newborns US$1.43 million; increasing vitamin A supplementation for newborns US$375,000; improving safe motherhood US$7.9 million.

Conclusions: The MDG aims could be achieved for an incremental cost of US$54-60 million per year or an additional US$4.50 per capita, for example, for contracting plus HEF.


Purpose of the research: To understand the constraints rural Cambodians face in accessing quality public health services; to assess the effectiveness of the HEF as a purchaser of public health services.

Research questions: What are the main constraints to access to adequate basic health care? How and to what extent does the equity fund address these constraints? What are the implications for the equity fund and its replicability?

Study sites: Sotnikum OD.

Type of survey: Qualitative.

Type of data used: Primary.

Methods of data collection: Case studies, field studies, focus group discussions, interviews.

Sample size: 26 villages in Sotnikum OD; 68 interviews (50% non-HEF inpatients, 25% HEF and 25% non-hospitalised poor) to assess patient expenditures and level of patient financial support; four FGDs with 10-20 participants at village level.

Main findings: Many factors deter people from going to the hospital at an earlier stage (distance, family duties, lost time and income, lack of confidence in the RH, costs for admission, transport and food, the need for direct payment), and private practitioners are more accessible and responsive. The HEF supported 15-20% of the inpatients (compared to a poverty level of 30-40 per cent). Only post-identification was used. Leakage to the non-poor was nearly absent. Total per capita cost was less than US$0.05 per year for the whole OD. For one hospitalisation, only 31% of the cost was for admission fee, 18% was spent on transport and 50% on food. The average support per patient was US$10.00, which covered hospital fees and transport costs; only 5% was devoted to food outlays. Total average expenditure by the poor was US$18-25, the HEF therefore covered 40-56% of spending by the poor (or up to 100% for the poorest patients).

Conclusions: The HEF effectively addressed the constraint of financial access and improved access to the referral hospital for the poorest groups, regardless of ability to pay. There is a need for financial assistance beyond just user fees. The biggest potential of the equity fund lies, not in financing expenditure in the public sector, but in preventing (ineffective) expenditure in the private sector, by encouraging the use of adequate public health care. The equity fund reduces inequities in health expenditure related to distance as poorer people tend to live further from facilities. Lack of information, in particular about the hospital and the equity fund, remains a big constraint to utilisation.

Purpose of the research: To investigate the constraints on equitable access to the district hospital and the effects of the HEF on these constraints, based on the results of the first two years of HEF operation in Sotnikum OD.

Research questions: What are the constraints on equitable access to the district hospital and the effects of the health equity fund on these constraints?

Study sites: Sotnikum OD.

Type of data used: Secondary.

Methods of data collection: Document review, routine data, participant observation. Routine data from the HEF in the first 25 months of functioning (September 2000 to September 2002), observations of the authors, interviews with HEF staff and community leaders.

Main findings: Health equity fund effectively improved financial access for the poor but that the poor continued to face many constraints for timely access. The study also found that the health equity fund was cost-effective with minimal leakage to non-poor. Utilisation by HEF patients increased from 20 to more than 100 per month; the number of non-supported patients increased less. The HEF supported 30% of all hospitalised patients in third quarter of 2002. Targeting was accurate (only one non-poor patient received financial support, whereas the health equity fund supported nearly all of the extremely poor). But post-identification meant that improved financial access for poor patients arriving at the hospital does not yet guarantee equitable access to hospital care for all the poor. Financial access for those attending the hospital improved; 87% of the extremely poor in the sample were identified and supported by the HEF for 50% of their total expenditures.

Conclusions: Health equity funds managed by a local non-government organisation are a promising channel for donors who want to invest in poverty reduction


Purpose of the research: To investigate the political and technical questions related to the rapid scaling up of HEFs and make recommendations for further scaling up.

Research questions: Assess target group, management, method of identification, benefit package, monitoring and evaluation and sustainability.

Study sites: Sotnikum and six other ODs (Thma Puok, Svay Rieng, Kiri Vong, Takeo, Phnom Penh and remote Siem Reap).

Type of data used: Secondary.

Methods of data collection: Routine data, participant observation, project-related surveys.

Main findings: The thesis reports on HEF at Sotnikum OD during 2000-2003 and six other ODs for comparison. At Sotnikum different methods of identification were trialled, leading to implementation of pre-identification with health cards and vouchers. For the health card, village chiefs or HC committee members were asked to prepare a list of the poorest households based on their knowledge and five criteria, the list then being cross-checked by CFDS. Patient surveys showed no leakage to the non-poor but some under-coverage. Between 2000 and 2003, utilisation by HEF beneficiaries rose from 20 to 120 IPD per month (from 10% to 40% of admissions) while fee-paying admissions remained stable. Patient surveys in 2000 and 2003 revealed a substantial decrease in household health expenditure for both HEF beneficiaries and non-beneficiaries, but it is not clear to what extent this can be attributed to the HEF. In Thma Puok, the proportion of patients supported by HEF increased from 10% in 2000 to more than 50% in 2003. At Svay Rieng, UNICEF chose to begin with pre-identification of the poor in 2002 using local health staff and volunteers, identifying 18% of the province
population as beneficiaries, with some exclusion but no inclusion errors. Twenty% of inpatients were supported by HEF in 2003. Kiri Vong’s pagoda-based scheme was the only HEF that used a local fundraising mechanism. Eligible households were identified at the commune level by volunteers from the pagoda and village chiefs against five criteria, identifying 15.6% of households as beneficiaries. The benefit package covered hospital (70% of fees) and health centre (100% of fees) services. HEF utilisation of services was 6-8.5% of admissions at hospital and health centres during 2003. At Takeo PH there is no formal HEF, but exemptions are provided on arrival and no one is denied care. The Swiss Red Cross provided funding for exemptions, with cross-checks performed by the Cambodian Red Cross; exemptions were only 3-4% of total admissions. In Phnom Penh, the HEF paid for referral of the poor to the municipal hospital, identification being done by staff at the health rooms based on a checklist. An economic evaluation in 2001 recommended extended benefits and management by a local NGO. Scaling up of HEFs depends on many issues. HEFs should target the poorest who cannot pay for health care and protect the poor from impoverishment due to health costs; this requires a uniform set of poverty criteria. The management and purchasing role of HEFs is best performed by an independent third-party local NGO or perhaps the Ministry of Social Affairs. Post-identification of the poor seems to be low cost and effective (in Sotnikum) and pre-identification is yet to produce satisfactory results (in Svay Rieng); targeting based on disease category or geography could be considered. Benefits should include at least fees for hospital care and transport costs. More effective monitoring and evaluation will be needed. Financial sustainability of HEFs is not a concern because it is a cost-effective use of donor funding. With scaling up, the MOH will need to take a more active role.

Conclusion: Scaling up HEFs is an appropriate and feasible policy to improve access for the poor.

Ir, P. (2008). Assessing Effectiveness of Health Equity Funds Bed Censuses in Four Hospitals in Kampong Cham. Phnom Penh, Belgium Technical Cooperation, Provision of Basic Health Services in Kampong Cham. [See also van Pelt 2006; van Pelt 2008]

Purpose of the research: To assess and compare the performance and effectiveness of HEFs in attaining their objectives.

Research questions: Assess socio-economic status of inpatients; awareness, knowledge and perception of HEFs; targeting performance of HEFs; health seeking behaviour, health expenditure and coping mechanisms for the current illness; and incidence of borrowing and accumulated debts.

Study sites: Cheung Prey RH, Chamkar Leu RH, Prey Chhor RH and Kampong Cham PH.

Type of survey: Quantitative.

Type of data used: Primary.

Methods of data collection: Bed census surveys in May 2006 and February 2008, including all hospitalised patients on one day.

Sample size: n = 546 in 2006; n = 553 in 2008

Main findings: The four hospitals are used largely by the poor, most likely due to the HEF; 81% of all inpatients were poor and eligible for HEF; 45% of inpatients reported they sought care in the hospital because there was a HEF. Access: 68% of inpatients were HEF beneficiaries (83% in the three district hospitals). Targeting: There was minimal leakage to the non-poor, with inclusion error only 9 per cent, but exclusion error was 24% of patients. Information: 46% of inpatients had not been aware of the presence of a HEF at the hospital before hospitalisation; 96% of inpatients aware of HEF were certain of obtaining HEF assistance. Use of public facilities: 70% of HEF-eligible inpatients sought treatment before they went to the hospital, mainly from private practices and private pharmacies. Stigma: 23% of the interviewed inpatients said they felt ashamed of being identified as poor for HEF. Facility revenues: 30-77% of facility revenues were from HEF. Quality of care: There was a decline in the proportion of inpatients who reported better quality of health services as a reason for their hospitalisation, while key indicators suggest an improvement of the hospital performance and productivity over the study period. The increased proportion of HEF-assisted admissions and of facility revenue from HEFs
indicates their contribution to hospital productivity. Health expenditure among HEF-eligible inpatients increased significantly between surveys. Debt for health care: 27% of HEF inpatients borrowed at interest, 13% sold assets and 8% took credit from the providers to finance their health care; the proportion of households carrying an outstanding health care-related debt fell between surveys from 63% to 53 per cent.


Purpose of the research: To assess the reliability of pre-ID and post-ID and make recommendations for improvement of HEF identification.

Research question: Identify reasons for the high proportion of post-ID inpatients.

Study sites: Cheung Prey, Chumkar Leu and Prey Chhor.

Type of survey: Quantitative and qualitative.

Type of data used: Primary.

Methods of data collection: Key informant interviews, patient interviews (randomly selected), clustered random-sample household survey.

Sample size: 30 key informants (including 20 village chiefs); 47 post-ID HEF inpatients; household survey of 600 households (300 HEF and 300 non-HEF).

Main findings: During pre-identification about 28% of all the households were identified as poor. Even so, about half of all HEF beneficiaries at the three referral hospitals had been identified through post-ID. The post-ID assessment did not find any major problem, except some inclusion errors in Prey Chhor (but patient familiarity with the post-ID questionnaire may affect responses). The household survey showed a large proportion of potentially poor households without HEF cover (under-coverage of at least 17-25% of interviewees) and showed mismatching between the socio-economic status (SES) and HEF eligibility cut-off points. Poverty is mobile—75% of the survey households had changed living condition over the previous year (13% got better and 52% worse).


Purpose of the research: To analyse the HEF policy process and draw lessons for translating knowledge into policies that promote equity.

Type of survey: Qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Cases study, document analysis, key informant interviews (semi-structured), participant observation.

Sample size: 20 key informants from the MOH, Ministry of Economy and Finance, Ministry of Planning, donor agencies, researchers, NGOs.

Main findings: The study used an analytical framework based on exploiting existing knowledge, creating new knowledge, brokering new knowledge and adopting and using new knowledge. The uptake of HEFs in Cambodian health policy was determined by three factors: a conducive policy context, credibility and timeliness of HEF knowledge and commitment and good relationships among actors. HEF policy development was supported by three types of locally generated knowledge: on the problem of access to health services for the poor, the failure of user fee exemptions and its consequences; on the effectiveness of HEF pilots; and on institutional arrangements and conditions for replication of the pilot schemes.

**Purpose of the research:** To assess targeting accuracy of eligibility of household HEF beneficiaries.

**Study sites:** Oddar Meanchey health operational district.

**Type of survey:** Quantitative.

**Type of data used:** Primary.

**Methods of data collection:** Household interviews. Three tools used to assess targeting accuracy: scoring tool, assessment by interviewers and SES index (using principal component analysis).

**Sample size:** Random sample of 200 households, 99 with a HEF card and 101 without. Structured questionnaire to head of household or substitute.

**Main findings:** Four years after the pre-identification survey, a high level of targeting errors was identified. SES poverty level not different between HEF and non-HEF. An average of 71% across all respondents reported a change in living standards from four years earlier (39% better, 32% worse). Using the scoring tool, 43.5% were wrongly classified (43 out of 99 HEF not eligible, 44 out of 101 non-HEF eligible).

**Conclusions:** Previous pre-identification may not reflect the current poverty situation. Post-identification in association with regular updates of pre-identification is needed. Targeting needs to focus on the extremely poor to avoid errors.

**Other comments:** The results indicate a change in poverty status, not errors in the original pre-identification.


**Purpose of the research:** To document the experience with HEFs supported by MSF, including background, rationale and implementation.

**Study sites:** Sotnikum OD.

**Type of data used:** Secondary.

**Methods of data collection:** Routine data.

**Main findings:** The project began with passive post-identification of beneficiaries, then active case finding in the hospital wards and community awareness raising and finally decentralised identification in village. For one health centre, health cards were issued to poor families within villages following community-based identification; in other villages, vouchers were issued to poor people at the time they wanted to visit the health centre (but their success depended on the commitment of local volunteers). HEF beneficiaries as a proportion of all patients increased from 10% to 40 per cent; the number of HEF inpatients rose from around 20 to 120 cases per month, while the number who paid the user fee themselves remained relatively stable (the total number of inpatients rose from 200 to 300). 80-90% of all very poor patients who were hospitalised were supported by the HEF, many of whom would otherwise not have had access to the hospital. A number of surveys showed that the major proportion of HEF beneficiaries was among the poorest 25% of patients, and many beneficiaries would not have had access to the hospital without support. The HEF financed 12% of the total hospital income through payment funding of user fees for the poor.


**Purpose of the research:** To provide an overview of the CAAFW CBHI scheme, its design, development process, some results and lessons.
Study sites: Thma Puok OD

Methods of data collection: Based on technical advice and assistance provided by the authors.

Main findings: Membership is extensive, and all the health centres and referral hospital of Thma Puok showed a huge increase in utilisation after the introduction of the CBHI scheme. The scheme is directly or indirectly subsidised by the government and donors. The premium of US$3 per head per year is subsidised US$1 by CAAFW with donor funds. Benefits are available from the HC and Thma Puok RH, and 80% if referred to Mongkol Borei, plus ambulance to the hospital, food and funeral costs. Facilities are reimbursed case by case at the end of the month; beneficiaries make no payment for services. Negotiations with health providers and community marketing or promotion of the scheme are the two key activities in implementation. Linkage with HEFs (through the purchase of premiums for the poor) was not favoured due to the likelihood of dependency on external funding and the additional administrative costs.

Conclusions: CAAFW has been quite successful in expanding the coverage of the scheme compared to other insurance schemes in the country, but faces several technical and financial constraints on further developing the scheme.


Purpose of the research: To assess the effectiveness of vouchers and HEF in improving access to skilled birth attendants for poor women and draw lessons for scaling up.

Study sites: Cheung Prey, Chamkar Leu and Prey Chhor, with control group in non-HEF districts.

Type of survey: Quantitative and qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Routine data, focus group discussions, key informant interviews.

Sample size: 9 FGD with 87 voucher recipients, 18 key informants, 20 voucher recipient interviews.

Main findings: Facility deliveries increased sharply, from 16.3% of the expected number of births in 2006 to 44.9% in 2008 for all deliveries (voucher, HEF and self-paid). The increase was more substantial than in control districts. In 2008, voucher and HEF beneficiaries accounted for 41% of the expected number of births among the poor.

Conclusions: The voucher-HEF scheme strengthened the results from a midwife incentive per case scheme.


Jacobs, B. (2007). Post Admission Identification of Poor People for Fee Exemptions at Hospitals: A Safety Net with Holes. Dissertation submitted in partial fulfillment of the requirement for the degree of Masters of Science in Health Systems Management, London School of Hygiene and Tropical Medicine, University of London. [Published as Jacobs and Price 2008]

Purpose of the research: To assess options for targeting the poor for fee exemptions to enable access to curative public health care.

Research question: Is pre-identification or passive identification at the facility more effective for of targeting the poor in rural Cambodia?

Study sites: Kiri Vong referral hospital.
Type of survey: Quantitative.

Type of data used: Primary.

Methods of data collection: Structured patient interviews with a pre-coded questionnaire. Pre-identified patients were matched with passively identified patients of the same age group and same condition (together termed non-PP). Paying patients represented the better off and, following matching with non-PP, were included for comparison.

Sample size: 356 (118 patients for each group) and 118 paying patients.

Main findings: Pre-identification of poor before they present at the hospital is more effective than passive identification at the hospital since it promotes initial care seeking at public facilities, reduces out-of-pocket expenditures, and enables poor to deal better with outstanding debts for health. Passive identification may be a necessary supplement to pre-identification until the latter is sufficiently elaborated to limit exclusion errors to the absolute minimum. Free care, reimbursement of transport and provision of a stipend for food were not sufficient to prevent borrowing for 80% of non-PP, and 3% of such subjects with farmland were forced to sell part or all of it. Indirect costs, although not assessed, appear to have a major influence on borrowing practices and most likely on care seeking.


Purpose of the research: To propose that social protection schemes (like HEFs) should financially support the insurance premiums for the CBHI scheme for those households that experience major problems in paying these contributions.

Methods of data collection: Presented as an editorial for further discussion.

Conclusions: The potential kick-start to CBHI schemes by linking them to social protection during a sufficiently long period could enable the schemes to mature financially and managerially. In the long term, local and/or national solidarity arrangements—which need time to develop and grow—can enable fair cross-subsidies. Such solidarity mechanisms are socially and politically more acceptable and sustainable in the case of one single fund rather than different funds catering for different population groups.


Purpose of the research: To compare health care-seeking behaviour, out-of-pocket expenditure and coping mechanisms for pre-identified health equity fund beneficiaries (EFB) and non-beneficiaries (NB) who were hospitalised.

Research question: What are the differences between EFB and NB in health care-seeking behaviour?

Study sites: Kiri Vong OD referral hospital.

Type of survey: Quantitative.

Type of data used: Primary.

Methods of data collection: Patient interviews.

Sample size: 398 paired patients (EFB and NB).

Main findings: A significantly greater proportion of EFB patients at the RH (32 per cent) initiated care in the public sector (health centre or hospital) than NB (24 per cent) and more EFB (27 per cent) initiated care seeking at a health centre than NB (12 per cent). Of all RH patients who had consulted a health centre at some time, only 34% came to the hospital as referrals, the remainder coming on their own initiative; such referral was less common for EFB (29 per cent) than NB (45 per cent). The average duration of hospitalisation for EFB and NB...
was 6.4 days. EFB average direct cost was R20,205 (65% of the amount was spent at private practitioners) and for NB R52,557 (51% at private practitioners). Only 7% of EFB claimed to have sufficient money to cover all expenses incurred with the condition leading to hospitalisation, significantly fewer than the 51% of NB. For those with insufficient available cash to cover costs incurred with hospitalisation, 99% of NB would borrow money, of whom only 16% had to borrow from private providers, and for EFB 89% and 26% respectively. The ratios of borrowed money to actual direct costs were 2.2:1 for EFB and 0.74:1 for NB; 9% of EFB could not access cash. Forty-three% of EFB reported they would increase labour in order to repay the loan and 21% by harvesting natural resources. Nearly half the NB reported that they would sell rice to repay the loan.


Purpose of the research: To provide lessons on establishing effective community participation in two externally funded, NGO-implemented district health projects.

Research question: Whether establishing effective community participation in externally funded health projects with relatively short implementation times requires engagement with existing community-based organisations and agencies.

Study sites: Moung Russey OD (under national guidelines for community participation) and Kiri Vong OD (with pagoda-based volunteers).

Type of survey: Quantitative and qualitative.

Methods of data collection: Personal observation, structured interviews with community health centre co-management committee and feedback committee members, cross-sectional survey of women with children under 5 in Moung Russey and Kiri Vong using a structured questionnaire.

Sample size: Two randomly selected villages per health centre in Moung Russey (total 20 villages and 290 women) and Kiri Vong (total 18 villages and 288 women; nine with and nine without a pagoda committee). For health centre co-management committee and feedback committee members’ views, 34 committee members in Moung Russey and 46 committee members in Kiri Vong.

Main findings: The outcome measures used in the study included the acceptability by committee members of their assigned duties and acceptance by women of committee members for stimulating participation in health-related issues, including perceived roles, perceived ability to influence health-seeking behaviour, level of activities related to health and suggestions to improve their roles, ability to represent women’s issues at village or commune level and whether women felt able and comfortable to discuss physical and personal problems with the committee members. The case study indicated that establishing effective community participation in externally funded health projects with relatively short implementation times requires engagement with existing community-based organisations and agencies.

Conclusions: The success of community participation in externally funded health projects with relatively short implementation times requires engagement with existing community-based organisations and agencies, such as pagodas, rather than external organisations.


Purpose of the research: To examine the impact of user fees at the hospital on staff’s quality care provision through by their salaries, through a case study of the introduction of user fees at a district referral hospital in Kiri Vong operational district.

Research question: What is the impact of user fees on health care-seeking behaviour, ability to pay and consultation prices of private practitioners?

Study sites: Kiri Vong OD.
Type of survey: Quantitative.

Type of data used: Primary and secondary.

Methods of data collection: Interviews with randomly selected hospital patients using a pre-coded questionnaire at three stages (baseline, pilot, implementation); routine data using the hospital HIS.

Sample size: The total number of patients or carers interviewed was 101 at baseline, 151 during the pilot phase and 152 during implementation.

Main findings: The introduction and subsequent increase in user fees created a ‘medical poverty trap’ with significant health and livelihood impact (including untreated morbidity and long-term impoverishment) and appear to have led more patients initially to seek care from the private sector while hospitalisation rates declined. When there were no official charges at the hospital, only 20% of patients consulted private providers before presenting at the hospital; this increased to 54% during piloting and 73% during implementation (apparently for reasons unrelated to cost). Consultation fees charged by private providers increased in tandem with price increases at the referral hospital. The proportion of interviewees who were landless (an indicator of poverty) fell from 16% during baseline to 7% following introduction of user fees. Respondents reporting insufficient cash to cover all expenses incurred rose from 40% at baseline despite the provision of free hospital care to 60% during the pilot even though 25% were exempted from hospital fees, and fell to 41% during implementation. The majority of interviewees who reported having insufficient cash resorted to borrowing to cover the direct costs of hospitalisation.

Conclusion: There is a need to change from direct payments at the point of service delivery to a social health insurance system in which healthy, high-income groups subsidise health care for low-income groups; well-targeted subsidies for the poor may be necessary such as through an equity fund.


Purpose of the research: To assess the effectiveness of an innovative equity fund to improving access to public sector health services for the poor in Kiri Vong OD.

Research questions: The appropriateness of using community members to identify the poorest; the impact of pagoda-managed equity funds on access to public health services for the poorest; the impact on out-of-pocket expenditure during illness episodes; and the contribution of the equity funds to community participation.

Study sites: Kiri Vong OD.

Type of survey: Quantitative.

Type of data used: Primary.

Methods of data collection: Cross-sectional household surveys (with adult female respondents) were conducted five and 11 months after the commencement of the equity funds, using a similar approach but at different villages.

Sample size: For 10 health centres with fewer than the average number of equity fund beneficiaries (EFBs) for all health centres, one village was randomly selected; from this village list of EFB households, 10 households were randomly selected for interviews; then, an adjacent non-beneficiary (NB) household was approached for interview. For 10 health centres with more than the average of EFB households for all health centres, two villages were randomly selected where 10 EFB and five NB households were interviewed. In total, the sample included 299 EFB households and 201 NB households (total 500 female adults).

Main findings: Identification by community members of those eligible for equity funds is feasible, accrues minimal direct costs and is effective. Direct costs associated with seeking care were considerably lower for equity fund beneficiaries than for non-beneficiaries, and fewer beneficiaries than non-beneficiaries initially consulted the private sector, providing evidence of the equity fund’s ability to attract the poorest to the public...
sector. The level and nature of community participation were enhanced considerably following the introduction of the pagoda-managed equity funds.

**Conclusions:** Engaging an existing community-based organisation (in this case the pagoda) to plan, target and manage an equity fund was not only effective in terms of improved financial access for the poorest to public health services but also increased the level of community participation in health. It is recommended that external agencies (such as international NGOs) limit their role to the provision of technical support and advice, rather than (as is so often the case in Cambodia and elsewhere) taking the lead on implementation and administration.


**Purpose of the research:** To compare the effectiveness of pre-identification and passive identification against criteria of health-seeking behaviour, out-of-pocket spending, ability to pay and effect on coping strategies and debts.

**Research questions:** Optimal health-seeking behaviour, timely seeking of care, lower direct access costs, allows patients to pay an affordable amount, reduces debts for health care.

**Study sites:** Kiri Vong Referral Hospital.

**Type of survey:** Quantitative.

**Type of data used:** Primary.

**Methods of data collection:** Prospective cohort survey during April 2006-March 2007. Structured patient interviews.

**Sample size:** 118 matched patients (pre-, post- and non-identified) producing a sample of 354 structured interviews (37% of admissions). Selected on the basis of pre- or passive-identified. Non-HEF paying patients were included for comparison through matching.

**Main findings:** Both targeting methods accurately identified the poor. But exclusion error with pre-identification appeared substantial. Criteria of effectiveness were health care-seeking behaviour, out-of-pocket expenditure, ability to pay and effect on coping strategies and debts; pre-identification was superior to passive identification for all indicators except timely care seeking. Despite the cost of pre-identification, it should be used alone or in combination with passive identification.

**Conclusions:** Other comments: Study method was not optimal, with passively identified patients selection bias.


**Purpose of the research:** To assess the effects of user fees and related fee exemption system on the health care-seeking behaviour, out-of-pocket expenditure and coping mechanisms of fee-exempted patients (FEP) at Kiri Vong Referral Hospital.

**Research question:** Do exemptions from user fees mean free access to health services?

**Study sites:** Kiri Vong referral hospital.

**Type of survey:** Quantitative and qualitative.

**Type of data used:** Primary.

**Methods of data collection:** Interviews with pre-identified FEP and fee-paying patients (PP) at Kiri Vong RH of the same age group and with the same medical condition using a pre-coded questionnaire.
Sample size: 398 patients (paired groups of 199 FEP and PP) and unstructured in-depth interviews with nine FEPs.

Main findings: The exemption scheme improved service access for the poor. Targeting of the poor measured by socio-economic status was effective. The timing of the start of health care seeking was equal for FEP and PP; significantly more FEP consulted first-line public health providers than PP. Hospitalisation rates were 32.5/1000 population for FEP and 18.4/1000 for PP. Providing health care free at the point of delivery appears to have stimulated appropriate care seeking at the health centres, as indicated by the significantly higher proportion of FEP (27-45 per cent) consulting health centres before going to the hospital, compared with PP (12-19 per cent). But only a third of interviewees who visited public health facilities prior to hospitalisation were referred. The direct costs of health care seeking were US$4.30 for FEP and US$15.3 for PP. Indirect costs influence households’ ability to shoulder the costs associated with health care even when it is provided free at the point of delivery. Of the 186 FEP who reported being unable to cover their pre-hospitalisation expenses, 89% borrowed money. FEP borrowed at a ratio of 3.4:1 to direct costs incurred and 0.74:1 for PP. The identification process and exemption system did not prevent potential impoverishment of 2.4% of the PP, who had to resort to selling land to pay debts incurred as a result of the illness.

Conclusions: User fee exemption schemes can be pro-poor provided that exemption is based on effective pre-identification of intended beneficiaries, that these beneficiaries are informed of their right to free health care and that health care providers are reimbursed for the revenue foregone due to exemptions. To be effective, exemption schemes need to be underpinned by a range of additional interventions.


Purpose of the research: To analyse the sustainability of the pagoda-based HEF structure at Kiri Vong OD over a 32-month period of operations, to provide an evidence base for improving HEF operation and to assess its potential replicability.

Research questions: Uses a sustainability assessment framework to assess the ability of pagoda structures to promote financial access for the poorest to public sector health services; and analyses the strengths and limitations of the pagoda-managed equity fund to assess its sustainability.

Study sites: Kiri Vong OD.

Type of data used: Secondary.

Methods of data collection: Document review, routine data on service provision and financing, project documentation and MOH.

Main findings: Initially, the pagoda-managed equity funds were funded solely with money collected from the community; during the second phase a local NGO was created to operate the HEF with additional external funds to pay transport costs for beneficiaries. The pagoda-based HEF increased utilisation by the poor (not including assisted deliveries). Between the initial phase and the subsequent phase, annual consultations per capita moved from 0.61 for non-beneficiaries (NB) and 0.21 for equity fund beneficiaries (EFB) to 0.47 and 0.65; EFB made up 6% of all outpatient consultations in the initial phase and 28% subsequently. The annual number of hospitalisations per 1000 population moved from 40.3 for NB and 18.4 for EFB to 9.4 and 32.5 subsequently; EFB made up 7% of the total annual hospitalisations initially and 33% subsequently. Without seed funding of US$0.12 per EFB, none of the equity funds were financially viable. Management of the equity funds depended on the work of the volunteer health centre management committees and later the NGO Buddhists for Health.

Conclusions: The pagoda-managed equity fund initiative scores well against key sustainability indicators (health service utilisation and health outcomes; management capacity and financial viability; community mobilisation and government support). Some external financial support is needed to allow the HEFs to function effectively. The initiative can be replicated by working innovatively with indigenous grassroots organisations to enhance community HEF ownership and to keep administrative overheads low.

**Purpose of the research:** To assess any changes in the level of service delivery, to analyse the underlying reasons for such changes and to describe the processes used during transition to sustain service delivery output.

**Research question:** Whether the high level of service delivery attained under NGO management can be sustained during the handover to government of management responsibility and authority.

**Study sites:** Kiri Vong OD.

**Type of survey:** Quantitative.

**Type of data used:** Secondary.

**Methods of data collection:** Data from three cross-sectional surveys by Enfant et Développement, monthly Health Management Information System reports, quarterly performance results based on data collected by the contractor for performance management and salary supplement payment and financial reports from the facilities.

**Sample size:** Cross-sectional surveys of 220 women in 12 villages.

**Main findings:** Health equity funds were operational in all facilities. The observed increase in assisted deliveries from 44% to 66% is likely to be due to more equitable access to health care. The income from user fees (including health equity fund and capitation payment by the community-based health insurance) increased from US$65,407 in 2004 to US$154,544 in 2007. Of the total revenue for Kiri Vong OD in 2007, government funds accounted for 56% (US$757,684), user fees—including health equity fund and health insurance—for 11% and external funds for 33% (US$446,439). The total income per staff member rose from US$85 in 2004 to US$159 in 2007. Performance subsidies constituted 53% of the total staff remuneration during 2005 and decreased to 18% in 2007.

**Conclusions:** User fees—in tandem with health equity funds to enable financial access to health services for the poor—are a useful means to phase out the amount spent on staff performance bonuses while concurrently increasing salaries, and as such improve the likelihood of sustaining service delivery levels.


**Purpose of the research:** To better understand the constraints on public policy making in poverty reduction.

**Research questions:** What kind of policies are developed and why? What kinds of implementation difficulties are there? What role does context play in policy making?

**Methods of data collection:** Theoretical framework based on four phases of policy analysis: agenda setting, policy formation, implementation and evaluation.

**Main findings:** Economic transition has led to increasing inequalities in health. Health care is a poverty trap. External influence on policy is strong. Both domestic and external actors play an active role. Implementation is complex and does not meet the expectations of policy. Evaluation is largely an external process.

**Conclusions:** The global poverty-health paradigm is evident. Poverty reduction is hampered by social and institutional factors.


**Purpose of the research:** To discuss the current HEF and CBHI situation and look at possible next steps towards a unified national system that provides a standard approach to social health protection for the informal sector (poor and non-poor) in Cambodia.
Research question: How to achieve national coverage in the informal sector through HEF and CBHI?

Methods of data collection: Document review.

Main findings: HEFs need to harmonise and standardise operational policies and procedures across all sites, operators and partners in order to move away from the current patchwork of HEFs toward a uniform national system. Beyond convergence on a single HEF model, and within the framework of moving towards national coverage of the informal sector, careful consideration should be given to ways in which HEF and CBHI could be incorporated into a common unified scheme. In the medium term, the possibility exists to find a common way in which coverage of HEF and CBHI could be extended to ODs where no current scheme exists.

Conclusions: The generalised steps that could be used to extend a unified scheme into new areas are: (1) Conduct a hospital quality assessment using MOH-approved tools to ensure that routine MOH systems, infrastructure and inputs are in place and an adequate level of service quality is offered. This typically takes two months in each OD. (2) Upon certification of hospital quality, offer HEF benefits to the poor through post-identification system. (3) Conduct a pre-identification exercise in the OD catchment area. This takes 4-6 months depending on the size of the OD and could be conducted concurrently with the hospital assessment. (4) Once pre-identification is complete, extend coverage of HEF services to health centres as their service quality assessments are complete. (5) Introduce CBHI activities into the existing system.


Purpose of the research: Evaluation of progress towards increasing utilisation by the poor and reduction in health-related debt.

Study sites: Seven sites—ODs at Mongkol Borei, Battambang, Moung Russey, Sampov Meas, Chhlong, Kratie and Phnom Penh

Type of survey: Quantitative.

Type of data used: Primary and secondary.

Methods of data collection: Routine and secondary data from the URC Project Data System, MOH HIS and the Cambodia Socio-Economic Surveys 2004 and 2007, bed census, key informant interviews.

Sample size: 599 patient interviews at six referral hospitals.

Main findings: Introduction of HEFs results in an immediate and sustained increase in the overall use of IPD services by a factor of 1.5-1.75. Where pre-identification is complete, utilisation rates for inpatient services by the poor were approximately three times higher than for self-paying patients. Utilisation rates by the pre-identified poor at health centres are on average slightly higher than by self-paying users. Continuous improvement in access for deliveries for poor women relative to fee-paying; up to 70% of HEF women gave birth at a HC or RH. 55-71% fewer households had a debt in areas with HEF. HEF assists households to cope better with debt by lowering debt from original levels. Pre-identification is cost effective in reducing health-related poverty; post-identification is not cost effective. 73.7% of HEF beneficiary respondents to the bed census reported they were not at all ashamed of being identified as poor. 11.2% felt there were inclusion errors and 25.7% that there were exclusion errors. 79.9% of HEF beneficiaries reported they felt the care they received was the same as that for fee-paying patients.

Conclusions: HEF coverage of health centres seems to increase overall utilisation proportionally to the number of poor with HEF, and there is little or no substitution introduced by the HEF.


Purpose of the research: To review the progress of GTZ’s activities in support of social health insurance in Cambodia and propose areas for support in 2006.
Research questions: How were GTZ's activities successful? What and how can be done to make the current activities more successful and effective?

Type of data used: Secondary.

Methods of data collection: Document review.

Main findings: For the health insurance scheme for formal sector workers, there are a number of activities that GTZ has done to improve the social health insurance, such as lobbying the MLVT to have civil servants included in the Social Security Law, in which only private sector workers are included, meeting with others such as URC and USG to find ways to have an equity fund and insurance scheme operated side by side, and investigating the possible linkage between health insurance schemes and micro-finance institutions. For the health insurance scheme for informal sector workers, there are also a number of activities that GTZ has done to improve social health insurance, such as supporting the development of CAAFW, which is the only other health insurance scheme operating in Cambodia besides GRET, and obtaining further information on how CAID operates in order for GTZ to be more effective in working with it. The potential added value of linking health insurance with equity funds is noted and explained in detail.

Conclusions: GTZ should carry out all the missing activities presented in the main findings, and CBHI and HEF should be linked in the future, for which GTZ has to do more.


Purpose of the research: To make an end-of project assessment of the impact of the contracting system; to make recommendations for new contracting arrangements under the Health Sector Support Project Phase 2 (HSSP2).

Study sites: Four ODs in Kampong Cham province.

Type of survey: Quantitative.

Type of data used: Primary and secondary.

Methods of data collection: Household survey and routine data, focus group discussions, interviews.

Sample size: FGDs with health centre chiefs, referral hospital physicians, RH midwives and HC midwives. Interviews with staff from 10 randomly visited HCs and all four hospitals.

Main findings: Increased hospitalisations from 2005-2006 were sustained mainly due to the HEF; an increase in unnecessary hospitalisations of HEF beneficiaries was corrected; the ratio of self-paying clients to HEF beneficiaries at the PH remains acceptable but the OD RHs have increasingly become hospitals for the poor, those who can afford to pay using private clinics. As a proportion of all patients, HEF beneficiaries accounted for over 90% in Cheung Prey and Prey Chhor RHs and 67% in Chamkar Leu. RH revenues from self-paid user fees increased from 2005 to 2007 but at a lower rate than the increase in HEF-reimbursed fees. Performance incentives and user fee revenues (augmented by a health equity fund) help to increase staff commitment to work in the public sector.

Conclusions: Equity in access to hospital services has improved thanks to the HEFs, and access to maternity care in HCs has improved as a result of the voucher system.


Purpose of the research: To evaluate contracting in Ang roka and Kiri Vong.

Research question: Evaluate the contracting experience against sustainability, capacity building and quality of care.

Study sites: Ang roka OD, Kiri Vong OD.

Type of survey: Quantitative and qualitative.
Type of data used: Secondary.

Main findings: In Kiri Vong OD, 80% of equity fund beneficiaries reported that they still borrowed money and often paid interest, due to lack of confidence that the services would be free, expectation of having to pay for food while in hospital, need to compensate for lost income and food for family, need to pay for initial transportation costs and use of private providers or drug sellers before accessing services at the RH.


Purpose of the research: To evaluate implementation of contracting in Ang roka and Kiri Vong.

Research questions: Identify the issues pertinent to the planned transition to an internal contracting arrangement (special operating agency—to replace the external contractor, Swiss Red Cross, in a new phase) between the provincial Health Department, the OD managers and the health facilities

Study sites: Ang roka OD, Kiri Vong OD.

Type of survey: Quantitative and qualitative.

Type of data used: Secondary.

Methods of data collection: Routine HIS and financial data and informal interviews.

Main findings: Contractual targets were exceeded for all service indicators except family planning; substantial gains were made in MCH services and curative care compared to other rural areas. Utilisation of health services was inversely related to distance of households from services. Quality of care was higher than normal rural standards, with 24-hour coverage, and client satisfaction was generally high. Fee charges were acceptable, with no under-the-table charges, and there were safety nets for the poor through the pagoda-based HEFs for HCs and the SRC-HEF for the referral hospital. Health expenditures for HEF beneficiaries are less than for non-beneficiaries but higher than would be otherwise expected. About half of HEF beneficiaries obtained treatment privately or bought drugs before or instead of treatment at a public facility. CBHI membership is low but increasing.

Knowles, J. (2001). An Economic Evaluation of the Health Care for the Poor Component of the Phnom Penh Urban Health Project. Phnom Penh, Health Sector Reform III Programme - London School of Hygiene and Tropical Medicine, Options UK, Department for International Development.

Purpose of the research: Economic evaluation of the HEF component of the Urban Health Project: estimate the costs of health services for the poor component, assess resource allocation, analyse management support costs, document lessons from the HEF.

Study sites: Phnom Penh—Tonle Basak and Boeng Kak squatter sites.

Type of data used: Secondary.

Methods of data collection: Document review.

Main findings: The value of risk pooling benefits under the HEF is about US$627 per year per poor resident. And US$1949 is saved annually from timely treatment. HEFs help to prevent poverty, which saves approximately US$1000 per person in poverty alleviation investments.

Conclusions: The strongest aspects of the Urban Health Project were increasing utilisation by the poor and the success in targeting project subsidies.


Purpose of the research: To discuss the contribution of Cambodia’s health program to poverty reduction. The objectives of the research are to strengthen the health program’s poverty reduction focus, to assist the MOH in
formulating its health sector poverty reduction strategy in the context of Cambodia’s National Poverty Reduction Strategy and to contribute to the development of a more effective monitoring and evaluation framework for the health sector.

**Research question:** How can Cambodia’s health program contribute to poverty reduction?

**Type of data used:** Secondary.

**Methods of data collection:** Document review.

**Main findings:** A growing body of evidence both in Cambodia and internationally supports the view that improved health and nutrition can play an important role in reducing income poverty and other important dimensions of poverty, such as illiteracy. However, the report notes that many of the strongest links between improved health and nutrition and poverty reduction occur over the longer term (as is reflected in the MDGs). In the short to medium term, it is more useful to focus on the role of improved health and nutrition as important dimensions of poverty reduction in their own right. Accordingly, an effective poverty reduction strategy for the health sector needs to focus on the distribution of key health outcomes, as well as on national averages, and especially on eliminating rich-poor disparities, which are currently very marked in Cambodia, in the utilisation of key health services. To contribute effectively to poverty reduction, health sector planning and budgeting are also important in the Cambodia’s health program.

**Conclusions:** Cambodia’s health program really contributes to poverty reduction. The Health Sector Support Project health finance-related covenants should be reviewed carefully by the MOH-HSSP secretariat as soon as possible, and to contribute to poverty reduction, the new plan should be developed as soon as possible for the evaluation of equity fund pilots and other schemes for improving the affordability of health care for the poor.


**Purpose of the research:** To analyse the barriers to scaling up health service provision in Cambodia with a view to attaining the health millennium development goals

**Research questions:** What are the barriers to scaling up health service provision in Cambodia? What can be done to reduce those barriers?

**Type of data used:** Secondary.

**Methods of data collection:** Document review, field visits.

**Main findings:** Much of the policy and financing framework for scaling up is in place. With recent higher levels of public health spending, rising donor flows and already high levels of out-of-pocket private spending, the adequacy of gross health financing does not currently appear to be the central impediment to achieving health MDGs. An effective transition will also depend on raising the effectiveness with which resources are deployed. In this context, institutional fragmentation and rigidity in both the external aid community and domestic health system remain barriers to progress. The aggregate number of health professionals does not appear to be an overriding constraint on scaling up for better health. Thus an HEF in a hospital with a catchment population of 100,000 would cost US$50,000 a year to run. The cost of nationwide provision of HEFs with the above characteristics would be US$7.3 million (or US$4.9 million excluding existing HEFs), equivalent to US$0.50 per capita per year. If current trends in government and donor financing continue, the extra costs identified would be fully covered from 2011 on; i.e. a financing gap would exist in 2007-11. Government financing alone could cover the extra costs only from 2013, suggesting that donor bridge financing would be needed for a period of five to six years.

**Conclusions:** A number of activities need to be undertaken, such as strengthening of the policy and financing framework, overcoming the financial impediments to scaling up, addressing the human resource impediments and taking into consideration the view of many in the field that inter-sectoral linkages to health are a neglected area with the potential to further achievement of MDG goals with limited resource inputs.

**Purpose of the research:** To support the design, planning, implementation and costing of a model of GTZ in the province of Kampong Thom for the extension of social transfers to poor populations by establishing household poverty identification procedures that can be effectively, efficiently and equitably used at village and commune level.

**Research questions:** If commune household poverty identification is considered advantageous, how is the equity fund program to be engaged? Once beneficiaries have been identified, what are the procedures for registering those eligible for fee and opportunity cost waivers? Should registration be determined by the commune household poverty lists alone; should these be verified, ex-ante, in the household, when individuals seek care in the facility or otherwise? Should registration be permanent or temporary? Is sensitisation of the public to these services of importance? What costs are attached to these different scenarios? Who should be involved in these procedures?

**Study sites:** Kampong Thom Province.

**Type of survey:** Qualitative.

**Type of data used:** Primary and secondary.

**Methods of data collection:** Key informant interviews with national actors and with GTZ national and provincial staff, focus group discussions and document review.

**Sample size:** Nine focus group discussions (8-10 participants each).

**Main findings:** Separate identification procedures from targeting procedures. The design for pro-poor identification requires the development of a transparent yet standardised approach to household level poverty identification which separates the commune procedures of pre-identification from procedures for operationalising social transfers. Pre-identification need to harness decentralised commune governance that can then oversee and collaborate with services providers and associative structures to arrange and enhance service delivery to the poor.

**Conclusions:** A model or pilot in Kampong Thom province should be established, and a provincial workshop should be held, followed by several district and numerous commune workshops to introduce the pre-identification model.

**Other comments:** The author did not provide information on how many key informants were interviewed.


**Purpose of the research:** To assess the extent to which HEFs could improve access by the poor to public hospitals.

**Research questions:** To what extent were the hospitals accessible to all? Fairness in benefiting from public resources. The SES of HEF beneficiaries (false positives); proportion of the very poor with HEF (false negatives).

**Study sites:** Purposive selection of six rural hospitals through case studies (three CPA2 and three CPA3) as good performers (Kiri Vong, Mongkol Borei, Peareang, Pursat, Sotnikum and Takeo).

**Type of survey:** Quantitative.

**Type of data used:** Primary.

**Methods of data collection:** Part of a wider study (hospitals in charge, benefit incidence analysis in six rural hospitals). Data collected on both the patient and household. Interviewer assessment of poverty. Bed census survey at each site to assess patient socio-economic status. Used an asset index to compare inpatients with the general population.

**Sample size:** Total 589, between 67 and 135 patients at each site.
Main findings: The patient socio-economic profile is similar to the general rural population. HEFs probably contributes to this outcome. HEF assistance is concentrated on the very poor. Some poor inpatients did not get HEF coverage.

Conclusions: HEFs appear to spread hospital access across socio-economic groups, but the quality of care also matters. The hospitals are used by the poor, but HEFs are not a necessary condition for such an outcome (quality of care is also important). HEFs are highly effective in reaching the poor.


Purpose of the research: To evaluate the decentralisation of HEFs in Sotnikum District to HC level by assessing the pilot schemes in Kvav and Samraong HCs: to assess community pre-identification; to assess the value of HEFs for first-line services. This report documents the experiment after one year.

Research questions: What is the most appropriate system of community identification? Is it relevant to organise a HC assistance package? What are the best strategy, package and organisational set-up?

Study sites: Kvav and Samraong HCs, Sotnikum district.

Type of survey: Quantitative and qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Document review, household interviews (health-wealth impact and health seeking behaviour), routine data from the health facility registers to assess utilisation.

Sample size: 110 households.

Main findings: Decentralisation of HEFs to HC level changed health-seeking behaviours of many poor households, many of whom began for the first time to use the public health system; this increased access by the poor at health centres and the referral hospital. MSF and local NGO CFDS developed three different approaches for identifying people in need of assistance: card, voucher and social worker at health centre schemes. The pre-identification by the card system was the most effective. The redirection of users towards public health centres and hospitals produces both a health benefit and a wealth benefit.


Purpose of the research: To demonstrate how barriers to access for the poor are effectively addressed by the HEF in Sotnikum district.

Study sites: Sotnikum district, Cambodia

Type of data used: Secondary.

Methods of data collection: Document review.

Main findings: On average, 40% of hospital inpatients received some assistance. The introduction of a HEF managed by a local NGO appeared to improve access to hospital care for the poor. As long as the services delivered in the hospital are meeting the standards, one can expect a significant health outcome for the beneficiaries. During the first year, the HEF may have mainly reduced the cost of care for people who had already chosen to access care. The years after, the steep increase in utilisation indicates that a considerable number of the ‘new’ patients were from poor households who would not have sought care at the hospital without financial support. In terms of poverty prevention, the greatest potential of the HEF does not seem to lie in financing expenditure in the public sector, but in preventing unnecessary expenditure in the private sector, by encouraging the use of adequate public health services.

Conclusions: The government should be responsible for providing public money to the poor because it allows the government not only to target the poor, but also to develop its public health system.

Purpose of the research: To identify some key issues that national policy makers will have to consider when making their own choices in policies for health-care finance that are favourable to poor people by comparing two experiences—the abolition of user fees in Uganda and the establishment of health equity funds in Cambodia.

Research question: What are the experiences of Uganda and Cambodia regarding health-care finance that are favourable to the poor?

Study sites: Uganda and Cambodia.

Type of data used: Secondary.

Methods of data collection: Document review.

Main findings: Utilisation by the poor increased in both Uganda and Cambodia. Supplementary costs were included in Cambodia but not in Uganda. HEFs have higher administration costs than abolition of user fees. HEFs redirect poor people towards public facilities and thus help prevent impoverishment; in Uganda problems with supply (drugs) mean health costs may not be reduced. User fees may ration services and provide revenue to facilities and therefore incentive to the staff.

Conclusions: First, unfair public health systems are not inevitable, since there are solutions. As more funds become available, we can develop strategies to ensure that the poorest people will benefit. Second, the comparison between the two countries confirms that the context in which the policy operates matters. Third, Uganda and Cambodia show that there are key decisions in the reform process. Fourth, in health-care financing, there are no universal easy solutions because the whole institutional arrangement is important. Fifth, a financing policy favourable to poor people is much more than a mere technical issue.


Purpose of the research: To describe and analyse the results of the second year of the New Deal experiment (better income for health staff, better service to the population) in 2001.

Research question: How effective were the New Deal experiments in Sotnikum and Thma Puok districts in the second year of implementation?

Study sites: Sotnikum and Thma Puok operational districts.

Type of data used: Secondary.

Methods of data collection: Document review.

Main findings: The New Deal comprises a set of contracts using donor funds and user fees to fund staff incentives. In Takeo, Sotnikum, Sway Rieng and Thma Puok, there is enough evidence to confirm the relevance of the approach: utilisation and activities have significantly increased. The strategy involves an increase in user fees; the increase in fees meant more limited access for the poorer. The first health equity funds were created in Thma Puok hospital in May 2000 and in Sotnikum in September 2000. HEFs have yielded impressive results. In December 2001, 26% of all in-patients in Thma Puok and 25% in Sotnikum were exempted under the HEF, while the proportion of people under the poverty line was probably closer to 40% in Sotnikum and even higher in Thma Puok. For 2001, HEFs accounted for some 15% of hospital user fees. Inclusion and exclusion errors were rare. Accountability and transparency remain sensitive points for mid-level managers.

Conclusions: The report focused on three issues: incentives, management capacity and accountability. After four years in Takeo, two years in Sotnikum and Sway Rieng and one year in Thma Puok, there is enough evidence to confirm the relevance of the approach. Adding to HEFs, a more general policy in favour of the
poor has to be elaborated. A health equity fund brings real benefit to the poor only if the hospital is providing effective health care. The HEF must be entrusted to a body independent of the hospital.

**Other comments:** Different experiments can be gathered under the New Deal label. The major ones are taking place in: Takeo Provincial Hospital (started in 1997 and supported till the end of 2001 by the Swiss Red Cross), Sotnikum health district (started late 1999 and supported by MSF and UNICEF), Thma Puok health district (started late 2000 and supported by MSF and WHO), Svay Rieng Provincial Hospital (started in 1999 and supported by UNICEF), Moung Russey District Hospital (started early 2000 and supported till end 2000 by Movimondo), Kratie Provincial Hospital (started in 2000 and supported till end 2001 by Health Net International) and Stung District Hospital (started in 2001 and supported until the end of that year by MSF-France).


**Purpose of the research:** To assess community perceptions of the fairness of pre-identification.

**Research question:** The premise is that the perceived fairness of the HEF’s pre-identification is a suitable marker for the quality of the pre-identification.

**Study sites:** Five HEFs supported by URC in Pursat, Chhlong, Moung Russey, Mongkol Borei and Phnom Penh and the HEF supported by UNICEF in Svay Rieng.

**Type of survey:** Quantitative and qualitative.

**Type of data used:** Primary and secondary.

**Methods of data collection:** Key informant interviews, household survey using a clustered random sample and document review.

**Sample size:** 175 households in the six HEF areas (30 households were selected from two villages for every HEF program under study), some HEF staff and the village chiefs.

**Main findings:** False negatives 2.3-9.4 per cent; false positives 0-1.7 per cent. Perception of fairness 64-97 per cent. Perception of completeness 17-83 per cent. Many people did not value the card and had not used it.

**Conclusions:** This study indicates that all pre-identification methods were well accepted by the local people—they perceived that the HEF cards were fairly distributed in their villages. There are advantages and disadvantages in all pre-identification methods. There is no one particular method that is better than the rest or that is a model that can be used for all areas.


**Purpose of the research:** To provide management information on HEFs, to assess the effectiveness of pre-identification.

**Research question:** That the perceived fairness of HEF pre-identification is an important measure of the quality of the targeting.

**Study sites:** Review of six HEF schemes (Pursat, Chhlong, Moung Russey, Mongkol Borei, Svay Rieng and Phnom Penh).

**Type of survey:** Quantitative and qualitative.

**Type of data used:** Primary and secondary.

**Methods of data collection:** Household and key informant (HEF staff and local officials) interviews carried out in mid-2005, updated using secondary data. Semi-structured interviews with local staff involved in the HEF program, village authorities and beneficiaries.
Sample size: Cluster random sampling of households by commune and village with random selection of households. Fifteen households selected at each site. Opportunistic selection of HEF staff and local officials.

Main findings: Different methods of pre-identification are used, definitions of poverty vary, and methods of enrolment affect perceptions of fairness. Pre-identification was well accepted by beneficiaries: 81.7% of beneficiaries thought it was fair and 12% not fair. Local informants did not report major errors. There were more false negatives than false positives. Reasons for exclusion were recorded.

Conclusions: Eligibility criteria and poverty definition need to be reconsidered. The study found no stigma associated with the distribution of HEF cards, no matter what the method. Because of mobility in poverty, pre-identification must be ongoing.

Other comments: Judging inclusion and exclusion errors by beneficiary and stakeholder perceptions runs the risk of subjective results that may not be accurate.

Men, C.R. and M. van Pelt (2006). Two Case Studies–Phnom Penh and Ang Roka: Equity Fund’s Impact on Access to Health Services. Study of Financial Access to Health Services for the Poor, MOH/WHO/AusAID/RMIT University. Phnom Penh, MoPoTsyo (Patient Information Centre) and Centre for Advanced Studies. [See also Annear, Wilkinson et al 2006; van Pelt and Morineau 2008] Purpose of the research: To assess the operation and functioning of health financing and pro-poor schemes in selected urban and the rural areas. Research carried out for the Study of Financial Access to Health Services for the Poor, where the results were also reported in the Phase 1 Access Study report.

Research questions: The barriers to access to public health services for the population including the poor; inclusion and exclusion errors among the target groups; the content of the benefit packages and the role of third-party payers; and which health problems are causing poverty.

Study sites: Ang roka OD and selected squatter areas in Phnom Penh.

Type of survey: Quantitative and qualitative.

Type of data used: Primary and secondary.

Methods of data collection: In-depth interviews, focus group discussion and documentary review; quantitative analysis of data on indebtedness for health from the Urban Sector Group’s HEF data base.

Sample size: 8 key informants (MOH staff, HEF managers, social health insurance managers), 43 indebted poor households living in the two slums. One focus group discussion organised with HEF beneficiaries in Boeng Kak slum and two focus group discussions in Ang roka (one with HEF beneficiaries and one with non-beneficiaries). From the USG data base 1704 households in Boeng Kak and 1505 in Tonle Basak.

Main findings: HEFs have an impact on access and help to increase utilisation of MPA and CPA services among the poor in both settings. HEFs help to reduce out-of-pocket expenses related to health care, especially on transportation, food and medication. HEF and contracting improve staff behaviour towards patients, make services more responsive for the poor and bring accountability on the side of the providers. HEFs lead to a significant reduction in debt for health care. Households with debt for health care: HEF area 17% and non-HEF area 47 per cent. The differences are significant.


Main findings: Outlines the guiding principles for setting up and managing provincial and district health equity funds, and highlights issues for evaluating their effect and outcomes in health service delivery. There is a wide variation in scale, financial volume and management systems among these schemes. At hospitals, the benefit package should include, but not be limited to, maternal and child health services including management of childhood infections, antenatal care and essential or emergency obstetric services; treatment and management of infectious diseases, accidents and injuries. Management of the HEF should be entrusted generally to a third-
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party NGO, but the MOH should experiment with implementation through provincial and district authorities. HEFs should include a health promotion component, referral for service delivery at different tiers, quality improvement, information and marketing of public sector services, community involvement, identification of beneficiaries and social support to families in need, and partnership with civil society and NGOs.


Main findings: Annual report on health financing issues for the MOH Cambodia. Includes background information, health system development and current status of the Health Coverage Plan, review of the health financing situation (government and donor funding now equal at US$8 per capita per annum each), the national health budget (25% increase over 2007), donor funding and SWiM arrangements, household health spending (60% to private providers), user fees and supply-side financing schemes, contracting, demand-side financing schemes and health equity funds (at 50 hospitals and 120 health centres), social health insurance and community-based health insurance (12 local schemes), and voucher schemes for pregnant women.


Main findings: Provides a description of health equity funds, the background to their establishment, their institutional set-up, procedures for the identification of beneficiaries and benefits package. Defines four different types of HEF: Group 1, six national hospitals operating as government subsidy schemes (SUBO) under Prakas 209; Group 2, 10 health operational districts operating as SUBOs; Group 3, MOH-funded ODs with contracted HEF implementers (HEFIs); Group 4, other HEFs with HEFIs or HEF Operators (HEFOs).


Purpose of the research: To report on the outcomes for HEF implementation nationally during 2008.

Study sites: HEF managed by third-party HEFO-HEFI at 38 provincial and district referral hospitals.

Type of data used: Secondary.

Methods of data collection: Routine data. Monitoring of hospitals; monitoring of beneficiaries. Data from the MOH database provided by HEFIs URC, BTC, AFH, UNICEF, Reproductive and Health Alliance Cambodia, Cambodian Red Cross (Takeo provincial hospital ) and Volunteer Services Overseas.

Sample size: 13 HEF hospitals with HEFO-HEFI; 741 ex-HEF beneficiaries interviewed at home (285 pre-identified, 456 post-identified) from 29 hospitals in 22 ODs in 15 provinces including 5 HEFI and 10 HEFO.

Main findings: 38% of all hospitalised patients were HEF-supported. 25% of the deliveries at the referral hospitals were HEF deliveries. 66,133 pre-identified poor visited 38 different health centres in five ODs with HEFs managed by third-party payer HEFO-HEFI. At these health centres, 20% of the patients were pre-identified poor. 40-45% of hospital HEF beneficiaries had been to the health centre before going to the hospital: 49.4% among pre-identified and 38% among post-identified beneficiaries. 64% were confident the HEF would pay for their treatment at the hospital at the time they left their village: 93% among pre-ID and 46% among post-ID. In general there was little difference between pre-ID and post-ID. 40% got a loan at interest for the last hospitalisation. 93 % did not pay for treatment after HEF status was recognised. 91 % were not told by staff to buy medicines (higher for pre-ID). 94% said hospital staff gave the same treatment as for non-HEFB. 95% said hospital staff attitude was the same as for non-HEFB. 98% said they would use the hospital again when sick. 80 % said they did not get treatment from private health staff after they left the hospital. 56% said the money received for transport was sufficient. 73% said they were not at the moment in debt to a doctor (higher for pre-ID), 95% appeared to conform to HEFO’s poverty criteria. Households in debt for health care—secondary analysis of Cambodian Socio-Economic Survey 2004 and 2007. Results are not conclusive. There was a significantly lower percentage of households with debt for health care in 2007 than in 2004 in the areas where
HEFs started in the interim, but in the areas that remained without HEFs there was no significant reduction. The proportion of HH-DHC in areas with HEFs was almost 40% lower than in areas without HEFs. Pre-identification was associated with much stronger social health protection in 2007 than only post-identification. A cost-benefit analysis showed the return on post-identification at 14% and for pre-identification 132 per cent.


Purpose of the research: To present the findings of a preliminary evaluation study on the feasibility and effectiveness of the UNICEF-sponsored Health Equity Fund in Svay Rieng province.

Study sites: Svay Rieng province.

Type of survey: Quantitative and qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Routine data from the HEF and PHD HIS database, stakeholder interviews, patient interview survey, observation and documentary review.

Sample size: Informal interviews with UNICEF provincial staff and hospital management adviser, provincial hospital director, vice-director and administrative staff; interviews with 53 HEF beneficiaries and 14 non-beneficiaries in the hospital or village.

Main findings: Managed by a provincial Equity Fund Support Committee with achars, local NGOs, the Department of Social Affairs and the Department of Education, UNICEF staff. Village-based pre-identification system (first of its kind in Cambodia) is feasible and cost-effective (the number of patients identified increased compared to the number post-identified), with post-identification to reduce exclusion error. 23% of the provincial population identified as eligible for HEF (and likely to increase); increased utilisation by the poor from 12% of hospital patients in 2001-2002 to more than 30% from July 2002 to June 2004. The number of fee-paying patients has also been increasing. The BOR increased from 55% in 1999 to 88% in 2004. There was increased confidence in using public health services by the population (poor and non-poor). Positively impacted beneficiaries’ health care-seeking behaviours and prevented them from having to borrow and/or sell or pawn assets to pay for health services. Most of the fully exempted beneficiaries reported that they would have had to borrow money from neighbours and relatives to pay for those health care costs. A large proportion of beneficiaries still do not understand their exemption rights before coming to the hospital. Increase in auto-referral and a decrease in letter-referral cases following the introduction of the HEF; as more patients become aware of their exemption rights, they are more likely to go directly to the hospital to seek care instead of going through the health centre. The equity fund, however, created an incentive for staff to treat poor patients. 92% of interviewed equity fund beneficiaries thought that the quality was average or better, compared to 93% of non-beneficiaries. 54% of beneficiaries ranked staff treatment as either good or very good compared to 64% of non-beneficiaries.

Conclusions: Village-based pre-identification system is a feasible and effective way to identify correctly the poorest population, is cost-effective and promotes community participation. HEF increased health care access for the poor population.


Purpose of the research: To analyse the operational arrangements developed by three BTC-supported HEFs.

Study sites: Siem Reap, Oddar Meanchey and Sotnikum referral hospitals

Type of survey: Qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Key informant interviews and documentary review.
Sample size: Interviews with a variety of actors (ministries, donors and implementing agencies) in centre, provinces and districts.

Main findings: The observations and recommendations are based on the expert judgment of the author using information from interviews. The three HEFs have the same objectives (improving access and protecting the poor) but vary in their procedures for population targeting (definition of poverty), selection criteria or identification methods and the practical conduct of the identification. Except for the Sotnikum post-identification, none of the identification methods had been evaluated and no indication about the accuracy of each method was available. HEF beneficiaries account for 30 per cent, 36% and 64% of total IPD users in Siem Reap, Sotnikum and Oddar Meanchey.


Purpose of the research: This paper reviews four hospital-based health equity funds in Cambodia and draws lessons for future operations.

Research question: How can HEFs in Svay Rieng, Peareang, Kiri Vong, and Sotnikum contribute to improving access to hospital care for the poor?

Study sites: Svay Rieng, Peareang, Kiri Vong and Sotnikum ODs.

Type of survey: Quantitative and qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Routine data, semi-structured interviews, documentary analysis and participant observation.

Sample size: Semi-structured interviews with a variety of informants (no numbers stated in the report). Sites were selected through purposive sampling: third-party payer, supported by different agencies, providing an illustration of the variety of models, being in operation long enough to give sufficient routine data (in 2004).

Main findings: Provides a framework for comparative analysis. The four schemes were designed and implemented by different agencies, using different implementers. They had a positive impact on the utilisation of hospital services by the poorest patients in addition to the average number of fee-paying patients. They now account for 7% (Kiri Vong) to 52% (Peareang) of total hospital use. HEFs mean a supplementary income for health facilities, improve their financial stability and increase staff bonuses and money available for running costs.

Conclusions: Confirms that a HEF can enhance access to hospital services by the poorest people. The comparative review shows that a range of operational arrangements may be adopted to achieve the health equity fund objectives. Design aspects essential to the model’s performance are: the existence of donor funding, the presence of a driving agent, a clear separation of roles, appropriate identification techniques and a holistic consideration of the different barriers to health service utilisation. Some operational issues have received too little attention. There are also policy issues. Core poverty is difficult to tackle, and granting free health care will not be enough.

Overtoom, R. (2003). Report on Possibilities for Equity Funds in Chhlong Referral Hospital, Pursat Provincial Hospital, Moung Russey Referral Hospital, Mongkol Borei Provincial Hospital.

Purpose of the research: To advise URC on the feasibility of the establishment of HEFs at referral hospitals in the form of an equity fund.

Study sites: Chhlong RH, Pursat Provincial Hospital, Moung Russey RH and Mongkol Borei Provincial Hospital.

Methods of data collection: Site visits, interviews with HEF implementers.

Main findings: Prerequisites for establishing a HEF include CPA services of a reasonable quality, reasonable activity in the hospital, private sector not too flourishing, a health financing system in place and staff agreement.
on the distribution of bonuses, appropriate numbers of beds, adequate human resources and enough infrastructure. Success in establishment of a HEF requires separation of the service-providing authority, the budget-disbursing authority and the auditing authority. It is necessary to establish a consistent source of funding. Benefits should include fees, travel, food and ancillary costs. Pre-identification is the best method for targeting the poor. A contract is needed between the HEF implementer (NGO), hospital personnel and local partners as auditors, with quality of care standards negotiated and agreed.


**Purpose of the research:** To understand the role and influence of villagers’ trust in the health insurer on enrolment in a CBHI scheme. The study examined villagers’ trust in health insurers and the association between insurer trust and CBHI enrolment.

**Research question:** How does the villagers’ trust in the health insurer influence enrolment in a CBHI scheme in Cambodia?

**Study sites:** Thma Puok OD in Banteay Meanchey.

**Type of survey:** Quantitative and qualitative.

**Type of data used:** Primary and secondary.

**Methods of data collection:** Focus group discussions, household survey and documentary review.

**Sample size:** Seven focus groups in different villages, each comprising 7-13 people, and stratified survey of 28 household clusters each comprising 20 persons (n=535 from 28 randomly selected villages).

**Main findings:** Although villagers generally trusted the health insurance organisation, villagers with poor experiences with other organisations were less willing to trust the insurer. Insurer trust represented a combination of interpersonal and impersonal trust. Insurer trust levels for villagers who newly enrolled and renewed insurance were significantly higher than those who never enrolled in CBHI schemes. The study proposes a conceptual framework for trust including organisational trust, financial trust, honesty, competence and personal interactions.

**Conclusions:** Trust plays a vital role in health financing systems, where the entire arrangement is largely relational. Understanding the nature of trust for the health insurer is essential to improve health insurance enrolment and protect people in poor rural communities against the impact of health-related shocks.


**Purpose of the research:** Follow-up survey to measure and interpret changes in project indicators compared to baseline.

**Study sites:** Eight ODs supported by BTC in Kampong Cham, Oddar Meanchey and Siem Reap provinces.

**Type of survey:** Quantitative.

**Type of data used:** Primary.

**Methods of data collection:** Clustered random sample household survey.

**Sample size:** Siem Reap and Oddar Meanchey: 5 ODs x 14 clusters x 25 households = 1750 households; in Kampong Cham: 3 ODs x 20 clusters x 20 households = 1200 households; includes 232 households that had HEF cards in 2008.
Main findings: Almost all HEF households were recruited among the poorest households, suggesting that the selection process is efficient in targeting the poorest families. The distribution of all households across wealth groups is bell-shaped, whereas the distribution of HEF members slopes downwards from left to right, which shows that HEF successfully targets the poorest households. Inclusion of the non-poor in HEF was about 3% of the non-poor population (in total only six out of 232 HEF households in only two out of eight ODs were from the wealthiest quintile). Coverage of the poor with HEF was 1.1-37.7% across eight ODs. Health care outcomes in project areas: the gap between poorest and wealthier households has decreased the most for the maternal health indicators: ANC, tetanus toxoid immunisation, deliveries by trained birth attendants. Coverage rate differences for vaccination between the very poor and the wealthy were not statistically significant except in Siem Reap OD, where households are in close proximity to the hospital.

Conclusions: Health equity funds are efficient in targeting the poorest families, thereby demonstrating that they have the potential of improving access to health for the neediest families.


Purpose of the research: To examine Cambodian and international experiences with contracting approaches, glean lessons learned so far, provide recommendations for improvements in management, identify any practical limits to contracting and identify strategic options for expansion of such arrangements.

Type of survey: Qualitative.

Methods of data collection: Documentary review, discussions with development partners and NGOs, field visits to meet MOH staff in provinces, ODs, referral hospitals and health centres, exit interviews with patients, discussions with commune representatives, focus group discussions in villages.

Sample size: The field visits covered as many ODs as possible within the short time available. Review team members obtained opinions from a wide cross-section of participants in contracting.

Main findings: Access to health care for ethnic minorities, women and vulnerable groups was greatly improved through contracting. The most significant segment of vulnerable groups is the poor, and contracting combined with HEFs has certainly improved coverage and utilisation by them. While HEFs are valid as a poverty-reduction strategy, their role in financing future rounds of contracting is questionable. A tendency to bypass the health centre to access directly the most valued highest level is still observed in some areas. Abuse of referrals to avail of equity funding has been reported as well.

Conclusions: Three issues are critical: there do not appear to be any consistent guidelines for applying pre-identification criteria; HEFs do not currently provide exemptions from fees at HCs; and HEFs should encourage the poor to seek first-level care before their health conditions escalate to require hospital care. There is a perverse solidarity effect of HEFs in contracting through providing significant additional funding for health services, which is the opposite of the way in which the solidarity effect should function (to support the poor).


Purpose of the research: To report on the status of the implementation of the GTZ-GRET project with partners for CBHI and HEF in Kampot OD.

Study sites: Kampot OD.

Methods of data collection: Routine data.

Main findings: Coverage figures show a rapid increase in HEF enrolment (to 12,906 individuals or 9% of the OD population in December 2008) and a slow increase in CBHI enrolment (to 2192 or 1.5% of the OD population). Service utilisation at health centres and the hospital (the contact rate) is much higher for voluntary
CBHI members than for the poor supported by HEF, partly due to lack of information and partly due to distance from the facility. A client satisfaction survey of 27 randomly selected respondents conducted by GTZ in July 2008 showed 89% would return to the hospital for treatment in the future, 93% would recommend the hospital to others and 93% reported that the services met their expectations. However, the survey found low levels of satisfaction with admitting staff—37 per cent, politeness of non-clinical staff—33 per cent, satisfaction with nurses-midwives—41% and cleanliness of toilets—59 per cent. Pagoda/mosque committees have mobilised community resources (approximately 2 million riels over six months), discussed project issues with communities and provided feedback to the health provider and CBHI implementer.


Purpose of the research: Compiling information on existing health financing projects, lessons and experiences to recommend options for health financing models (to be implemented by URC).

Type of survey: Qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Focus group discussion, literature review, meetings, site visits, informal interviews. Information was tabulated according to type of scheme.

Sample size: Sought the perspective of all the actors in health financing schemes, including the initiators of the schemes (all are NGOs), central, provincial, operational and facility MOH officials, users-villagers and local authorities.

Main findings: Quality of service is linked to infrastructure, equipment, technical capacity, staff availability and financial incentives. Transportation and food costs are the main problems facing poor families. Health needs assessments and socio-economic studies in target populations are essential to set and negotiate user fees that will be accepted by all actors (users, providers and fund holders). The operating costs of current HEF schemes are generally high (approximately 30% of total costs). Transparency and good governance of contractors are subjects to be considered. Limitations of HEF schemes include lack of pre-identification and inability to detect all catastrophic cost episodes.

Conclusions: The community-based financial risk sharing mechanisms combined with equity fund support is appropriate for Cambodia. For the short term, the fund can be a complement to the very small pre-payment schemes in increasing financial access to quality health-care services. In the long term, government subsidies in micro-financial risk sharing schemes might replace the HEF.


Purpose of the research: To summarise the outcome of the first national forum on HEFs.

Methods of data collection: Conference presentation.

Main findings: Included presentations from URC, Health Net International, SRC, BTC and UNICEF on progress in implementation of 22 hospital-based HEFs. The purpose of HEFs is to provide financial and social assistance to the poor, add to provider revenues and improve service delivery. Most HEFs complement health system strengthening projects with contracting-type mechanisms. The reported costs of HEFs vary between schemes from US$12 to almost US$43 per hospitalised beneficiary. The reported results indicate that: third party management of HEFs is effective; HEFs have increased access by the poor to public health services; it is not conclusive that HEFs reduced catastrophic health expenditure; the technical quality of care remains questionable; sustainability and accountability are common concerns; post-identification is feasible and cheap, pre-identification is time consuming and more expensive but is justified by the better results; poverty is dynamic, with consequences for the frequency of pre-identification; communication among implementers and HEF operators remains limited; pre-identified beneficiaries are better informed about their eligibility to receive free health care; the role of community networks needs to be explored; and data between HEFs cannot
be directly compared due to a lack of uniformity. Issues on which there was a consensus: health equity is a priority; HEFs improve access and provide financing for facilities; uniform monitoring of HEFs is needed; many factors play a role in catastrophic expenditures and not all are addressed by the HEF. There was little consensus on how to make HEFs sustainable or how to use HEFs as purchasing agents. Outstanding issues included: the HEF impact on quality of care; empowering the poor. Further evidence is needed on: the type of operator implementing HEF (including government bodies); the role and duties of the HEF operator; the identification of beneficiaries; the benefit package (inclusion of health centres).


Purpose of the research: To assess results of the Sotnikum New Deal experiment from its start in 1999 till early 2001.

Study sites: Sotnikum OD.

Methods of data collection: Participant observation and routine reports.

Main findings: It is possible to break the vicious circle of underpayment of health staff and underutilisation of the public health services through the New Deal model. With the implementation of user fees, an equity fund was considered necessary to provide access for the poor (the third HEF to be established after Thma Puok and Phnom Penh). The HEF involved external funding through UNICEF-MSF, a purchaser-provider split and post-identification.

Conclusions: Access to health care has improved in Sotnikum, but the improvements in quality are still less than satisfactory.


Purpose of the research: To document how out-of-pocket health expenditure can lead to debt for health care.

Study sites: Banteay Meanchey province.

Type of survey: Quantitative and qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Household surveys and interviews, document review.

Sample size: 72 households (first investigation in June 2001), 26 indebted households (follow-up investigation after one year) to document health-seeking behaviour, out-of-pocket expenditure and how the expenditure was financed.

Main findings: Benefits derived from a combination of the New Deal and the HEF (CAAFW for pre-identification and payments). From their introduction in late 2000, the number of hospitalisations in Thma Puok hospital more than doubled (as of 2004). The main impact of the health equity fund was to attract the poor to the public health system and prevent them from having to borrow money for private care and to lower the average OOP payment compared to neighbouring facilities.

Conclusions: Even modest out-of-pocket health expenditure frequently causes indebtedness and can lead to poverty. A credible and accessible public health system is needed to prevent catastrophic health expenditure and support social safety nets.

**Purpose of the research:** To assess the contractual performance of four HEF’s implemented by Action for Health (facilitating access for the poor at the RH, preventing catastrophic health expenditure).

**Study sites:** Cheung Prey, Prey Chhor, Chamkar Leu and Kampong Cham PH.

**Type of survey:** Quantitative and qualitative.

**Type of data used:** Primary and secondary.

**Methods of data collection:** Document analysis, HEF routine data and survey results, primary data from in-depth stakeholder interviews, interviews with village chiefs, former HEF beneficiaries; secondary data from a bed census among inpatients at the PH and three RH, routine exit interviews by the HEFO and a household survey in Chamkar Leu.

**Sample size:** Primary data from interviews with 54 stakeholders (including non-government organizations, HEF implementers, health officials, local officials), 30 village chiefs and 90 former HEF beneficiaries. Secondary data from a bed census among 546 inpatients and survey results from 150 household interviewees.

**Main findings:** The HEF is effective for the poor who arrive at the hospital but does not prevent catastrophic expenditures. The post-identification process at the RH is considered fair and correct. Beneficiaries are difficult to reach with information. Health staff working privately compete with the HEF. There is no clear strategy to deal with catastrophic expenditures. Most stakeholders report that staff attitudes and quality have improved with the HEF, but this is also due to staff financial incentives.


**Purpose of the research:** To test the HEF monitoring tool and use the results to help set performance targets.

**Study sites:** One Prakas 809 subsidy receiver and four HEFs: USG at the Phnom Penh Municipal Hospital (funded through URC), AFH in Kompong Thom (funding through HSSP), AFH in Preah Vihear (funding through HSSP), Association for Human Resource Development and Health Education in Chamkar Leu, Stung Trang (funding from BTC), CFDS at Sampov Meas in Pursat (funding from URC).

**Type of survey:** Quantitative.

**Type of data used:** Primary.

**Methods of data collection:** Household interviews with HEF beneficiaries.

**Sample size:** Six lots of 19 randomly selected HEF beneficiaries at home (n = 114 completed interviews).

**Main findings:** Pre-ID households produced a higher average monitoring score than post-ID households on pre-knowledge of HEF, dissatisfaction with services (though they will be more likely to use the service again in case of illness). The lower level of satisfaction among pre-ID could indicate a sense of empowerment. Both groups borrowed money equally before attending the facility. Post-ID households produced a higher average monitoring score than pre-ID for attitude to equity, staff attitude, perceived benefit of having HEF and availability of food (no explanation is given for these results except to observe that post-ID may have lower expectations). The NGO third-party payers protect the poor (prior to ID) against hospital charges.

**Conclusions:** In HSSP-funded schemes there is a lower awareness among beneficiaries of their entitlements compared to NGO-funded schemes.

Purpose of the research: To assess the performance of four HEFs in Kampong Cham province.

Study sites: Cheung Prey RH, Chamkar Leu RH, Prey Chhor RH and Kampong Cham PH

Type of survey: Quantitative and qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Comparison with earlier evaluation in 2006; documentary analysis; routine data and MOH HEF monitoring; secondary data HEFO structured RH bed census; secondary data patient exit interviews at RH and HC; secondary data service user interviews by village HEF agents; hospital and health centre observation and village visits.

Sample size: Interviews with 33 key informant, hospitalised patients and more than 30 HEF beneficiary users of RH and HC; exit interviews (bed census) with 127 (46+32+49) IPD-HEF patients at the three RHs.

Main findings: Pre-identification was completed only in 2008; previously post-identification was used. A voucher scheme for poor pregnant women was implemented by the HEFOs in three ODs (Cheung Prey, Chamkar Leu, Prey Chhor) for health centre services. Inappropriate use of RH services was corrected using sanctions. Identification: it appears the HEF has under-reported the numbers of people who should benefit from HEF but do not (particularly due to lack of village awareness due to post-identification). Access: more than half of RH users are HEF beneficiaries (47-92 per cent). Utilisation: at HCs, the HEFs facilitated access by poor pregnant women, increased utilisation of priority MPA MCH services and reduced health expenditure related to pregnancies. But utilisation of health centres for other MPA remains low mainly due to lack of service and poor staff attitude. At RHs, the HEFs rapidly increased utilisation by self-referring poor patients, while utilisation by fee-paying patients remained relatively constant; the patient demand quickly exceeded hospital capacity. Impoverishment: HEF RH beneficiaries are poorer than before but significantly less often in debt for health care (declined from 62% to 56% of patients); but there are uncovered costs including emergency transportation, opportunity costs, extra food, food for a caretaker, a caretaker and additional medical expenses after hospitalisation; borrowing is often related to care pre- and post-hospitalisation. Patient satisfaction was high; 95% of HEF RH patients said they would use the services again. There was a conflict of interest for health centre staff, for whom the poor constitute an important clientele of private practices. Village interviews revealed 88-100% satisfaction with services; 6-41% satisfaction with RH staff attitudes; 7-12% asked for under-the-table payments. Information: not aware of HEF 46 per cent; feeling of shame 26 per cent; perceived not different treatment by staff 76 per cent. Referral: poor quality HC services discourage utilisation. Many poor people were found to continue to use private village services. At the three RHs, 53-96% of patients had not visited a health centre. At health centres, fee-exemption rates were 9-29% for hospitalised poor patients. Quality of care: for HEF patients, doctors are generally present, waiting times have fallen, hygiene is better. Third party status: the HEFO has little role in the bargaining for quality and in demanding value for money. Provider payment: HEF has four payment categories (normal 40,000 riels, normal plus test 60,000 riels, REA 80,000 riels and delivery 50,000 riels) HEF total cost per IPD discharge of US$21-28.

Conclusions: Reducing health-related poverty requires a commitment by authorities and a complete public health service and cannot be achieved by the HEF alone. The task is to provide access for the poor in place of expensive private services, which exhaust household resources both before and after public health care. The HEFO and HEFI at some point will have to become fund holders for both primary care and referral care.


Purpose of the research: To evaluate the health equity fund program of the Urban Sector Group.

Research questions: The role of the HEF, how it identifies the poor, how it affects providers, how it links with social support networks, monitoring procedures, alternative strategies and areas for improvement.
Study sites: Phnom Penh.

Type of survey: Qualitative.

Type of data used: Primary and secondary.

Methods of data collection: Site visits, observation, key informant interviews, semi-structured patient and non-patient interviews, routine data and documentary analysis.

Sample size: 24 key informants from the Municipal Hospital, Municipal Health Department, Health Centres, NGOs, user groups and local authorities; beneficiaries at the Municipal Hospital and at their homes and at Mum's clubs; non-beneficiaries at their homes.

Main findings: There is more than sufficient evidence to show that the HEF improves access for the Phnom Penh urban poor and the resettled urban poor by reducing financial barriers and providing a representative for the poor. HEF patients at the municipal hospital have an average length of stay longer than the average for all patients, perhaps indicating a better quality of care. Shortcomings in the method of identification (initially only at the health rooms) means some poor people are not included (upgrading of the pre-identification activities is recommended). For evaluation of the referral system's impact on access and equity, it is necessary to take into account categories of people currently not yet benefiting from the system but within the population area covered by the equity fund. The USG-managed equity fund does not function in isolation, but relies on a network who entertain different kinds of formal and informal relationships (including user groups, local authorities, health providers and beneficiaries). The USG (third party) role is effective in: coaching poor patients, voicing feedback from users of the referral system to the municipal Health Department, negotiating for more cost-effective performance at the municipal hospital and linking with broader poverty reduction activities. User group members play a key role in removing the barriers to emergency medical care.


Purpose of the research: Impact assessment of a community-based HEF.

Study sites: Two squatter areas in Phnom Penh (one with HEF for four years).

Type of survey: Quantitative.

Type of data used: Primary.


Sample size: 1690 households identified as poor by community representatives in the HEF area and 1499 households in the non-HEF area. 43 in-depth interviews (19 with HEF and 24 without).

Main findings: Households at the HEF site were in the previous 30 days 2.4 time more likely to have used medical services, 3.4 times less likely to have incurred a debt for health care and 1.7 times less likely to have purchased medicines without seeing a health worker.

Conclusions: A community-based HEF reduces the incidence of health-related debt among the poor and improves their access to health care.

Purpose of the research: To provide information on the impact of user fees on access, equity and health provider practices in order to better inform the decision-making process about the future of the fees scheme in Cambodia.

Research questions: The impact of user fees on equity and access to health services, especially for the poor and vulnerable; the extent to which user fees are either preventing or promoting equitable access to public health services; the extent to which the user fee scheme has induced improved facility management; and the key components of user fee schemes that have proved successful.

Study sites: Five provincial referral hospitals and 10 health centres in Takeo, Svay Rieng, Pursat, Kampong Chhnang and Sihanoukville and four national hospitals in Phnom Penh.

Type of survey: Qualitative.

Type of data used: Primary and secondary.

Methods of data collection: In-depth interviews, semi-structured interviews, patient exit interviews, focus group discussions, observations, mystery client visits and documentary review.

Sample size: 24 focus group discussions (comprising more than 200 people from communities within the catchment areas of the provincial hospitals and health centres selected in the evaluation), 42 hospital patients interviewed, 17 focus group discussions with more than 100 staff, 72 health managers interviewed (in-depth interviews with at least two managers at each hospital) and 34 in-depth interviews conducted with PHD directors, provincial health advisers, deputy provincial governors, senior MOH personnel, technical advisers and representatives from donor agencies that provided support to hospitals or health centres.

Main findings: Many issues support the potential role of HEFs. Official user fee schemes have increased equitable access for the poor to health centres (primary health care) but often act as a barrier at referral hospitals. Despite wide variations, activity at referral hospitals and health centres has generally increased following the introduction of user fees, which have significantly improved accountability and transparency in most facilities, reduced but not eliminated unofficial payments and had a positive but limited impact on quality of services, depending on the quality of facility management. Paying for health care, particularly secondary or tertiary care, is a major cause of destitution, and there is a major failure of exemption schemes (particularly at hospitals); there is a systemic conflict between a viable exemption scheme and a viable salary incentive scheme. Consumers generally have low levels of awareness of their rights as clients in accessing health services. There is little evidence of systematic referral mechanisms between primary, secondary and tertiary levels of health care.

Conclusions: The major issue of concern with user fees is the failure of the exemption scheme to protect the poor. The main problems are the inequitable manner in which exemptions are granted and the lack of incentives to providers to grant exemptions at all. A second concern is the unforeseen and often unreasonable extra fees for services, which are undermining the main benefits of the user fee scheme to customers (i.e. affordability and predictability). The evaluation identified a number of information gaps related to the most efficient means of targeting the poor, evaluation of quality of care and understanding the factors that determine consumers’ use of private and public health providers.