

# **CAMBODIA HEALTH PETS**

## **PUBLIC EXPENDITURE TRACKING SURVEY REPORT**



Human Development Sector Unit  
East Asia and Pacific Region  
World Bank

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## **Abbreviations and Acronyms**

ADB	Asian Development Bank
ADD	Accelerated Disbursement District
ALOS	Average Length of Stay
BMC	Budget Management Center
BSEC	Budget Strategy and Enforcement Center
CAR	Council of Administrative Reform
CAS	Country Assistance Strategy
CENAT	National Center for Tuberculosis and Leprosy Control
CMS	Central Medical Store
CPA	Complementary Package of Activity
CSES	Cambodia Socio-Economic Survey
DFID	Department for International Development (UK)
DHS	Demographic and Health Survey
DPP	Department of Public Procurements
HC	Health Center
HSSP	Health Sector Support Project
ICB	International Competitive Bidding
IFAPER	Integrated Fiduciary Assessment and Public Expenditure Review
JICA	Japan International Cooperation Agency
MCHC	Maternal and Child Health Care
MOEF	Ministry of Economy and Finance
MOEYS	Ministry of Education Youth and Sport
MOH	Ministry of Health
MPA	Minimum Package of Activity
NCB	National Competitive Bidding
NCHADS	National Center for AIDS, Dermatology and Sexually Transmitted Diseases
NCMCH	National Center for Maternal and Child Health
NGO	Non-governmental Organization
NIS	National Institute of Statistics
OD	Operational District
ODA	Official Development Assistance
ODO	Operational District Office
OPD	Outpatient Department
PAP	Priority Action Program
PDEF	Provincial Department of Economy and Finance
PEAC	Prequalification Evaluation and Award Committee
PETS	Public Expenditure Tracking Survey
PHD	Provincial Health Department
PHDO	Provincial Health Department Office
PPU	Provincial Procurement Unit
RH	Referral Hospital

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## **Executive Summary**

**Public Expenditure Tracking Surveys (PETS) were conducted in Cambodia education and health sectors to help to diagnose issues with public expenditures..** Internationally, PETS have contributed towards identifying problems with public expenditures and improving public finance flows to frontline facilities in developing countries where formal budget execution and monitoring systems are weak. As part of its reform of public finance, Cambodia conducted its first PETS in the education sector in 2004. Experience from the education PETS contributed to the design of a mixed-method approach for the health PETS that combined quantitative and qualitative survey techniques adapted to the specificities of Cambodia's budget management practices.

**The objective of the study was to help the Royal Government of Cambodia (RGC) to diagnose issues and propose directions for improving effectiveness and efficiency of public financing in the health sector.** The study was part of the broader process of the RGC public finance reforms and reforms in the health system. The central questions studied were: (i) to what extent resources reach front line facilities, and (ii) what were the main issues related to the management of resources. The study also hopes to contribute to the building of global knowledge base on the design and implementation of public expenditure tracking instruments.

**In study methodology qualitative and quantitative study instruments complemented each other.** The study covered public health sector expenditures for 2003 and 2004. Quantitative surveys assessed the scale of funds reaching frontline facilities, while qualitative approaches investigated the processes and issues related to resource management. The quantitative survey used structured interviews with the key informants and data from accounting records. The survey included three sets of questionnaires administered in 17 Provincial Health Departments (PHD), 30 Operational Districts (OD), 200 Health Centers (HC), and 29 Referral Hospitals (RH). Health facility questionnaires included also a review of a sample of patient records. The qualitative approach comprised reviews of secondary data and in-depth interviews with key informants at three levels of the provincial health system: Provincial Health Department, Operational Districts and health facilities. The qualitative study was conducted in four representative provinces: Prey Veang, Battambang, Kampot, and Stung Treng; and also included two Operational Districts (Ang Roka, Pear Rang) under contracting arrangements (where NGOs were contracted to manage government health services) to study any impact of public finance management arrangements in these public-private partnerships. The qualitative study also included two national programs – National Centre of Maternal and Child Health (NCMCH) and National Centre for HIV/AIDS, Dermatology and Sexually Transmitted Diseases (NCHADS) – to study public finance management and how it links to health services delivery.

**Complexity of the study needed to be managed.** To link performance of financing systems to delivery of broad range of services using a variety of inputs would be a complex undertaking in any setting. In the health PETS, the complexity was further increased by poor record keeping and weak institutional capacity. The chosen approach in the Cambodia health PETS used quantitative and qualitative research instruments to in order to have a range of views around the same issues to gain a credible insight in

relation to the research questions. The complexity of the task pointed towards the need to be selective about research questions and to make a significant investment in the design phase with explorative studies, consultations and pilot testing. The Cambodia health PETS did all this but even significant preparatory work and a clear focus stretched the PETS team to its limits and the data management and verification process lead to long delays compared to original implementation schedule.

**Health sector budget planning processes for Ministry of Health and Ministry of Economy and Finance are different.** Three sets of guidelines direct the budget formulation process: The Budget Circular; the Priority Action Program (PAP) both by the MOEF; and the Annual Operational Planning (AOP) from the Ministry of Health. The AOP process is based on national health priorities defined in Health Sector Strategic Plan and on activity based costing. The MOEF uses its own norms for budget planning based around historical expenditure and structured into line item budget chapters. In reality this means that two separate budgets are prepared. Duplication of these budget processes not only overburdens the limited institutional capacity of Provincial Health Departments, but more importantly it stymies the Annual Operational Planning process – which is directly connected to national public health priorities - into effective budgets. These parallel budgeting processes need to be linked and streamlined. The program based budgeting initiative introduced by the MOEF would better tie public health priorities to public finance allocation. However program budgeting also needs to ensure that it covers both management and administration of the health sector as well as deployment of essential health services that don't necessarily fit under the disease/health priority based programs.

**Innovative public expenditure management systems were introduced on pilot basis to address the disbursement delays under regular pre-audit expenditure management.** Under the normal budget procedures most of the budget expenditures are subject to top-heavy pre-expenditure reviews and a twelve step authorization process. Petty cash for non-salary operational expenses was the only exception that was managed under post-review system by advancing implementing agencies cash for estimated needs for 1.5 months for limited number of eligible expenses. Advances needed to be reconciled for replenishment. To overcome delays in releasing funds under pre-audit arrangements, the government had introduced Priority Action Programs (PAP) and Accelerated Disbursement District (ADD) programs that were developed as a post-review system with a more efficient and timely disbursement process for front line services to access their funds. Under these arrangements larger advances were made available for an extended list of eligible expenditures for non-salary operating expenses. To improve the performance of health services delivery, the Ministry of Health with the support of Health Sector Support Project, contracted NGOs to manage government health services in eight Operational Districts.

**PETS allowed to measure only actual expenditures in government health facilities.** PETS found that there were no budgets below provincial level. Therefore the PETS was not able to compare public expenditures on health services with planned budgets and could only analyze actual expenditures at Operational District, referral hospital and health centre level. Health service providers (health centers and referral hospitals) need transparent budgets, and budget structures and financial management mechanisms and capacity improved to allow for tracking recurrent expenditures at the health service level.

More transparent budgets would also make it possible to apply grass root level accountability mechanisms for budget execution from communities and allow OD and health facility managers to more effectively plan and manage budgets. It would also make it possible to have an informed policy debate on improved financing of health services provided by health centers and referral hospitals. The proposed program budgeting initiative in the health sector includes a “Health Services” program that could be used for the budgets of health facilities. For example, the program budgeting structure already in the education sector includes sub-programs dedicated to operational budgets for schools.

**Only a small share of government budget expenditures was spent on delivery of health services.** In 2003 and 2004, only 36% and 32% of the government health budget was spent for providing services in government health centers and referral hospitals. This estimate includes the provincial level budget expenditures in health facilities, drugs and supplies that are procured centrally and distributed to health facilities, as well as the direct transfers from the central level budget to contracting operational districts. The rest of the government health expenditure was devolved to various levels of health administration and national programs. For these years, public expenditure for providing essential health services translated into US\$1.23 and US\$1.20 (equivalent in Cambodian Riel) per capita respectively. If donor financed drugs and user fee income in government health facilities is included, the per capita expenditure would have increased to US\$1.60 and US\$1.77 equivalent.<sup>1</sup>

**Making health services work may require doubling or tripling health expenditures on service delivery.** The evidence from contracting Operational Districts in Cambodia suggests that per capita financing of US\$3-6 equivalent would be needed to provide adequate services in health centers and referral hospitals to reach improved coverage of population with key essential health services, and to improve intermediate health outcomes. This would mean doubling or tripling 2003/2004 expenditures on district level health services in Cambodia. Urgent debate is needed about the appropriate funding of essential health services to the population in health centers and referral hospitals and possible sources and channels of such funding. But one should also note that financing is not the only factor for improved service delivery. For example, in contracting pilots there are two other aspects of contracting that contribute to improved service outcome – Connecting financing to both performance measures of health service targets and to improved management.

**User fees play increasingly important role in financing additional incentives for staff and non-salary operational costs of health facilities.** In 2004, the user fees accounted for 13% of health centre and 22% of referral hospital expenditures. Although regulations exist about the use of these additional revenues in health facilities, the PETS revealed that accountability was very weak, and under-reporting is likely, given the private health expenditures reported in the 2004 household survey. As equity funds and nascent community based health insurance and social health insurance schemes are increasingly paying the fees on behalf of their members, the user fee share of financing health facility

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<sup>1</sup> This does not take into account direct expenditures by donors and NGOs in the health facilities that are not accounted at the PHD, OD or health facility level.

expenditures is likely to increase. User fees need to be integrated in the health services budgeting process as well as being part of the monitoring of the execution of these budgets.

**Overall government health budget increase does not necessarily mean improved financing of essential health services.** Between 2003 and 2004 the total government health budget increased by 11% and the total actual government health expenditure by 19%. However, expenditure at provincial level where all the district level health services are located actually fell both in value (from 100,469 million Riel in 2003 to 96,017 million Riel in 2004) and as a proportion of the total (from 58% to 50% in 2003 and 2004 respectively). This estimate included the drugs and medical consumables procured by central budget and distributed to provinces as well as direct transfers from central budget to health services. The slight increase of total per capita expenditure for service delivery was due to an estimated 55% increase in donor funded drugs used at service delivery level and 25% increase in user fee revenues.

**Donor support only partly effective in supporting health service delivery.** PETS analysis suggested that a significant increase in donor funded drugs and medical consumables distributed to provinces in 2004 compared to 2003 had a direct impact on service delivery (18,821 million Riel in 2004 compared to 12,122 million Riel in 2003). There was little evidence that donor funds provided to provincial level actually had a direct impact on service delivery in health centers and referral hospitals. Similarly, there was little evidence that national programs (both government and donor) provided direct support for recurrent costs for service delivery. It should be noted that some in-kind support may have benefited service delivery (e.g. gas to maintain cold chain for vaccinations in health facilities). Different modalities may be needed to channel donor support to further benefit the actual delivery of health services.

**There is little evidence that national programs provide additional operating cash or supplies to health service level.** PETS could not find evidence of national programs contributing towards public expenditures at health facility level unless they ran their own health facilities (e.g. a referral hospital for maternal and child health care in Phnom Penh by NCMCH). However, national programs may be providing direct incentives to selected staff and require direct accountability in terms of reporting. More transparent policy is needed for managing the interface between vertical disease specific national programs and horizontal health service delivery by health centers and referral hospitals. Currently this interface is blurred. In the short term, the national programs should clearly describe in their national policy documents the interface with health service delivery level (health centers and referral hospitals) and indicate any funding they provide for health services staff in their budgets and expenditure reporting. In medium and longer term the respective roles of vertical national programs and health service delivery organizations need to be clarified. Along with the strengthening of horizontal service delivery, the national programs should predominantly focus on their key role in their respective focus areas on: policy and technical guideline development; designing and implementing larger population based public health campaigns; monitoring; training; and supervision/monitoring/evaluation of the effectiveness of health system performance and evaluation.

**Non-salary operational expenditures dominate government health expenditures.** Only 14 and 15% of total government health expenditures was spent on staff costs in 2003 and 2004 respectively. In 187 health centers sampled by PETS the average expenditure per health centre was 55 million Riel in 2005 and 63 million Riel in 2003 and 2004 respectively. User fees accounted for 13% in both years. When accounting for both government expenditures and allocation of user fee revenues in-line with government guidelines, the total expenditure allocation to staff salaries and incentives was 23% and 22% in 2003 and 2004 respectively, with an additional 23% and 24% on non-wage operational costs, with the remainder accounted for by drugs and consumables received in kind. In the sample of 29 referral hospitals, the average expenditure per hospital was 575 and 617 million Riel in 2003 and 2004 respectively. Expenditure allocation (including user fees) was 28% and 27% for staff cost in 2003 and 2004 respectively, 37% and 38% on non-wage operational costs, and again the remainder was accounted for by drugs and consumables received in kind. International benchmarks in more developed countries for the proportion of staff and non-staff recurrent costs are reversed compared to Cambodia.

**Misaligned authority, bureaucratic red tape and limited institutional capacity are serious constraints for effective public expenditure.** Consolidated views from qualitative study respondents pointed to the overall perception that misaligned authority led to delays and non-responsive expenditure. Provincial health departments had little decision making authority about expenditures. Although the MOEF has decentralized some decision making authority to provincial level, it mostly rested with Provincial Department of Economy and Finance and the Governor's office. Expenditure commitment process on provincial level required document verification by 6-8 officers within the Provincial Department of Economy and Finance (PDEF) and an additional 5 reviews by the Governor's office. Advances for cash expenditures under the authority of PHDs were very limited in terms of eligibility and amount. The supplies procured at the provincial level and then distributed to health facilities are delayed and often not appropriate for the needs of individual facilities. PETS found that most of accounting staff in provincial and district level health departments were actually health professionals. Their knowledge and skills in financial management relied a lot from on-the-job training and coaching from MOEF staff. Part of the reason why public financial management innovations designed to facilitate financing of service delivery (PAP and ADD) were eventually scaled back was that advances were seldom reconciled for replenishment due to the limited financial management capacity at lower health administration levels. Record keeping was generally poor, with the lower the institutional level having lower quality records. While all PHDs had records on provincial health budget and expenditure, 70-100% of health centers were without complete records for different budget chapters. Although weak institutional capacity justifies some centralization of financial management functions, a comprehensive financial management reform and capacity building is needed to make the decision making authority more responsive to need and to ensure proper accountability.

**Disbursement delays were significant.** PETS estimated that disbursement delay from the provincial treasury to provincial health department was 4.2 months in 2003 and 3.8 months in 2004. At the Operational District level, the PETS estimated disbursement delays at 4.6 and 4.3 months in 2003 and 2004 respectively. Delays were the shortest for

staff costs at 2.6 and 2 months respectively and the longest for programming expenditure under Chapter 13 (including PAP and ADD) at 7.2 and 6.6 months respectively. There were variations within budget chapters and among provinces. For example, Chapter 10 basic salaries were disbursed the fastest, while temporary staff salaries and overtime charges experienced significant delays. Similarly, in Chapter 11, petty cash was the fastest disbursed, while mission fees experienced the longest delays. Pursat province had the longest delay for all chapters (6.7 and 6.5 months in 2003 and 2004 respectively), while Prey Veng had the shortest delay for all provinces (1.6 and 2.1 months in 2003 and 2004 respectively).

**Timeliness of budget disbursement correlated with provision of several essential health services by health centers.** PETS found moderate positive correlations between the timing of budget disbursements different budget categories for several reproductive health services and vaccination coverage. Although these correlations do not necessarily mean a causal relationship but it does however, support findings from qualitative surveys where health officials suggested that budget delays and shortfalls led to cutbacks in outreach activities.

**Different coping mechanisms to cash shortages and disbursement delays were used at different levels.** At provincial and operational district levels, the operation of the PHD and Operational District offices were prioritized and fewer resources were transferred to lower levels (e.g. delays in mission fee disbursement). To cover urgent needs, officials may have to borrow funds from money lenders or get supplies on credit (e.g. fuel). At the facility level, the main coping mechanism was revenues generated from user fees to cover shortfalls. Although user fees are retained at the facility level, in some cases the Operational District offices requested facilities to provide user fee revenues to cover OD office expenditures. In some cases, NGOs or other donors supported activities threatened by cash shortfalls. If activity costs could not be covered from other sources, the activities did not take place. In particular this impacted on supervision visits at the PHD, OD and national program level as well as training activities by national programs. Overall PETS found a moderately positive correlation between the timing of budget disbursement and service outcomes such as births delivered in health facilities, post natal care, hepatitis and tetanus vaccinations, birth spacing and non-malaria laboratory tests. Although observed correlations do not necessarily imply a causal relationship, they nevertheless echo the interviews with health officials who have suggested that funding delays and shortfalls lead to cutbacks in outreach activities.

**There is high risk for leakage of public funds in the health sector.** Although the quantitative study did not identify leakages explicitly, several findings from quantitative and qualitative data pointed to high probability of leakages occurring. Institutional issues about public finance management created an enabling environment for leakages. Overestimation of revenues and cash shortages in provincial treasury created a “market environment” for competing claims for cash from different departments and for facilitation fees to be charged to get timely disbursements. Lack of budgets below provincial level and a corresponding lack of knowledge of entitlement by lower level managers and communities further added to this enabling environment. In addition, heavy bureaucratic red tape for approving expenditure decisions at provincial level added to the likelihood that facilitation fees would be charged. Low institutional capacity and

poor record keeping practices make tracing of public expenditure very difficult and offer many opportunities for leakages. Facilitation fees and ineffective public procurement were reported as the main forms of leakage.

**Practice of facilitation fees appears to be widespread** according to the interviews with the PHD, OD and health facility level managers and accountants. There is commonly held perception that if facilitation fees are not paid to the provincial treasury, funds will be considerably delayed. Once charged at the provincial level, the losses need to be recuperated from the lower levels with the possibility of additional fees being charged as the funds pass through different levels to end beneficiaries. Facilitation fees differ among budget chapters; basic salaries are the most protected funding with virtually no reported leakage; mission allowance fees, overtime fees, temporary workers salaries, cash advances are subject to up to 30-40% losses through facilitation fees before they reach end beneficiary.

**Public procurement results often in prices significantly higher than in retail market.** Prices of some common goods as recorded in public procurement documents were higher than the retail. For example, public procurement price for A4 paper in sampled PHDs was on average 52% and 49% higher than retail in 2003 and 2004 respectively. Similar observations were made for gasoline (14% and 4% respectively), diesel fuel (25% and 10% respectively) and pillows (118% and 167% respectively). The qualitative PETS study pointed towards possible explanations for higher prices, including possible oligopoly of suppliers and collusion, accounting for 10% VAT and 1% profit tax in formal procurement price that are not typically charged in retail, facilitation fees that may need to be paid to facilitate procurement and payment processes. Another form of leakage was reported at the facility level for fuel where actual delivery of fuel was 60-95% of the voucher value.

**Checks and balances appear to be ineffective in containing leakage and ensuring effectiveness of public expenditure.** Although multiple government agencies are involved in various internal and external audit processes, the effectiveness was questioned by respondents in qualitative study. In the centralized pre-audit system, expenditures were already approved by high level government officials, so it was felt that it would have been difficult to question these decisions by inspectors. The audits were also based on documentary evidence and might not reflect actual payments. No audits were conducted into the efficiency of public expenditure, such as comparing public procurement and retail prices. Multiple audits implied costs to implementing agencies for hosting and entertainment estimated at US\$4,000 to 5,000 equivalent per province. This creates a vicious circle for leakages to be charges as these costs would need to be recuperated from some source. PETS failed to identify any example of sanctions being applied for financial management irregularities, so the potential deterrent effect of sanctions was greatly weakened. Finally, given that budgets were not applied below provincial level, social accountability mechanisms such as by Health Center Management Committees or village support groups could not be exercised.

**Mitigating the risk of leakage would require a comprehensive approach targeting at the various factors creating the enabling environment for leakages.** Better overall revenue planning and cash management within the treasury system should reduce cash shortages that currently induce a market for facilitation fees to be charged to line

departments. Having greater transparency in budgets for health facilities would also allow more effective community accountability and better informed lower level managers. Reducing the number of cash transactions and channeling more funds through banking system would also improve transparency. Reducing bureaucratic red tape and streamlining expenditure approval processes would also reduce both delays in budget disbursement and the opportunity to charge facilitation fees. Aligning decision making for expenditure with more accountability for service results would facilitate more transparent and responsible prioritization of expenditures. Audit and review mechanisms need to be streamlined and include questions about efficiency and effectiveness of public expenditures by making sure that that public procurement provides value by matching financial inputs to health service with outputs. Enforcing sanctions and penalties for non-compliance or theft would also add to the effectiveness of checks and balances.

**Effectiveness of public expenditure management innovations in the health sector.**

The NGOs became involved in the management of the government budget for non-salary operating expenses for these health services disbursed under the PAP program. The PETS found that the ODs under innovative budget disbursement mechanisms and the health centers and referral hospitals in these districts did receive more funds per OD and health facility than regular budget disbursement districts and health facilities. But PETS also found that disbursement under Chapter 13 that included the innovative budget programs had longer delays than regular Chapter 11. The PETS did not confirm a consistent link to improved service delivery outputs in the innovative budget districts (except in contracting districts) and instead concluded that innovative budget disbursement mechanisms need to be supported by strengthened institutional capacity and linked to performance measures to make them more effective. In contracting districts, significantly improved performance was linked to staff incentives.

**Contracting Operational Districts post the best health services utilization performance.** Utilization of government health services is low. In the provinces and operational districts sampled for the PETS, the utilization of basic health services at the health centre level was 0.56 per capita in 2003 and 0.63 in 2004; and the utilization of referral hospitals 15 admissions for 1,000 population in 2003 and 16 in 2004. There was no discernible difference between different budget disbursement modalities except for vaccinations. However districts with contracted management providers posted consistently better performance results for most parameters including per capita outpatient visits, hospital admission rates, vaccination coverage and efficiency of hospital bed use. The significantly better performance of districts with contracted management providers compared to operational districts that were also under PAP or ADD budget management mechanism but without a contracted NGO provider suggests that there are also other factors in play in addition to budget disbursement. These may be linked to strong performance-oriented management better institutional capacity introduced by NGOs as well as the additional incentives the NGO's provide to health services staff..

**Women benefit more from the government health services.** According to the PETS 70% of health center patients and 58% of referral hospitals patients are women. The gender bias is more pronounced at health centre level and for urban settings. The service utilization is more balanced in early years, while a strong gender bias emerges for the



reproductive age cohort of 15-45 years and declines in later years. This likely reflects the public health policy priority towards reproductive health services.

**Health centers are effective service providers to the population within the radius of four kilometers.** PETS found that 69% of patients came from within 4 km to the health center compared to 57% of population who lived within this radius. Access becomes particularly difficult for the population living more than 10 km away from the health center. Policy debate is needed on how to better reach outlying populations with essential primary health care. A proper balance between fixed-point delivery and outreach activities needs to be found to ensure adequate coverage of the catchment population with essential primary health care. Serving outlying populations needs to also be supported with appropriate financing modalities. This in particular applies to the on-going discussion on the appropriate use of budget funds to support health center outreach activities.

**Staff absenteeism is higher among highly qualified staff.** On average, 27 percent of staff was not present at the time of a PETS team visit to a health facility. The most common reason given for absence was outreach activity that may explain higher absenteeism of staff in the health centers in remote areas (32%). But it does not explain high absenteeism rate in referral hospitals (29%) and in urban areas that are less engaged in outreach activities. Absenteeism was highest among medical doctors and medical assistants (38% and 44% respectively) that is likely to have significant adverse impact on quality of services since higher level of care and supervision of lower level staff relies on them. Other studies and common knowledge in Cambodia point towards off-site private practice as the main reason for absenteeism from government health service. And this in turn is linked to the very low remuneration provided by civil service to health staff. This corresponds well to the highest absenteeism rates observed for highly qualified staff as they have the best private sector earning opportunities.

**Urgent measures are needed to improve incentives for health services staff.** Experience with contracting schemes in the health sector, the labor market survey for appropriate incentives for the central Ministry of Health staff, Merit Based Pay Initiative for the Ministry of Economy and Finance staff and Priority Mission Groups indicates that the incentive packages would need to be increased up to 4-5 times to ensure staff commitment and performance in their jobs. Reforming staff incentives in the health sector need to be linked to the discussions of appropriate level of financing essential health services, potential sources and channels of funding as well as discussion of level of autonomy of health managers at provincial, OD and health facility level in recruiting staff and deciding their compensation levels.

**Policy discussions are needed to determine the most effective and cost-effective ways to follow-up on PETS results and experience in public expenditure tracking in the health sector.** Conducting PETS was a complex, time consuming and costly exercise. Debate is now needed what elements of the PETS could be streamlined into routine budget management and monitoring mechanisms. Smaller scale and specific issue based follow-up studies may be feasible to monitor progress in selected areas. *Further options to be discussed during the review process.*

## 1. INTRODUCTION

**History of PETS.** The importance of health systems in delivering improvements in health outcomes has been widely recognized. The 2003 World Health Report on health systems conceptualized health system performance as a result of the interplay of the following key health system functions: financing; service delivery and stewardship. The 2004 World Development Report<sup>2</sup> identifies four breaks in a chain between allocating public resources and intended level of service delivery: at the resource allocation stage (i) the funds can be spent on wrong goods or people; at the budget execution stage (ii) funds may fail to reach frontline service providers; and/or (iii) there can be weak incentives for the service providers to provide service; at the service consumption and service impact stage: (iv) households fail to take advantage of service provision.

The Public Expenditure Tracking Survey (PETS) is a diagnostic tool that fits well with the health system approach to improve health outcomes as it analyzes service delivery problems in the context of public expenditure management and accountability arrangements. Government resources that are earmarked to flow through several layers of government before reaching front line service providers. But often information about actual level of expenditures at service level is not available in developing countries and the PETS is designed to both track the flow of resources through the strata of government administration to determine how much of the allocated resources reach the intended levels, and to link this with the problems affecting service delivery.

In 1996, Uganda was the first country to conduct PETS in the education sector when policy makers realized that in spite of increased budget allocation to the education sector, enrollment rates did not improve. The Uganda PETS discovered that only 13% of allocated non-wage expenditures actually made it to the schools, the rest either disappeared for private gain or was captured by district officials for purposes other than education. This finding led to significant policy changes that in subsequent years improved the situation dramatically and led to improved service outcomes. Since then, several countries have conducted PETS, including Ghana, Honduras, Papua New Guinea, Peru, Rwanda, Tanzania and Zambia.

Early PETS exercises focused mostly on the flow of resources through different levels of government to find out where procedural and bureaucratic bottlenecks or leakages occurred. More recent surveys have paid more attention to how service delivery units such as schools, health centers and hospitals operate. The surveys include a sample of service units and questions about various service delivery issues, such as range and quantity of services provided, availability of resources (e.g. drugs and staff), and governance and management aspects. In some cases, the surveys are expanded to include the users of services and even non-users through household surveys.

**PETS in Cambodia.** Cambodia has emerged from the period of civil turmoil. Since democratic election in 1993, market based economic reforms have been introduced along with the changes in public expenditure management. Health and education sectors are priority sectors for socio-economic development and achieving the Millennium Development Goals feature prominently in the National Strategic Development Plan. The Health Sector Strategic Plan (2003-2007) features health financing and service

delivery as important focus areas for improving health outcomes. Yet, although public expenditures have increased dramatically (in the health sector a 280% increase in constant prices between 1995-2002), improvement in social indicators has been slow. In the education sector, the main challenges are to achieve universal enrolment and completion of primary education and how to improve increased completion of lower secondary education. In the health sector, only the more recent 2005 Demographic and Health Survey indicated improvement in some key health indicators such as infant and child mortality, but progress has been slower in other health indicators (i.e. maternal mortality). The 2004 Cambodia Socio-Economic Survey indicates that access to essential health care and uptake of the government health services continues to be a major challenge.<sup>3</sup>

The rationale for the PETS in Cambodia grew out from the 2003 Integrated Fiduciary Assessment and Public Expenditure Review (IFAPER)<sup>4</sup> and is closely linked with the World Bank Cambodia Country Assistance Strategy (CAS) that was jointly developed with the ADB, DFID and the UN system. It is also closely linked to the “breaks in the chain” approach to service delivery analysis conceptualized in the 2003 World Development Report: Making Services Work for Poor People.<sup>2</sup> Whereas IFAPER analyzed whether public spending in Cambodia was generating the “right goods for the right people” by assessing public expenditure policy across government and within priority sectors and examining the extent the poor benefited from the budget expenditure, the PETS was to fill in the missing pieces of service delivery story, i.e. flow of funds to frontline service providers and its impact on availability and efficiency of services. The Cambodia CAS<sup>5</sup> focuses on governance as the main constraint on economic growth and improvements in service delivery. Within the governance focus, public resource use and financial management feature prominently as important tools to improve service delivery and reduce fiduciary risks to ensure allocated funds for their intended use. The results of the PETS would provide important inputs to the Public Financial Management Reform Program supported by a number of development partners in Cambodia.<sup>6</sup>

In both education and health sectors, international development partners support the RGC sectoral development programs through sector wide approaches. In the health sector, the approach is dubbed as SWIM – Sector Wide Integrated Management – that comprises one national Health Sector Strategic Plan, one set of national priorities, joint annual health sector performance review conferences, annual operational plans for the sector bringing together the government and donor resources. In this context to achieve joint development goals, effective management and timely disbursement of both government and donor resources is vital. Improving slow budget execution rates has been one of the focus areas of the Royal Government and development partners’ dialogue in the health sector - which has seen recent improvements. PETS would provide important additional insights on what happens to the fund flows down to service delivery level after they have been approved on central and provincial level.

Both health and education sector PETS were conceived in 2003 through inter-agency and RGC consultation. Several departments and individuals participated from the World Bank as did representatives from the International Monetary Fund, United Nations Development Program, World Health Organization and the government. A report on PETS in education sector was finalized in 2005 and this report summarizes the findings

of the health sector PETS. To coordinate the PETS in the health and education sectors, a joint PETS Advisory Committee was set up as were the PETS working groups in the MOEF, the MOH and the MOEYS.

During the preparation for the PETS, it became evident that the complexity of the health sector and issues affecting budget execution and service delivery required a step-by-step approach for applying research to cover all issues affecting service delivery. The preparatory process identified four research clusters: (i) flow of funds, in-kind transfers, utilization of user fees; (ii) human resources issues, including deployment, motivation, incentives, career management, links between private and public sector; (iii) resource allocation issues, including both the government and donor funds, financial management and leakage; (iv) service delivery in health centers and referral hospitals, including quality and quantity of facility based services and outreach, management of exemption schemes (equity funds). One study cannot address all the potential research questions entailed in these clusters. The current PETS mostly focuses on the first research cluster and provides limited insights to others. It is hoped that further follow-up research agenda will emerge from the discussion of the results of this PETS.

It is also important to note that the intent of the PETS is to make a positive contribution to the improvement of services. It is not intended to be an auditing instrument for the public finances. Some issues such as leakages can occur in many ways and some of these ways would be very difficult to track in a survey. But the PETS is intended to be able to point to generalized problems of public finance management that effect service delivery and the effectiveness of public finance management itself.

The survey work for the health PETS was conducted from August to December 2005. The main survey was preceded by a pilot survey in July 2005 to test and make necessary adjustments in the survey instrument. Time between January and April 2006 was spent on data cleaning and analysis. The background reports were prepared by June 2006 and feedback consultation held with the provinces, the MOH and the MOEF by November 2006. This report takes into account comments received during these consultations.

**Structure of report.** The report has eight chapters, including this introductory chapter. The second chapter on research methodology discusses the design of quantitative and qualitative survey instruments, survey implementation issues and how the PETS dealt with data constraints. The third chapter describes the current regulations on public expenditure management pertinent to the subjects reviewed by the PETS, including the national and the Ministry of Health budget planning and execution processes. The fourth chapter discusses resource flows in the health sector, including the allocation of the government health budget between the centre and provinces and actual expenditures at various sub-national levels. The resources include cash from the government budget, resources distributed in kind (drugs and supplies) as well as donor support and user fee revenues. The fifth chapter discusses resource management issues, including general constraints, procedures and implementation, cash shortages, delays and leakages as well as respective coping strategies. The sixth chapter discusses the results of the PETS review of utilization of health facilities, in particular gender mix and impact of distance of patients' residence on service utilization. The seventh chapter discusses the conclusions and recommendations arising from the study. The report also includes annexes with the Terms of Reference for the study and the survey instruments.

## 2. RESEARCH METHODOLOGY AND IMPLEMENTATION

The methodological approach learned from the international experience with PETS. As the focus and design of PETS has differed from country to country depending on local context and study objectives, the study design used generic lessons learned as summarized in Dehn, Reinikka, and Svensson study on survey tools for assessing the performance of service delivery.<sup>7</sup> The design process included:

- Consultations among the main government and development partner stakeholders about the scope of the study;
- Developing quantitative survey methodology using explorative studies for data availability (rapid data assessment), field testing survey instruments, ensuring cross-checks to ensure data reliability;
- Ensuring successful survey implementation, including training of staff, developing and using operational manual for survey staff?
- Mechanisms to ensure adequate data entry and verification.
- Ensuring proper analysis, consultation and feedback on results and dissemination strategy.

The design of the health PETS also included lessons learned from the implementation of the education sector. The experience from the education PETS indicated that sole reliance on receipts for tracking funds did not provide a solid basis for the analysis as little or no original data was compiled at the facility level and most of the accounting took place on Operational District and Provincial Health Departments. For this reason, the quantitative survey instrument was complemented by qualitative research instrument in order to obtain better insights into public finance management issues in the health sector.

### 2.1 Scope of the study

The objective of the health sector PETS presented in this report was two-fold: (i) assist the Royal Government of Cambodia (RGC) in improving its health budget management system issues that impede the efficiency and effectiveness of health service delivery; (ii) serve as an independent review to assist RGC in improving accountability procedures.

The research questions for the health PETS were based on the generic objectives of PETS exercise and on issues of particular importance in the Cambodian public expenditure management context. The design of the research questions was a result of extensive consultations with the Ministry of Health (MOH), the Ministry of Economy and Finance (MOEF), the World Bank, the ADB, DFID and the WHO. Exploratory studies were conducted to a sample of public health administrations and facilities in Takeo and Pursat provinces better focus research objectives and to assess availability of data at service delivery units and the different levels of government administration.<sup>8</sup> The research questions were finally designed and agreed to explore the following:

- Value of resources (cash and in-kind) received by the frontline facilities from the national budget and other sources and what factors explain any observed

- variations in the relative shares received by operational districts and health facilities;
- Any evidence at the health facility level of shortfalls and delays or temporary interruptions in different types of national budget resource flows;
- Any evidence that the above budget resource flow problems affected delivery of services;
- Any coping mechanisms to respond to problems to the above resource flow problems at the facility level;
- Any evidence of impact by innovative national budget management mechanisms to the resource flows, including Priority Action Program, Accelerated Disbursement District program, contracting NGO to manage district level health services;
- National budget allocation and execution within national programs, including comparison of financial management practices of government and donor funds.

The PETS study originally aimed at analyzing (i) flow of funds to frontline health service providers; and, (ii) demand side failure by linking PETS results to a household survey on health outcomes and health care seeking behaviors of Cambodian population. For the latter, the study proposed to use 2004 CSES and/or the 2005 DHS. It was not possible to perform the actual linkages because of time and budget constraints. But special emphasis was put on sampling methodology of health facilities to make sure that further analysis would be possible via linking PETS a database with other databases on health sector issues such as Cambodia Socio Economic Survey and DHS for further in depth studies. The database should also serve as a baseline information source for follow-up studies or monitoring through government systems.

## ***2.2 Quantitative methodology***

### **2.2.1 Sampling and sampling strategy**

The sampling approach was designed to meet the numerous requirements of all stakeholders (the MOEF, the MOH, donors, researchers) while ensuring that results would be nationally representative, and could later be linked to CSES data.

Facilities were selected as a random sample from the National Institute of Statistics (NIS) database of public health facilities. The sample was representative of all Cambodia, and was stratified to represent specific characteristics to be able to compare among facilities that were:

- Located in urban vs. rural and remote areas;
- Included or not included in government Priority Action Program – a special modality of government budget disbursement;
- Included or not included in the contracting operational districts – a health services management and financing modality where the management of district level health services was contracted to non-governmental organizations.

Data was then collected at the two levels of government administration: provincial health department (PHD) and operational district (OD); and, from sampled referral hospitals and health centers. Table 2-1 provides an overview on the sampling results.

**Table 2-1.** Sampling facilities for PETS survey

Level	Type of facilities	Facilities sampled	Total number of facilities
Provincial health department	PHD	17	24 nationwide
Operational districts	OD	30	59 OD in 17 PHD
Health facilities	Health Center and Health Post	200	350 HC/HP in 30 OD
	Referral Hospitals	29	29 RH in 30 OD

### 2.2.2 Questionnaire design and validation

Questionnaires were prepared for the three types of institutions: Provincial Health Department (PHD), Operational Health District Office (OD) and health facilities. The PHD and OD questionnaires consisted of four sections, questionnaires for health facilities consisted of five sections as follows:

- Section 1: General information on the institution, including identification, distance to higher and lower-level institution, number of staff members, level of supervision, and any NGOs support to the institution.
- Section 2: Financial and accounting information, including budget and expenditures in 2003 and 2004 by chapter and by lower level institution, mode of expenditure, cash received and cash transferred, in-kind contribution received and transferred, and user fees collected under the institution.
- Section 3: Drug and medical consumables, drugs and medical consumables received, dispensed and/or distributed to lower-level institutions.
- Section 4: Health information focusing on key outputs of health services such as the number of outpatient consultations (OPD), deliveries and number of day of inpatients.
- Section 5: Client profile. This section was administered to health facilities only. It covers the age, gender, and address of clients, their diagnoses, and treatments received.

The final questionnaires comprised several volumes too large to be included in this report. The could be provided at request by the Cambodia health program team in the Human Development Unit of the East Asia and Pacific Region in the World Bank. Most research questions could be answered from the results of these questionnaires. The remaining ones were answered through the analysis of qualitative information.

The questionnaires were pilot tested in Kampong Chhang and Preah Vihear provinces. The pilot enabled to improve the survey instrument according to available data and modify the method of gathering data. The pilot confirmed the paucity of paper trail and prompted to focus the PETS on collecting all available data on front line facility level that would later allow triangulating with whatever evidence was available in records at higher level.

The pilot prompted to divide lengthy questionnaires that required several staff to be in the room at the same time into sections that allow one-to-one interviews. Such modality was

more amenable to sensitive discussions that could have not been held in larger groups. It also permitted to assign individual sections to interviewers-enumerators with specific accounting or medical background.

Pilot study also prompted to reword questions to remove ambiguities, to ensure adequate coding, and to modify some procedures, e.g. given the low quality of accounting records, all records were copied in order to be able to cross-check and record them later. One procedure was added: the team copied information on 5% randomly chosen patients from the health center log books, including age, sex, village of origin, paid user fees, diagnosis and drugs received. This allowed analyzing utilization patterns as well as to compare prescription records with the stock of drugs in the facility.

### **2.2.3 Survey implementation**

Enumerators were carefully selected. Because of the complexity of the study, enumerators were specialized into three groups: (i) accounting background; (ii) medical background; and (iii) general information. The enumerators received two weeks of training about the questionnaire design and lessons learned during the pilot field study. After training, the enumerators were tested by the team leader in order to understand whether enumerators could complete questionnaires or not. Additional training was provided where needed. Some enumerators, who did not meet the requirements, were not allowed to go to field.

Field work in provinces typically started with the introduction of the PETS team to the staff of provincial health department by the Ministry of Health officials. Thereafter the team started working directly with PHD, OD and health facility. The PHD questionnaires were conducted by the team leader and one senior research assistant. The team leader was responsible for interviewing the PHD director/deputy director and the accountant, senior research assistant was responsible for interviewing the chief of drug bureau and staff responsible for HIS. After interviews, required documents were copied for data entry and later analysis.

OD and health facility questionnaires were conducted by enumerators. Enumerators (15) were grouped into three field work groups. Each group consisted of five enumerators with at least one specialized in accounting and one having health background. One senior enumerator in the group was assigned as group leader. The group leader was responsible both administrative and technical aspects and daily communication with overall PETS team leader.

Each group was assigned to work one Operational District. Typically the team was working for one week in one OD. The team started from the OD office by filling in OD questionnaires and thereafter proceeded with health facility questionnaires. Usually the group leader worked on general and accounting information while other team members worked with the other sections.

Some issues faced during the field work included the following. Rainy season impeded access to some health facilities. Some health facility staff were afraid to provide true and full information. The team sometimes got incomplete records and had to go back again to get missing data.



The health PETS database was developed by using MS SQL for back end and PHP for front-end. With the application, data entry could be operated by many users at the same time and the real time control was used to validate data. With MS SQL, data could be stored in large files that could be transferred to SPSS program for analysis. The whole health PETS database consisted of 57 tables. The data from the four questionnaires at the PHD level were stored in 18 tables, the OD questionnaires data also in 18 tables and health facility questionnaire data were stored in 21 tables. The preparation of database was supervised and technical support provided by a data management specialist with experience with similar surveys worldwide.

#### **2.2.4 Data constraints and PETS responses to data quality**

At each level, the PETS collected information from face-to-face interviews and from written records. It was difficult to obtain and compare information between institutions, as there was no standardized reporting mechanism. Significant part of data was thus obtained from secondary reports and from unprocessed invoices and receipts of expenditure. The PETS team had to verify the consistency of records between levels and to estimate amounts by triangulating qualitative information when no record was available.

**National level.** No questionnaire was initially designed for the central level but in order to compare the shares of budget allocation and resource flows between the central and provincial levels the PETS did obtain from the MOH information on central and provincial budgets and expenditures in 2003 and 2004. The report on the MOH central level expenditures was in the format recognized by the National Treasury, but the provincial level expenditure reports were informal consolidation sheets for the MOH at the end of the fiscal year. The PETS team triangulated these informal sheets with the official provincial reports that were signed by PHD director, provincial treasury director and provincial Governor and verified by financial controller from the MOEF.

PETS also collected data from the Central Medical Store (CMS) that distributes drugs and medical consumables to provinces and front line health service providers. Drugs and medical supplies that were provided in-kind represent the largest share of health expenditures in provinces. PETS had to access the CMS records of the goods distributed and their prices. As will be discussed later, the price information was used to calculate the value of drugs and consumables distributed by ODs to health facilities.

**PHD level.** At provincial level, the government budget was only defined by ceiling amounts by budget chapter. No budget information was available for lower levels – Operational District offices and health facilities.<sup>2</sup> Therefore it was not possible to compare actual expenditures with the budget below provincial level and the PETS team focused on actual expenditure reports. PETS team used official reports prepared by PHDs for the MOH that followed the budget chapters.<sup>3</sup> PETS also used reports from the MOEF financial inspectors that were available in all sampled PHDs. Using these reports,

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<sup>2</sup> In some Priority Action Program provinces, budgets for ODs existed under Chapter 13 (program expenditures) as proposed by ODs but they were rarely updated with final approved provincial budget. Budgets also existed for the ODs included in the Accelerated District Development program but these budgets were directly allocated from the central level MOH.

<sup>3</sup> P1 report for expenditure by budget chapter, P2 report for expenditure by OD.

PETS calculated the expenditures by OD and PHD office. In cases where PHDs did not have reports on their cash allocation from the provincial treasury, the PETS copied the cash books to directly process data into a report. PETS team also copied the invoices for payments to utility companies and records on the in kind distribution of goods and services to ODs. These provincial level data were triangulated with data obtained from the lower levels – ODs and health facilities.

The CMS distributes drugs and medical consumables directly to ODs and provides the PHD with a record. Some drugs and consumables are provided directly to the PHD for the use of national programs, for example vaccines for maternal and child health outreach activities. PETS obtained the CMS provincial level distribution records and crosschecked them with the reports from financial inspectors who were tasked to verify the receipts and distribution of drugs and supplies. The CMS records provided to the provincial level were consistent with the financial inspectors reports. Records on receipts and dispensing of drugs and consumables were also obtained from OD and facility level and further crosschecks performed.

PETS also collected data on provincial level HIS on health facility activity data. As there are incentives for health facilities to over-report (e.g. distribution of drugs and consumables depends on activity levels), the PETS team cross-checked the activity data with the activity data obtained directly from front line facilities and made necessary adjustments.

Support to PHD level by bilateral and multilateral donor agencies (Global Fund, DFID, ADB, WB) is provided via national programs and projects such as HSSP, NCHADS, CENAT. The funds flow through special impress accounts of local banks (e.g. ACLEDA). All these expenditures are recorded and reported to donors and subjected to independent audits. Unfortunately the accounting did not break down expenditures by operational districts and health facilities, so analysis below provincial level was not possible.

Data on user fee revenue were collected from the consolidated reports at the PHD level. These consolidated reports were based on OD level reports that in turn were based from facility reports that actually collected and retained the user fees. PHD level consolidated reports were usually prepared for the purpose of financial inspection.

**Operational District.** There were no standard record keeping mechanisms at the OD level, often no breakdown of budgets and expenditures at the health facility level and the quality of data varied considerably across sampled ODs. The PETS team classified the data problems into six categories as presented in Table 2-2. Only few ODs had data for the full analysis. For the others, the PETS team had to develop specific approaches to estimate expenditure allocations at the OD level and below. Overall, the PETS team spent considerable time in collecting and triangulating existing data and calculating actual expenditures at the health facility level.

**Table 2-2.** Summary of record keeping problems in the sampled Operational Districts

Nº	Year (2003 / 2004)	Budget Chapter								Expenditure Chapter								user fee revenue	
		B 10		B 11		B 13		B 31		E 10		E 11		E 13		E 31		03	04
		03	04	03	04	03	04	03	04	03	04	03	04	03	04	03	04		
1	OD Sen Monorom	3	3	3	3	3	3	3	3	1	1	1	1	1	1	5	5	5	5
2	OD Ang Roka	5	5	5	5	5	5	5	5	5	5	5	5	5	1	5	5	1	1
3	OD Keb Ville	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	5	5	5
4	OD Chi Phu	5	5	5	3	3	3	5	5	3	3	3	3	3	3	5	5	1	1
5	OD Kiri vong	5	5	3	5	3	3	5	5	3	3	3	3	5	3	5	5	1	1
6	OD Rattanakiri	3	3	3	3	3	3	3	3	1	1	1	1	1	1	5	5	1	1
7	OD. Kratie	3	3	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1	1
8	OD Romeas Hek	3	3	3	3	5	3	5	3	3	1	3	3	1	1	5	5	1	1
9	OD. Kong Pisey	5	5	5	5	5	5	5	5	3	3	3	3	5	5	5	5	1	1
10	OD. Kampong Speu	5	5	5	5	3	3	5	5	1	3	5	3	1	1	5	5	4	4
11	OD. Pea Reang	3	5	3	5	5	3	3	5	5	5	5	5	5	5	5	5	1	1
12	OD Steung Treng	3	3	6	3	3	3	3	3	3	3	6	6	1	1	3	1	1	1
13	OD. Stong	3	3	6	6	3	1	1	1	5	5	6	6	5	1	5	5	5	5
14	OD Ponhea Krek-Dam Be	3	5	6	5	3	5	5	5	3	1	6	5	1	1	5	5	4	4
15	OD Memut	5	3	5	5	5	5	5	5	1	1	5	5	5	1	5	5	1	1
16	OD Kg Cham- Kg Siem	5	5	6	6	1	1	5	5	1	1	6	6	1	1	5	5	1	1
17	OD. Bary-Santuk	1	3	6	6	3	4	1	3	1	1	6	6	3	1	3	3	1	1
18	OD Tbong	5	5	6	6	5	1	5	5	1	1	6	6	1	1	5	5	4	4
19	OD Kandal	5	5	6	6	1	1	5	5	2	2	6	6	5	5	5	5	1	1
20	OD. Kompong Trach	5	5	5	5	5	5	5	5	1	1	3	3	1	1	5	5	1	1
21	OD Kroch Chhmar- Stung Trang	3	1	6	6	1	1	5	5	1	1	6	6	1	1	5	5	4	4
22	OD Sampov Meas	5	5	6	6	5	5	1	5	1	1	6	6	5	5	1	1	5	5
23	OD. Battambang	5	5	5	5	5	5	5	5	1	1	1	1	1	1	5	5	4	4
24	OD. Chhouk	5	5	5	5	5	5	5	5	1	1	3	3	3	3	5	5	4	4
25	OD. Preah Sdach	5	5	5	5	6	3	5	5	4	3	3	3	6	3	3	3	5	1
26	OD. Prey Veng	3	3	3	3	3	3	5	5	1	1	3	3	3	3	5	5	1	1
27	OD. Kam Chay Mear	5	5	1	1	6	6	1	5	1	1	1	1	6	6	1	1	5	5
28	OD Kralanh	5	5	6	6	3	3	5	5	1	1	6	6	1	1	1	1	1	1
29	OD. Mongkul Borey	5	5	3	5	1	1	5	5	1	1	1	1	1	1	5	5	4	4
30	OD. Or Chrov	5	5	5	5	6	6	5	5	1	1	1	1	6	6	5	5	1	1

Code and number of problem in each field

1 Full information	1	1	2	2	5	7	4	1	18	19	7	7	14	18	4	5	17	18
2 Info w/o clear source	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
3 Only OD total information	11	10	8	7	12	12	6	7	7	7	9	9	6	6	3	2	0	0
4 Partial information	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	7	7
5 Without required record	18	19	10	13	10	8	20	22	3	3	4	5	7	4	23	23	6	5
6 Not Applicable	0	0	10	8	3	2	0	0	0	0	10	9	3	2	0	0	0	0
Total	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

#### Code definition

- 1 = Full information : Budget and expenditure broken down by ODO and by HF  
2 = Information without clear source : information from OD staff with no clear source.  
3 = Information only OD total : only total budget and expenditure of OD  
4 = Partial information : incomplete information  
5 = Without any record : OD did not provide any record the team requested.  
6 = Not applicable : record not expected

The following approaches were then applied for estimating OD expenditures in specific expenditure categories:

- Chapter 10 (salaries and staff allowances) Where records were inadequate, PETS estimated expenditures based on three sub-chapters: (i) Basic salaries and allowances were calculated based on salary and allowance tables from the OD for the months of March and December; (ii) Overtime bonus was often recorded as

- aggregate at OD level, PETS allocated it to facility level based on the number of staff in respective health facility; (iii) Similar to overtime bonus, expenditure on temporary/floating workers was often recorded as aggregate at OD level. PETS allocated these expenditures to health facilities based on the number of temporary workers in each health facility.
- Chapter 11 (operational expenses). If OD claimed Chapter 11 expenses but had no records, PETS used transfer records available at the PHD to estimate expenditures at the OD level. If OD level had aggregate expenditure records by type of institution (OD office, Referral Hospital, Health Centers), PETS disaggregated the data by health facility by number of staff for expenditures related to staff (e.g. in-kind provision of uniforms, fuel, mission fees) or type of health center for other expenditures (e.g. food for patients in health centers with beds) we had to break down results by type of health facility based on information provided by OD accountant. In some isolated cases, when it was not clear what allocation principle to apply, estimates were based on the PETS team leader experience and information from qualitative survey (e.g. per diem mission fees were mostly allocated to OD office).
  - Chapter 13 (program expenditure). In general, Priority Action Program (PAP) ODs had detailed expenditures by health facility but Accelerated Development District (ADD) program ODs did not. In response, PETS copied the OD level cash books, sampled them for detailed analysis and extrapolated the results to other ADD district facilities.
  - Chapter 31 (social subsidy). Records were not available in most ODs. Actual expenditure was very small and mainly used at the PHD level. If there was no record, PETS assumed it as zero expenditure at OD level.
  - Drugs and medical consumables. If ODs did not have the total value of the invoices for drugs they had sent to health facilities, the PETS team copied all invoices and calculated their value based on price information provided by the CMS.

**Health facility level.** Health centers receive mainly in-kind resources rather than cash and as a rule did not have an accountant. Health center chiefs who were responsible for accounting often were not trained for it and could not provide accurate information for section 2 of the survey (accounting). Referral hospitals with over 100 beds were allowed to hire an accountant. These without accountant had record keeping problems, but overall all maintained better records than health centers. For the analysis of expenditures at facility level, PETS used data from OD level. For drugs and consumables at the facility level, PETS compared the OD level data with health facility records. PETS also sampled patient registries for compiling patient activity data.

### 2.2.5 Per capita calculations and population methodology

Reliable population estimates were needed to calculate budget and expenditure per capita values. The following population sources were considered for inclusion:

- Health PETS data estimates;
- 1998 Population Census of Cambodia, Province profiles, National Institute of Statistics (NIS);

- Cambodia Intercensal Population Survey 2004 (CIPS), Province profiles, National Institute of Statistics (NIS); and
- Health Coverage Plan and SEILA commune database, Ministry of Planning.

The health PETS data estimates were not used as their values may not be as reliable as official surveys and there was insufficient information available. For example at the provincial level, Kampong Cham, Battambang and Svay Rieng did not have population estimates. It was reasoned there may have been population changes between 1998 and 2003-2004 that would suggest the 1998 Population Census of Cambodia may be not be preferable to later sources. The CIPS 2004 data contained only provincial level estimates in 2004 and the smaller provinces were combined with no statistically significant disaggregated values. As an alternative the health coverage plan provincial and OD estimates were used in conjunction with the SEILA 2003 and 2004 commune database. The OD population percentages of the total OD population in each province were calculated from the Health Coverage Plan. These OD percentages of the Provincial totals were applied to the SEILA provincial estimates in 2003 and 2004 to derive the OD population estimates in 2003 and 2004. The method is based on the reasoning the OD shares of the provincial total would remain relatively consistent between 2003 and 2004 while allowing the total provincial population to change. Provincial and OD population estimates are listed in Annex 3, Table 2, and Table 3.

## ***2.3 Qualitative methodology***

### **2.3.1 Review of secondary information**

PETS team collected various documents (e.g. reports by financial inspectors, supervision reports) related to resource management in the provinces visited and at the national level in the MOH. The team reviewed these documents to understand the processes of fund management and the existing practices in the locations surveyed.

### **2.3.2 Semi-structured interviews**

In parallel with collecting quantitative data, the PETS interviewed the following officials: (i) PHD directors or deputy-director; (ii) PHD accountants; (ii) OD directors; (iii) OD accountants; (iv) referral hospital directors; and (v) health center chiefs. Semi-structured interviews were conducted following for respondents to explain and quantify the flow of funds and resources from PHD down. They also focused on fund management issues related to delays in funding, leakages and coping mechanisms. The question guide is attached in the Annex 1.

In addition, the PETS interviewed directors of the provincial departments of finance and of provincial treasuries to understand how funds had been managed in 2003 and 2004 and how funds flowed from these institutions to the PHD.

### **2.3.3 Case studies**

Case studies were conducted to understand how national programs managed their financial resources. Two programs were studied the National Center for AIDS, Dermatology and STD Control (NCHADS) and the National Center for Maternal and

Child Health (NCMCH). The research questions asked were: (i) what services are provided by the national programs; (ii) what are the main resources to support national programs; (iii) how are the resources managed and what are the differences between management arrangements of government and donor funds regarding to transparency and accountability; (iv) how effective and efficient is the management of resources for intervention through the national program. Two contracting ODs were later added to compare financial management practices between contracting and non-contracting ODs.

Highlights from the qualitative studies are used to illustrate findings from quantitative survey as well as to fill the gaps where quantitative data were not available. A separate background report of qualitative findings is available.<sup>9</sup>

**(a) National Center for AIDS, Dermatology and STD Control**

NCHADS is the lead coordinating agency for the implementation of strategic plan for HIV/AIDS and STI prevention and care. NCHADS receives significant donor support and manages a budget of around US\$ 8 million a year. It also works closely with large number of NGOs and UN organizations receiving and/or providing direct support for HIV/AIDS activities.

NCHADS' supported activities to control HIV/AIDS and STD grouped into four packages: (i) prevention package; (ii) continuum of care package; (iii) research and surveillance package; (iv) management package including planning and resource mobilization and monitoring and evaluation. NCHADS does not provide health services directly but rather coordinate and fund service provision by other institutions (government health services as well as community based interventions). NCHADS is also engaged in policy development in the HIV/AIDS area.

**(b) National Center for Maternal and Child Health**

The NCMCH comprises several sub-programs:

- Referral Hospital in Phnom Penh which provides gynecology and maternity services, as well as being a training center in gynecology and maternity to health providers facility in Cambodia.
- National Nutrition Program (NNP) focusing on nutrition and physical growth of children. The main activities were related to nutrition training under the Minimum Package of Assistance for health center staff, breast-feeding and overseeing distribution of micro-nutrients (vitamin A, iodine).
- National Immunization Program (NIP): The program is supporting the vaccination of children and mothers in Cambodia. It has provided both funds and technical expertise to the health center to provide outreach activities.
- Reproductive health and birth spacing program: The national program has provided both policy guideline and implementation of activities related reproductive health and birth spacing.
- CDD/Cholera/ARI program: The program has supported training and networking the community based health volunteer at the village level –in particular in remote areas.
- Prevention Mother to Child Transmission (PMTCT): The program was launched in 2004 to prevent the transmission of HIV from mother to child.

The main activities of NCMCH are training of staff and supervision of activities. The NCMCH works with health service providers through its focal person in the Provincial Health Department.

## ***2.4 Summary on research methodology and implementation***

Health sector PETS with objectives to link performance of financing systems to delivery of broad range of services with variety of inputs would be a complex undertaking in any setting. Complexity is further increased in the setting of poor record keeping and weak institutional capacity. The Cambodia health PETS used various quantitative and qualitative research instruments to achieve a variety of views on the same issues to gain credible insights into the research questions. The complexity of the task also points towards the need to be selective about the research questions in potential research cluster areas, with significant investment into the design phase using explorative studies, consultations and pilot testing. Despite the Cambodia health PETS having a clear focus and undertaking significant preparatory work, it stretched the PETS team to its limits and the data management and verification process led to long delays compared to original implementation schedule.

A special database was developed. Databases at provincial, operational district and facility levels were linked and triangulated with existing secondary data to calculate the flow of resources at each level. Special forms were prepared to capture diversity of data for additional analysis.

The current record keeping of health expenditure in Cambodia does not provide consistent information for rapid analysis. In the future, a better accounting information system needs to be developed for improving both health expenditure and monitoring.

## **3. PUBLIC EXPENDITURE MANAGEMENT ARRANGEMENTS IN HEALTH SECTOR**

### ***3.1 Introduction***

The health sector in Cambodia is financed from three main sources: Government revenue, donors and private (mainly out-of-pocket) contributions. There is significant uncertainty about the total level of funding. The majority of health spending is made through out-of-pocket payments in public and private health facilities. Most household surveys indicate that private payments make up between 75 and 85% (US\$20-30 per capita) of total funding. The government's own funding increased from CR 26.7 billion in 1995 to CR 191 billion in 2004, or from about US\$ 1 per capita to about US\$ 3.74. The total estimated donor financing for health sector was US\$66 million in 2001 (about US\$4.5 per capita) of which 46% was provided by bilateral donors, 22% through WB and ADB credits and grants, 10% by the UN and EU and the remaining 22% by international NGOs. About 32 percent of total external financing was allocated to national programs and hospitals.<sup>10</sup>

This chapter focuses mostly on government's own expenditures. It reviews the official processes of planning, budgeting and expending public resources and compares them

with actual practices as documented during the PETS fieldwork. Finally, an analysis of gaps highlights some problems and identifies possible solutions.

Public expenditures are managed through a two level budget systems: central and provincial (24 provinces). Both are specified by the Budget Law and are supposed to follow common principles and procedures for budget planning and execution. The central level budget concerns income and expenses of the central government i.e. ministries and secretariats. In the health sector it regulates spending for the MOH, the national programs and centers and the national hospitals. At the provincial level the budget includes spending for PHDs and the institutions at lower levels including operational district health offices and health facilities – referral hospitals and health centers. The central level budget also includes centralized purchases of drugs and medical supplies that are stored in the central warehouse (Central Medical Store) and then distributed to provinces for use in hospitals and health centers.

The budget consists of revenues and expenditures. Expenditures are classified in five categories, each divided into Chapters, sub-Chapters and items. Each Chapter has specific items and purposes of expenditure and the law specifies its amount. Chapter 10 is for staff salaries and benefits, Chapter 11 for non-salary operational expenses, Chapter 13 for programmatic expenditure, and Chapter 31 for social allowances. The Budget Law specifies amounts to be expended in each Chapter.

The next section focuses on the general government planning and budgeting process in the MOH. We then focus on the current practice of budget formulation and execution at the provincial level.

### ***3.2 Government Budget Planning Process***

The government budget is formulated in the special Budget Law prepared by the government and adopted annually by the National Assembly. Understanding both the planning process and formulation of that law is necessary to understand budget execution.

#### **3.2.1 National budgeting process**

The preparation of the Budget Law involves line ministries, the MOEF, the Council of Ministers and the National Assembly. It follows a formal process detailed in the following steps:

**Step 1: Macro-framework.** In May/June, the MOEF prepares economic growth projections for the coming year determines governmental resources available from tax and non-tax revenue and estimated revenue from grants and loans from external sources.

**Step 2: Ministerial/departmental ceiling.** Once resources and revenues are determined, the MOEF allocates to each ministry, agency or sector, a maximum amount of resources (the ceiling package budget) that it might be able to spend in the following year. These allocations are submitted to the Council of Ministers (COM) for approval.

**Step 3: Budget circular.** Once the COM approves the ceiling package budget, the MOEF prepares a budget circular and distributes it to line ministries by late July. The circular presents the ceiling budget packages approved for each ministry and the general policies to prepare a complete budget.



**Step 4: Budget preparation and submission.** Line ministries then prepare two detailed budgets by chapter, sub-chapter and line items: a central budget for the ministry, secretariat and related institutions and a provincial budget for expenditures controlled by provincial administrations. The final detailed budget is submitted to the MOEF.

**Step 5: Budget negotiation.** Following the receipt of draft budgets in September or October from line ministries, which are generally higher than their ceiling budgets, line ministries and the Department of Budget in the MOEF hold negotiations on the draft budget. After discussions on the detailed items in the budgets the Minister for Finance and Economy approves the adjusted budget.

**Step 6: Budget approval.** Following these negotiations with line ministries the MOEF prepares a draft Budget Law annexed with the draft budgets of individual line ministries. This draft Budget Law is then submitted to the Council of Ministers for approval. The draft is later sent to the National Assembly for their approval by the last week of December.

**Step 7: Procedure to make the Law effective.** Once the National Assembly approves the draft budget legislation, it becomes the Budget Law. In order to be implemented it must be endorsed by the King and the Royal Government of Cambodia as follows:

- Budget Law has to be signed by the King under a Royal Decree to order the prime minister to implement the law;
- The prime minister has to sign a sub-decree to order the Ministry of Economy and Finance to implement the Budget Law;
- The MOEF has to issue a Prakas (a ministerial administrative order) to order line ministries to implement the Budget Law and allow the central budget to be implemented.
- Finally, line ministries have to delegate power to provincial Governors through a Prakas so their provincial budgets can be implemented.

Figure 3-1 summarizes the budget preparation process to prepare the budget and legislative documents for it to be implemented. In practice the whole process is usually completed by January-February of the budget implementation year. For 2004 which was covered by the current PETS, delays in the formation of a government following the 2003 general elections prevented the National Assembly from approving the 2004 draft Budget Law by the December 2003 deadline. With no current Budget Law, the government used the one twelfth of the 2003 Budget Law for monthly expenditures until the new government was formed in late 2004 and the 2004 Budget Law was approved. This may have affected the 2004 budget execution.



- **PAP planning guidelines.** The MOH Budget Department introduced these planning guidelines in 2000 along with the introduction of Priority Action Program (PAP) in the health sector. They are used to prepare the budgets for the ODs under the Accelerated Disbursement District (ADD) program.<sup>4</sup> The PAP applies only on non-salary operational budgets. Budgeting principles determine: (i) fixed costs that depend on the type of health facilities; (ii) variable costs that depend on output i.e outpatient visits for Health Centers (HC) and inpatient admissions for Referral Hospitals (RH); and (ii) administrative costs calculated as a percentage of the facility's budget.
- **AOP guidelines.** The Department of Planning in the MOH introduced Annual Operational Planning (AOP) guidelines in 2003. These guidelines are used by the MOH departments, national programs and PHDs for preparing an activity based budget based on agreed goals and objectives, prioritization of activities under given budget ceilings and indicators to monitor implementation. AOPs include both government and donor-funded activities. The planning process was introduced in 2003 and its implementation only started in 2004/2005 at the health facility level. Until now, the AOP process has been predominantly a planning exercise as it has not been possible to reconcile AOP budgets with the budgeting requirement of the MOEF. In effect, the PHDs prepare two sets of budget proposals but only one is being used for actual budgeting and budget execution.

The standard MOEF guidelines do not provide information for budgeting at below PHD levels: ODs and health facilities. The PAP guidelines provide guidance to develop budget packages for the OD and facilities based on fixed cost estimate and variable share based on activity levels. But even when OD and facility based planning takes place under the PAP process, the final budget developed according to the MOEF guidelines will result in aggregated line item budgets that do not go beyond PHD level. As there is no budget individual ODs do not know their budget entitlement; it is not possible to monitor budget execution at below PHD levels through government financial management systems. Neither was it possible to compare actual OD and facility level expenditures with budgets under the PETS. It also gives a lot of discretion to PHD level officials at the time budget execution including spending more on administrative purposes.

The AOP process is designed to be a bottom-up planning process and included guidelines for facility based budgeting. But as stated above, the AOP activity based budgets are not used for actual budget formulation by the MOEF.

Total health budget envelope for the health sector depends on general increase of government budget and from the inter-sector prioritization process. Although the government has expressed commitment towards social sectors, the share of health sector budget within national budget has been declining from 7.9% in 2001<sup>4</sup> to 6.9%<sup>5</sup> in 2006. The allocation of the budgets between the central and provincial levels has been determined by the Budget Department in the MOH, mostly based on historical data but also to some extent by policy priorities such as direction towards increased decentralization and national health priorities.

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<sup>4</sup> Please see Section 3.3.4 for more information on PAP and ADD.

<sup>5</sup> MOH data.

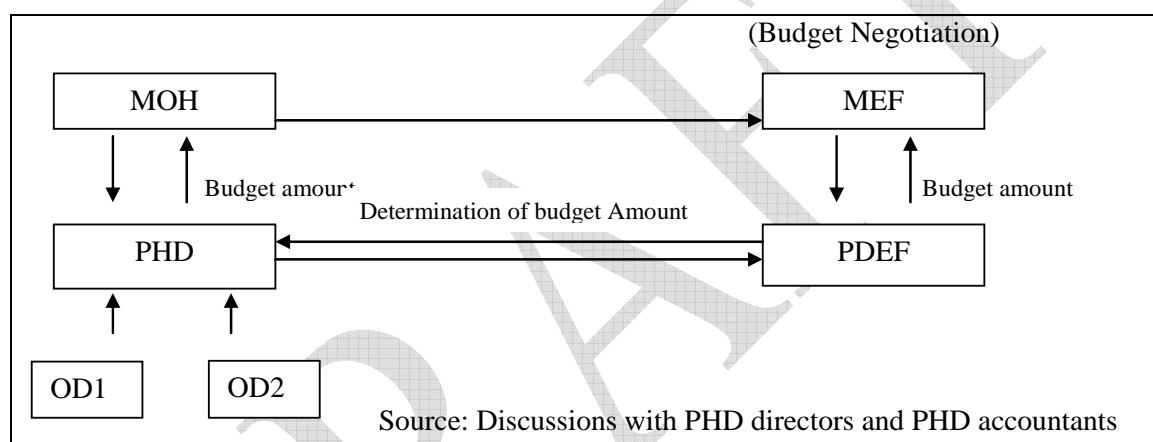
### 3.2.3 Budget planning process for health sector at province level

As described above the Provincial Health Departments plan their budget following two sets of guidelines: AOP guidelines by the MOH and the MOEF guidelines through Provincial Departments of Economy and Finance.

Based on the estimated budget ceilings provided by the MOH, the PHDs prepare formula-based budget ceiling per OD and request them to prepare detailed activity based operational plans. ODs then prepare detailed budgets by working with health centers and referral hospitals. PHDs consolidate the OD plans, prepare single PHD budget plans and submit them to the MOH.

With a package budget provided by the PDEF, the PHD has to prepare another budget for the PHD to be submitted to both the PDEF and the MOH. The second draft budget is used for formal formulation of Budget Law.

**Figure 3-2.** Formulation of provincial level health budget



PHD budgets are based on the consolidation of budgets prepared at the OD level, that are in turn partly based on the needs expressed by health facilities. However, the budgets were of unequal quality and followed different formats due to the multiple planning guidelines and types of health financing available in the province.

Budget guidelines that determine health budget formulation at PHD level are based on:

- PHD Office Budget. PAP provinces have formulas to allocate a budget to the Provincial Health Department Offices (PHDOs) as a percentage of OD expenditures. In non-PAP provinces, the PHDO budget allocation is based on negotiations with the Provincial Department of Economy and Finance (PDEF) as well as historical expenditure data.
- Operational District (OD) level budgets are developed using formulas with fixed and variable components. Given the large share of fixed allocations, it is difficult to increase OD budgets as outputs increase. The team did not find any other allocation criteria.
- Below ODs level budgets a formula-based allocation to health facilities was also used.

In 2003 the Annual Operating Plan was introduced in the planning and budgeting processes of PHDs. It complements the Priority Action Program (PAP) guidelines by providing formulas to calculate budget allocation at health facility and OD-levels while the AOP provides budgeting guidelines based on objectives and activities. The AOP process only began in 2005 and this PETS did not examine the implementation of AOP budgets.

### **3.3 Budget Execution**

This section reviews the management arrangements for government budget execution as well as public finance management innovations applied to the health sector.

According to Cambodian Budget Law three government agencies are involved in the preparation, approval and implementation of public expenditure: The Expenditure authority/ministry; the Ministry of Economy and Finance; and the National Treasury.

- The Expenditure Authority is considered the “authorizer”. The Minister/director of expenditure ministry/agency is the authorizer of expenditure requests. For provincial budgets, the authorizer delegates power to provincial Governor to authorize expenditure of provincial line departments in the province. The provincial Governor is called delegated authorizer.
- The Ministry of Economy and Finance is in charge of controlling public expenditures. The Minister, budget director or financial controller is in charge of public expenditure at the central level, while in the provinces, Directors of the Provincial Departments of Economy and Finance are the financial controllers.
- The National Treasury acts as a public accountant and cashier and is represented in the provinces by provincial treasuries.

Involving these three agencies respects the principles of division of powers between independent authorities to authorize, control and record expenditures. Yet, the structure of the system also raises important questions:

- Who is in charge of assessing the effectiveness and efficiency of expenditures?
- If line ministries do not have authority over their own expenditures, how can they maximize their outputs?

According to applicable Cambodian laws and regulations, there are two systems of expenditure from the budget. The pre-audit system exercises control on expenditures before they occur, and the post-audit system that checks and accounts for expenditures after they have occurred based on invoices and receipts of expenses.

#### **3.3.1 Pre-audit expenditure system: rules and issues**

The pre-audit system applies to all public expenditures over 500,000 Riel per transaction. The pre-audit procedures comprise four phases and involve a number of government staff. Public procurement of goods and services requires following a set of complex procurement procedures, reviews and approval of the MOEF.

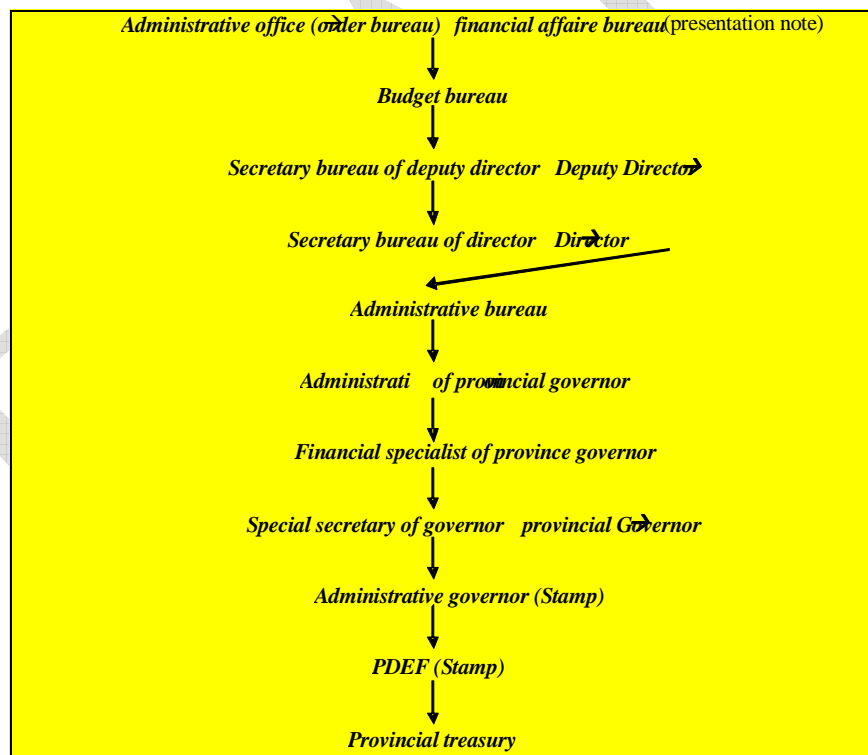
The phases of pre-audit public expenditures are the following:

- Commitment: an authorized ministry (or line department on provincial level) presents a pro-forma invoice as a request for expenditure along with supporting

- documents to justify the spending and a proposed plan for expenditures the MOEF financial controller located in the Ministry of Health (or PDEF) reviews the request. The controller approves the request and issues a Commitment Visa.
- Liquidation: with the Commitment Visa, the authorizer starts a transaction of expenditure. For goods and services provided by a contractor or seller, the authorizer must follow procurement regulations (and a public procurement process for expenses above 20 million Riel). With an agreement or purchase order, the contractor or seller delivers the goods and services to the spending agency, which then recognizes the amount due to the contractor or seller.
  - Authorization: A payment order is prepared, signed by the spending agency and the financial controller and sent to the national or provincial treasury.
  - Payment: The treasury verifies the expenditure documents, records them in its accounting system and finally makes payment to the contractor or seller.

In principle the pre-audit process and the roles of the authorizer, financial controller and accountant (national treasury) are clearly laid out in the relevant sub-decree. In practice, it is not without problems. Delays can occur at any of the phases of prior approval of expenditure. Cumbersome and lengthy public procurement process can add to delays and offer opportunities for leakages.

**Figure 3-3.** Detailed flow of documents at PDEF and provincial Governor



At the provincial level, the Governor is the delegated authorizer and PDEF the financial controller. The Governor usually expects the financial controller and the PHD to work together so he/she would only have to sign after the controller. In practice the PDEF director signs the Commitment Visa only after his/her team reviews the documents justifying the expenditure. The Figure 3-3 depicts the many steps involved for the PDEF to approve the Commitment Visa, and then for the technical staff of the provincial governor to prepare and sign a payment order (mandate). This official process should take no more than 15 working days provided that all goes well and that no further documents are necessary to justify the expenses. But once the mandate reaches the Provincial Treasury, further scrutiny and requests for justifications may ensue before transfer of funds to the relevant account is possible.

Public procurement of goods and services is a subset of pre-audit expenditure control system. Public procurement is a central issue determining effectiveness and efficiency of public expenditure process. Nearly 70% of Chapter 11 expenditures take place through public procurement process. Sub-decree 60 of July 31, 1995 defines the methods and institutions responsible for the public procurement of civil works, goods and services. It requires a set of complex procedures, reviews and approval of the MOEF. Procurement of goods and services includes eight steps, while procurement of works demands twelve. (see Table 3-1).

**Table 3-1.** Steps and responsibilities in public procurement

Purchase of goods and services	Responsibility	Contracting of civil works
-	(PPU)	(1) Preparation of pre-qualification documents
-	(PPU)	(2) Public invitation for the pre-qualification of contractors
-	(PPU)	(3) Reception of pre-qualification documents
-	(PEAC)	(4) Evaluation of pre-qualification of contractor
-	(DPP)	(5) Evaluation and approval of pre-qualified contractors
(1) Preparation of bidding documents	(PPU)	(6) Preparation of bidding documents
(2) Invitation for public bidding	(PPU)	(7) Public invitation for contractors to bid
(3) Reception of bidding documents	(PPU)	(8) Reception of bidding documents
(4) Public opening of bidding documents	(PEAC and contractors)	(9) Public opening of bidding documents
(5) Verification of bidding documents	(PEAC)	-
(6) Evaluation of bids	(PEAC)	(10) Evaluation of bids
(7) Approval of bidding evaluation	(MOEF-COM through DPP)	(11) Approval of bidding evaluation
(8) Awarding of bid and signature of contract	(PEAC and contractor)	(12) Negotiation, award and signing contract

PPU: Provincial Procurement Unit (PDEF); DPP: Department of Public Procurements (MOEF); PEAC: Prequalification Evaluation and Award Committee (under the provincial Governor)

Until 2005 (including the years covered by PETS), MOEF approval was required for bidding documents and bid evaluation for the purchase of goods and services over 20 million Riel. The MOEF has since delegated the approval authority to the Pre-qualification, Evaluation and Award Committee (PEAC) to approve procurement documents and the awarding of contracts up to 1,000 million Riel at the central level and up to 200 million Riel at provincial level after informing the MOEF's Department of Public Procurements (DPP).

In the provinces, the Provincial Procurement Unit (PPU) is responsible for purchases for all line departments. PHDs themselves can only purchase goods and services through petty cash and Chapter 13. Purchases to meet the needs of Operational Districts must have approval from the PHD, PPU and Pre-qualification Evaluation and Award Committee (PEAC), which may lead to delays of up to 8 months. In response to the long delays in public procurement, line ministries usually divide their purchases into small



amounts they can directly purchase from the market, avoiding the red tape of local competitive bidding.<sup>6</sup>

In Prakas No 045 (31. January 2005) on public procurement, the MOEF delegated the authority to purchase goods and services to line ministries and their provincial line departments.<sup>7</sup> Central line ministries can now procure goods and services for up to 500 million Riel – The MOH and MOEYS have a special ceiling of 1000 million Riel. Provincial institutions have a limit of 200 million for specialized line departments and 300 million Riel for provincial administration expenses. The PPU of the PDEF still supervises the purchase of all goods and services (except where post-audit applies)<sup>8</sup> for provincial line departments. The provincial Governor heads the Pre-qualification Evaluation and Award Committee (PEAC), that with the directors of line departments as its members, award and sign public procurement contracts. The PPD of the MOEF takes decisions for purchases over 200 million Riel for specialized line departments and 300 million Riel for provincial administrations. See Table 3-2.

**Table 3-2.** Summary of public procurement methods and levels of approval

Items to be procured	Limit (million Riel)	Methodology	Level of approval
Small items	0-20	DC	PEAC
Goods and services	0-20	DP-DCO	PEAC
Civil works	0-20		
Goods and service	< 100	IS	PEAC
Civil work	< 200		
Goods and service	20-100	LCB	PEAC
Civil work	20-200		
Goods and service	> 100	ICB	MOEF through DPP
Civil works	> 200		
Consultancy	> 100		
All	> 1,300	Right of COM	COM through DPP

DC: Domestic Canvassing, requiring three quotations; LCB: Local Competitive Bidding; DP-DCO: Direct Purchase -Direct Contract; ICB: International Competitive Bidding; IS: International Shopping

### 3.3.2 Post-audit Budget Management System

The post-audit system applies to the small expenses of the line ministries and their provincial line departments and is not subject to the lengthy procurement processes of pre-auditing. These expenses are incurred through the petty cash and impress accounts. The following are the key phases of post-audit expenditure management (see also Figure 3-4):

- **Advance disbursement:** At the beginning of the fiscal year the MOEF allows line ministries and their provincial departments to disburse a certain amount of advances without invoice and documentary justification. The advance amount and the specific items eligible for purchases are determined by the MOEF. The

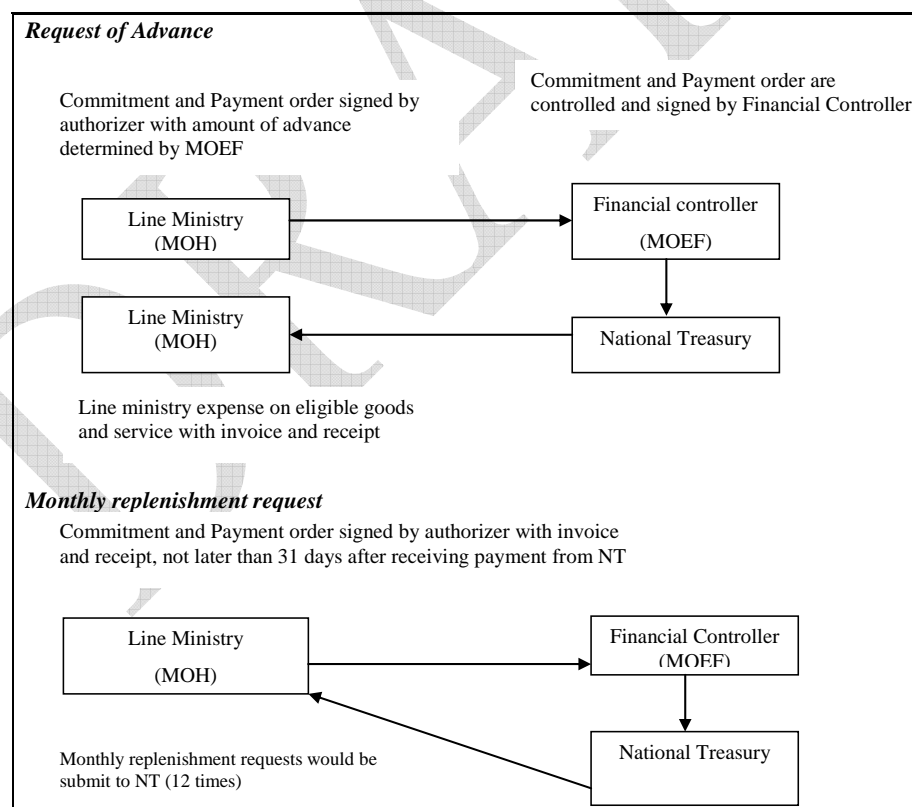
<sup>6</sup> MOEF has now forbidden this practice through a Prakas. It is yet unclear why line ministries could not divide up large expenditures and how spending only through large amounts at a time would make the expenditure process more efficient and effective.

<sup>7</sup> Before 2005, the Public Procurement Department of MOEF had to first approve the request and later approve the awarding of contracts, which delayed purchase approvals by months.

<sup>8</sup> PPUs do not control the expenditure of PAP and ADD ODs, since they use a post-audit system.

- amount of advance is fixed to one eighth of the yearly eligible amount for petty cash, itself one third of Chapter 11. The advance amount is recorded by the Treasury, which then advances it to line ministries. The ministry or agency keeps the cash in its agency and disburses it as needed.
- Payment of petty cash/impress expenditure. This advance cash is eligible for expenditure in the line ministry or provincial line department for amounts under 500,000 Riel (about US\$ 125) per transaction on the items specified by the MOEF. The authorizer can spend without ex-ante control is subject to ex-post control and audit.
  - Replenishment the petty cash/impress account. By the end of each month, the line ministry or provincial line department submits its payment orders with justification documents to the MOEF financial controllers. After the financial controller verifies and audits the expenditure, he/she approves and signs a Commitment Visa and payment order for the Provincial or National Treasury to replenish the petty cash/impress account.
  - Consolidation of expenditures. At the end of the fiscal year, the line ministry or provincial line department has to repay the advance payment to the national or provincial treasury to consolidate its expenditure.

**Figure 3-4.** Flowchart of petty cash process



While the pre-audit system provides more control to the MOEF, the post-audit leaves more discretion to line ministries and their provincial departments. The list of eligible items is limited and determined by the MOEF. Table 3-3 provides a comparison of the key characteristics of the pre-audit and post audit systems.

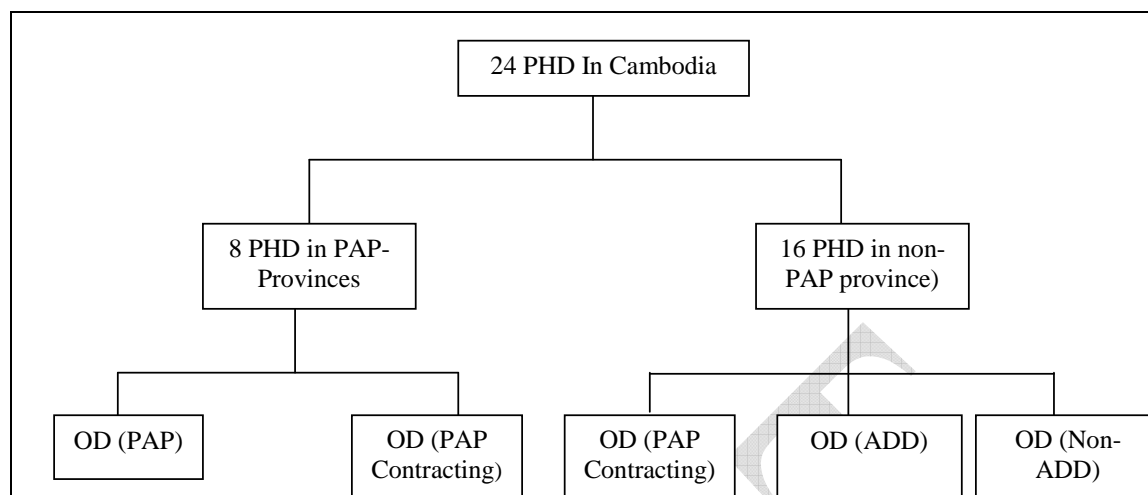
**Table 3-3.** Comparison of the pre-audit and post-audit systems

Criteria	Pre-audit	Post-audit
Cash advance	Not available	1.5 months of petty cash
Amount per transaction	Unlimited	Limited with specific amount, 500,000 Riel in petty cash
Pre-expenditure approval	Authorizer, and Financial controller	Authorizer
Expenditure controls	Involvements of many different committees	None
Mode of expenditure	According to amount specified by MOEF regulation	Direct purchase with three quotation from different suppliers or contractors

### 3.3.4 Innovations to improve financial management in health sector

With support from international donors, three public finance management innovations have been introduced to improve public health sector financing: (i) Accelerated District Disbursement (ADD); Priority Action Program (PAP); and (iii) contracting-in NGOs to manage Operational District level health services. The first two are applications of generic MOEF public financial management innovations, while contracting management services has been specific to the health sector. The ADD was introduced in 1996 to accelerate disbursement to districts, PAP was introduced in 2000, and contracting was introduced in 1998 with the support from ADB. All these schemes are post audit systems with the common objective of improving public financing of frontline facilities, and all have been reviewed under the PETS. In addition to these schemes, in 2005 Priority Mission Groups (PMG) innovation by the Council of Administrative Reform (CAR) to improve staff incentives was introduced in selected health facilities in Kampot province. The PMG experience was not reviewed under the PETS that covered only years 2003-2004.

In 2003/2004, the PAP program included 8 provinces from a total of 24. The ADD was applied to selected ODs in the remaining 16 provinces. The contracting ODs were located both in PAP and non-PAP provinces as they depended on donor financing but PAP principles were applied to all contracting ODs regardless of their location. See Figure 3-5.

**Figure 3-5.** Financial management innovations in health sector Cambodia**(a) Accelerated District Disbursement (ADD)**

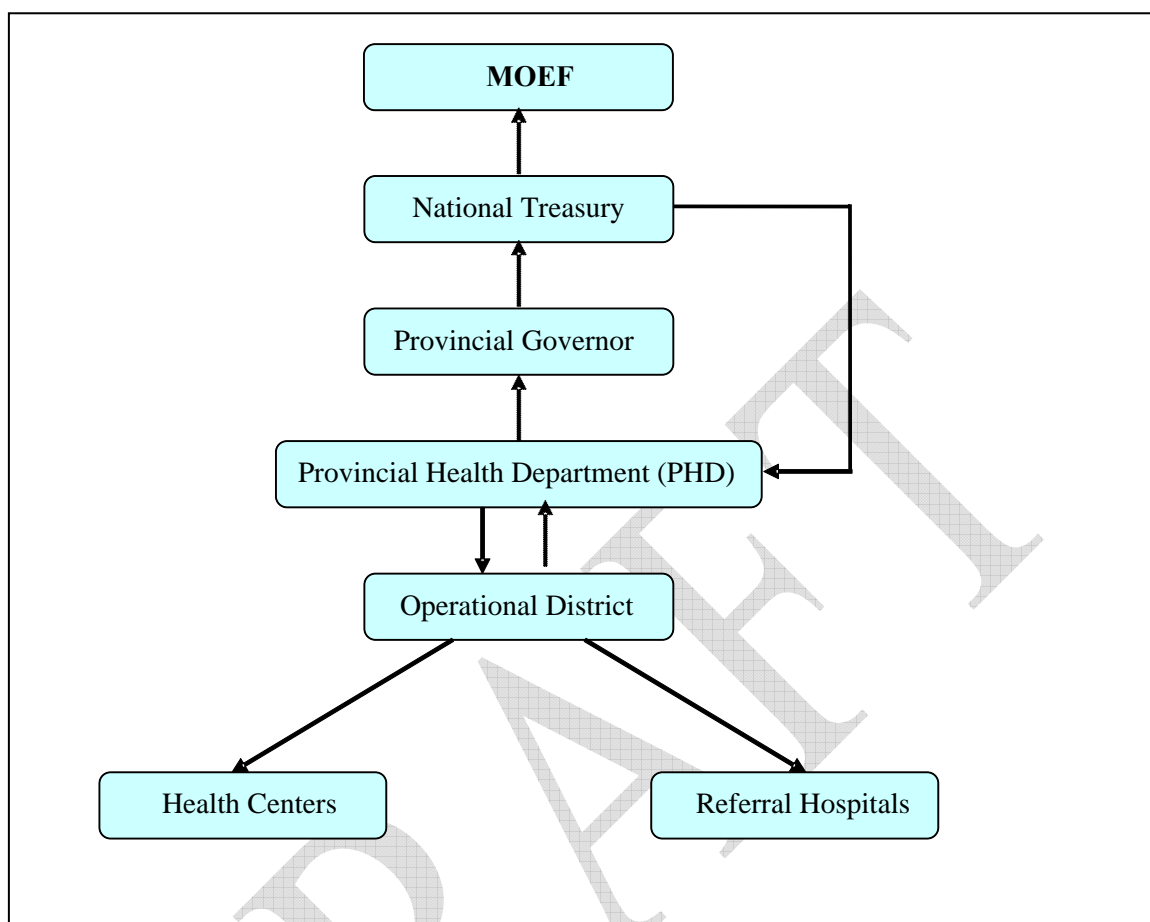
The ADD financial scheme was established to enable financial resources to reach ODs and improve health service delivery. The scheme covered non-salary operational expenditures (Chapter 11 in regular budget) that were budgeted and disbursed under Chapter 13.1 (special program expenditures). Initially, the National Treasury disbursed cash to the MOH who transferred it to PHDs and then from PHD to ODs. From 2002, the disbursements were no longer channeled through the MOH, but went through the provincial treasury under the provincial budget.

Under the ADD regulations, cash is released as follows (see also Figure 3-6):

- PHD requests cash advance and submits to the Governor to sign. Request is sent to treasury for disbursement.
- PHDs make cash advances to ODs based on a budget allocation.
- After spending cash, ODs submit invoices and justificatory documents to PHDs and the Governor, with proofs of expenditure signed by the buyer, supplier, the OD accountant and the OD director in charge.
- The MOH and the financial controller check the documents and the treasury replenishes the amount.
- The cycle is repeated.

This is a post-audit system similar to the petty cash approach. ODs would receive cash advance for three months of expenditures at a time (compared to 1.5 months for traditional petty cash post-audit system), regulations fix ceilings for each transaction, there is no specific period for the replenishment of the advance, and procurement follows the domestic canvassing method. The role of the PHD is to transfer funds, and it is not eligible to claim expenditures on this fund. ODs manage the funds for their operations as well as for their health facilities.

**Figure 3-6.** Funding flows under revised ADD system (dotted lines describe reporting, solid lines cash flows)



**(b) Priority Action Program (PAP)**

In response to financial management issues with the pre-audit system, including the limitation of funds, delays and a lengthy process of public procurement and disbursement, the RGC has introduced the Priority Action Program (PAP) to enable provincial administrations to disburse more resources directly to service delivery institutions. With support from donors, the PAP was launched in 2000 in the MOH and the Ministry of Education, Youth and Sport. It is designated in the budget under Chapter 13, and sub-Chapter 13.2.

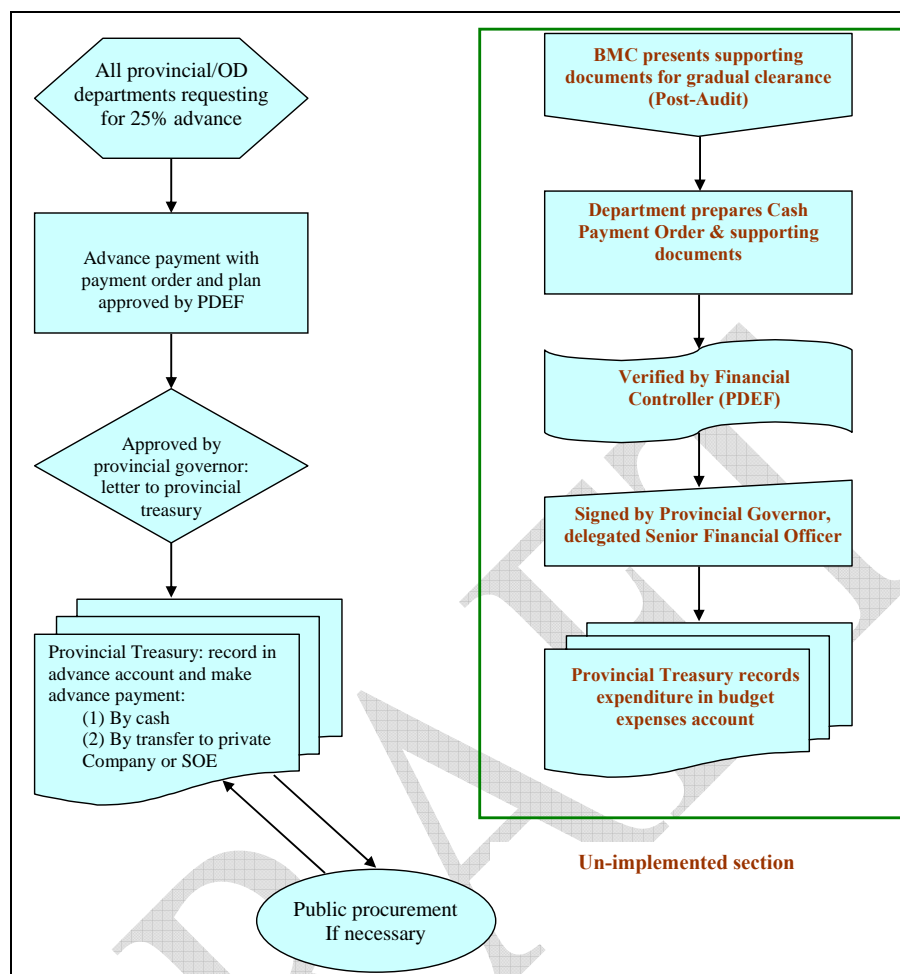
In the MOH, the PAP was first implemented in certain national programs, national hospitals, and selected provinces. From 2002, all national programs, all national hospitals as well as 8 provinces were included. The PAP provinces were Kompong Cham, Kompong Thom, Stung Treng, Sihanouk Ville, Kompong Chhang, Pursat, Siem Reap, and Phnom Penh. Similar to the ADD, the PAP covers non-salary operational expenditures that in the normal budget were in the Chapter 11. The PAP provinces do not have budget for Chapter 11. The Budget Law indicates the aggregate amount for sub-Chapter 13.2 with no breakdown by line items and this gives PHDs some flexibility to respond to needs as they arise.

The PAP followed similar procedures as the ADD system. The evolution from ADD was that PAP was applied at all sub-national levels – province, Operational District or facility, whereas ADD was applied at OD and facility level.

Two levels of Budget Management Centers (BMC) were responsible of PAP accounting. Level 1 (BMC1) was composed of the MOH secretariat and (at the central level) and PHDs (at provincial level). BMC2 is run by the National Programs/National Hospital (at central level) and ODs (at provincial level). The MOEF regulation No 006 (dated March 31, 2000) defined the PAP expenditure procedures from the central to the provincial levels:

- Advance request: At the beginning of the year, 25% of budget is requested as an advance to the Provincial Treasury (PT). Once the request is approved by the MOEF and verified by the Budget Strategy and Enforcement Center (BSEC), PT deposits the amount requested on a deposit account.
- Payment process: ODs and PHDs process expenses without a prior Commitment Visa in the form of cash, transfers and checks from the Provincial Treasury.
- Replenishment of Expenditure: ODs and PHDs submit payment orders with justification documents to the Provincial Department of Economy and Finance (financial controller) who verifies the expenditures and submits the payment order to the Governor to sign. The signed payment order is then sent to the Provincial Treasury (PT) to replenish the deposit account.
- The cycle is repeated until the end of the fiscal year.

According to the PAP procedure, PHDs and ODs must have funds at hand to pay for the expenses needed by health facilities during the whole fiscal year. In practice the PETS revealed several issues. The replenishment of accounts was often done without going through the formal clearance of the earlier expenses. This is due both to the lack of training provided to PHDs and ODs about PAP. As a result for many years advance accounts in provincial treasuries have not been officially cleared. Because of the cash-flow problems in the provincial treasury delaying disbursements - often into the following fiscal year and of poor recording - it is even more difficult to trace for which quarter advances are made. However the fundamental lack of funds in provincial treasuries makes most administrative procedures relatively insignificant. It is probably due to the above issues that by 2006 the MOEF has discontinued PAP in the provincial level and re-introduced Chapter 11 with pre-audit budget management system. Figure 3-7 provides an overview of the design and practice of the PAP at the provincial level.

**Figure 3-7.** Flowchart on managing budget expenditure under PAP**(d) Contracting Operational Districts**

At the time of PETS, eight ODs in Cambodia were piloting a contracting system (in 2006 the number of contracting ODs was eleven). In the contracting ODs, management of operational district level health services (including OD office, referral hospital, health centers and health posts) has been contracted to NGOs. The contractor manages the government budget for non-salary expenditures for these health facilities. The budget is transferred to the contractor under the PAP program; disbursements are managed directly through BNC1 (MOH) and the National Treasury. In-line with the PAP guidelines, the contractors submit financial reports on actual expenditures every three months to the MOH for replenishment.

Although government staff are transferred to contractor management, they continue to receive their government salaries through the usual process (from PHDs and provincial treasury). The MOH through the Health Sector Support Project (HSSP) financed by the World Bank and Asian Development Bank engages the contractors based on agreed performance targets. Under the HSSP contract, the NGOs cover their management costs, conduct capacity building activities as needed and also pay incentives to the health facility staff for achieving specific performance targets. From the PETS perspective the

issues of interest was to compare financial management of the non-salary operational costs by NGO contractors with the government entities and assess the impact of performance based incentives of service delivery.

**(e) Summary of expenditure procedures in post-audit budget management systems**

Petty cash, ADD and PAP are three post-audit systems delegating spending power to frontline facilities. The Table 3-4 summarizes their differences along eight key criteria.

**Table 3-4.** Comparative overview of post-audit budget management procedures

Item	Petty Cash	ADD	PAP
Expenditure principle	Post-audit	Post-Audit	Post-Audit
Eligible Institutions	All institutions	OD	All institutions
Eligible Items	Very limited items	Selected items	All items
Mode of Payment	Cash	Cash	Cash, Check, Transfer
Amount of payment	Very Limited	Limited	Un-limited
Amount of Advance payment (in month)	1.5 months	3 months	3 months
Replenishment	Monthly	Un-specified	Un-specified
Procurement	NS	NS	NCB and NS

NS: national shopping with three quotations; NCB: National Competitive Bidding

### ***3.4 Budget and expenditure management in national programs***

The two national programs studied by PETS have similarities and differences in their sources of financing and financial management. PETS assumes that the other national programs fit somewhere between these two national programs.

**(a) National Centre for HIV/AIDS, Dermatology and Sexually Transmitted Diseases**

NCHADS runs a high-profile well funded HIV/AIDS program. The scale of annual NCHADS budget at the time of PETS (US\$ 8 million) almost equaled the total government resources available to all health centers in the country. NCHADS receives funding from government through the central budget of the MOH and from international donors (DFID, European Union, University of New South Wales, Centers for Disease Control (US), the Global Fund, the French development cooperation, the World Bank and the ADB (JFPR). These funds are included in one annual comprehensive work plan.

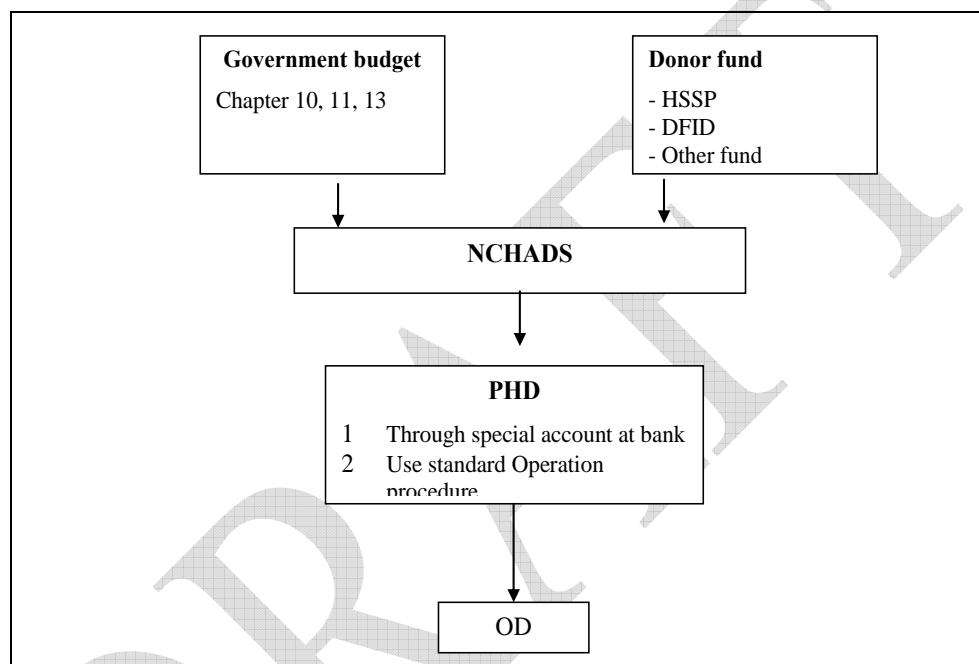
Government financing of NCHADS is included in the MOH central level budget. It finances only a small share (10-12%) of the total NCHADS program (2005 budget 3,272 million Riel) and follows the generic government budget management guidelines. The budget provides for salaries of staff (staff also receives salary supplements from donor funds) and non-salary operational expenditures. For non-salary operational expenditures PAP principles applied.

All donor funds are managed according to Standard Operating Procedures for external financing adopted by the government. This a significant achievement given the different fund management procedures typically required by individual donors. Alignment by donors with the SOP reflects not only alignment with development aid harmonization agenda but also the strong financial management capacity of NCHADS.



Part of the NCHADS funds are transferred to the PHD level and further down to OD levels (see Figure 3-8). In provinces funds are handled by Provincial Project Implementation Units (PPIU) managed by the PHD director, PHD accountant, and PAO (Provincial Administrative Office) manager. PPIUs opened special account in a credible commercial bank. In the case that some province did not have offices of credible banks, they were opened in near-by provinces. Expenditures from these accounts are managed under Standard Operational Procedures and the accounts are audited by independent audit firm. According to the flowchart, the funds are also transferred to OD but the PETS did not find any evidence of transfer of NCHADS fund to the OD level in 2003 and 2004.

**Figure 3-8.** Flowchart of funds management in NCHADS



NCHADS also receives resources in kind that are drugs and medical supplies. In general drugs and medical consumables are procured by the MOH and stored and distributed by the CMS. Drugs and supplies funded by Global Fund are procured by Principal Recipient Office at the MOH, stored in the CMS and distributed by NCHADS.

**(b) National Centre for Maternal and Child Health**

The NCMCH receives its resources from the central MOH budget, different donors, and user fees. The donors agencies are the Japanese government through JICA; The UK government through DFID; the World Bank through the HSSP; as well as the UNFPA; the WHO and UNICEF. User fee revenue is a significant funding source for the Maternal and Child Health referral hospital.

The financial unit of NCMCH received central MOH budget funds from the Administration and Finance Department in the MOH. For Chapter 10 expenditures, it received cash from the MOH. For Chapter 13, it could have received more in cash than for petty cash under Chapter 11 but in reality it received only petty cash and rest of resources provided in kind by the MOH.

NCMCH has not provided cash to PHD to manage at provincial level but it has been providing resources in kind such as posters, gas and refrigerators in order to support the program at provincial level.

Donor funds supported directly specific activities and in general by-passed the government structures. Donor programs provided support mostly in kind. Cash has been provided for per-diems and incentives for the government staff participating in target activities. Accounting and reporting reflected the requirements of individual donors and some programs employed special financial management staff for donor expenditures (paid by donor funds as well). In some cases, the director of a national program was responsible for the administration of donor funds. As a rule, donor finances were audited by independent auditors.

### ***3.5 Checks and Balances in Public Financial Management***

There are many governmental agencies which have a mandate to control and inspect the expenditure of PHD. These agencies are (i) financial controller from Provincial Department of Economy and Finance; (ii) internal auditor from Ministry of Health (iii) Financial inspector from Financial Inspectorate Department in the Ministry of Economy and Finance; (iv) responsible staff from central budget department of the Ministry of Economy and Finance; (v) inspectors from Ministry of Inspection and Relations with the National Assembly; and (vi) National Audit Authority.

- The financial controller is responsible for controlling budget expenditure on daily basis. The financial controller approves every mandate of disbursement. All types of expenditure have to be verified and controlled by financial controller (PDEF).
- Inspectors from the Ministry of Health visits all PHDs annually. The inspection is supposed to review both health output/outcome and financial input.
- A financial inspector from the MOEF verifies the appropriateness of expenditures. The reviews are based on rules and regulation from the MOEF. The inspector reports to the Minister of Economy and Finance.
- Responsible staff from the Budget Department in the Ministry of Economy and Finance: they are working with PDEF. They have mainly a role in budgeting and in quarterly budget reviews with the line agencies in provincial level.
- Inspectors from Ministry of Inspection and National Assembly are involved in ad-hoc inspection. They typically visit PHDs every two years. The inspector reports to the Prime Minister.
- National Audit Authority is a new agency with the role to audit public expenditure and report to National Assembly.

The inspections by different agencies are based on laws and regulations relevant to their mandate and responsibilities. The methods of inspection are not standardized and they are mainly based on their own regulations and practices.

### ***3.6 Management Arrangements for User Fees***

The collection and use of user fee in government health facilities was regulated by inter-ministerial Prakas between the Ministry of Health and the Ministry of Economy and Finance (No. 348 MOEF 5 June 1997). According to this Prakas, user fees were

determined by a 'health facility user fee committee' with membership comprising representatives from local authorities (province, district and commune) communities, representatives from PDEF, representatives from provincial Department of Social Affairs and Labor, and the director of health facility. These committees were also responsible for managing and reporting the expenditure from the user fee revenues. At that time the use of user fees was determined as follows: 50% for promoting quality of health service (non-salary operational expenditures), 49% for staff incentive and 1% to be remitted to national budget. User fee committees had to report quarterly to the MOH and the MOEF about user fee collection and expenditures. In 2005, a new inter-ministerial Prakas between the Ministry of Economy and Finance and the Ministry of Health (No 678 MOEF 11 October 2005) revised the formula for eligible expenditures from user fees as 39% for promoting quality of health service (i.e. non-salary operational expenditures), 60% for staff incentive and 1% remittance to national budget.

### ***3.7 Management Arrangements for Donor Funds***

Many donors have imposed their own systems and standards for management of their funds. Common features are the following: (i) application of administrative and financial procedures that comply with donor procedures, (ii) disbursement through credible commercial banks; (iii) financial transactions and statements are audited by a reputable audit firm. More recently Standard Operating Procedures for implementing donor financed projects were developed by the MOEF in cooperation with the World Bank and the Asian Development Bank. The development banks have agreed to use them as a basis for financial management of their projects and some other developments partners are following suit (e.g. AFD). NCHADS has also implemented Standard Operating Procedures for financial management of the donor support from various agencies.

## **4. Resource Flows in Health Sector**

This section reviews the resources flows in health sector for the years 2003 and 2004 along the following outline: (i) allocation of resources between central and provincial budget, actual aggregate expenditures on central and provincial level; (ii) resource flows from PHD to OD; (iii) resource flows from OD to health facility; and (iv) actual receipt of resources at health facility level. The summary section will discuss consolidated resources flows from centre to frontline.

### ***4.1 Government Health Expenditures: Central Level View***

#### **4.1.1 Government Health Budget**

Table 4-1 reviews the central and provincial budget allocation by chapter for 2003 and 2004 based on data from the MOH and the MOEF. It should be noted that the central budget also includes centrally procured drugs and medical supplies that would be distributed to health facilities in provinces as well as some PAP support to contracting districts. Later in this chapter, an analysis of expenditures at the central and provincial levels including transfers will be discussed.

**Table 4-1.** Central and provincial health budget by chapter in 2003-2004 (million Riel)

Total Health budget	Central budget	Provincial budget
---------------------	----------------	-------------------

	2003	2004	03-04	2003	2004	03-04	2003	2004	03-04
Chapter 10	26,860	31,280	16%	5,280	7,420	41%	21,580	23,860	11%
% of total	13%	14%		4%	5%		31%	30%	
Chapter 11	111,505	127,960	15%	87,415	103,975	19%	24,090	23,985	0%
% of total	55%	56%		66%	67%		34%	30%	
Chapter 12	7,080	7,575	7%	7,080	7,575	7%	0	0	
% of total	4%	3%		5%	5%		0%	0%	
Chapter 13	54,950	59,290	8%	31,950	34,890	9%	23,000	24,400	6%
% of total	27%	26%		24%	23%		33%	31%	
Chapter 31	1,606	1,495	-7%	375	250	-33%	1,230	1,245	1%
% of total	1%	1%		0%	0%		2%	2%	
<b>TOTAL</b>	<b>202,000</b>	<b>227,600</b>	<b>13%</b>	<b>132,100</b>	<b>154,110</b>	<b>17%</b>	<b>69,900</b>	<b>73,490</b>	<b>5%</b>

Source: MOEF and MOH

With an overall increase of 13 percent in 2004 from the 2003 health budget, the central budget increased by 17 percent while the provincial component only increased by 5 percent. The budget increase was mainly due to increments in Chapters 10 and Chapter 13. The 41% of Chapter 10 increase in 2004 compared to 2003 is partly explained by special allowances that were introduced to high level civil servants as determined by the Secretariat of Public Function. Chapter 10 increase at the provincial level was only 11%.

Line item allocation:

- Chapter 10 (staff salaries and bonus) received only 13 percent of the total health budget in 2003 and 14 per cent in 2004 (4% of central budget and 31% of provincial budget). Salary levels for all civil servants in Cambodia are determined by the Secretariat of the Public Function. The very low share of salary compared to other expenses does not recognize that skill level required to deliver most health services and that low levels of remuneration lead to a low level of motivation and ultimately both poor quality and minimal provision of services. However it should be noted that the share of salaries in the budget has been increasing compared to 9.7% in 2001 and 11.9% in 2002.<sup>4</sup>

The highest share of budget was Chapter 11 (operational expenses) that also includes expenses for drugs and medical consumables. Chapter 11 comprised 55% of the budget in 2003 and 56% in 2004. Chapter 13 (programming expenditure) was 27% in 2003 and 26% in 2004.

Table 4-2 provides a summary of provincial health budgets by main budget line item. Any conclusion from the table below? Why Chapter 11 is remerging in 2 PAP provinces in 2004 More analysis coming?

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**Table 4-2.** Provincial budget by chapter in 2003-2004 (million Riel)

Province	2003					2004				
	Total	Staff Exp	%	Non-staff Ex	%	Total	Staff Exp	%	Non-staff Ex	%
<i>Phnom Penh*</i>	3,050	1,276	42%	1,774	58%	3,579	1,579	44%	2,000	56%
Kandal	6,455	2,222	34%	4,233	66%	6,271	1,625	26%	4,646	74%
<i>Kompong Cham*</i>	7,437	2,149	29%	5,288	71%	8,064	2,575	32%	5,489	68%
<i>Battambang</i>	5,878	2,652	45%	3,226	55%	6,004	2,113	35%	3,891	65%
<i>Prey Veng</i>	5,140	1,231	24%	3,909	76%	4,698	1,350	29%	3,348	71%
<i>Siem Reap*</i>	4,024	1,513	38%	2,511	62%	4,140	1,640	40%	2,500	60%
<i>Kompong Thom*</i>	3,290	936	28%	2,354	72%	3,703	1,253	34%	2,450	66%
<i>Takeo</i>	4,172	1,296	31%	2,876	69%	3,852	1,405	36%	2,447	64%
<i>Svay Rieng</i>	2,885	758	26%	2,127	74%	3,040	875	29%	2,165	71%
<i>Pursat*</i>	2,535	925	36%	1,610	64%	2,773	1,022	37%	1,751	63%
<i>Kompong Chhang*</i>	2,614	874	33%	1,740	67%	3,312	1,502	45%	1,800	54%
<i>Kompong Speu</i>	3,428	1,158	34%	2,270	66%	3,692	1,301	35%	2,391	65%
<i>Kampot</i>	3,807	1,286	34%	2,521	66%	4,376	1,246	28%	3,130	72%
<i>Sihanouk Ville*</i>	1,341	543	40%	798	60%	1,509	559	37%	950	63%
<i>Koh Kong</i>	1,144	301	26%	843	74%	1,377	307	22%	1,070	78%
<i>Preah Vihear</i>	1,293	368	28%	925	72%	734	454	62%	280	38%
<i>Kratie</i>	2,265	661	29%	1,604	71%	2,337	717	31%	1,620	69%
<i>Rattanakiri</i>	1,372	401	29%	971	71%	1,080	829	77%	251	23%
<i>Mondulhiri</i>	703	233	33%	470	67%	545	286	52%	259	48%
<i>Bantey Meanchey</i>	3,784	1,112	29%	2,679	71%	4,016	1,104	27%	2,912	73%
<i>Stung Treng*</i>	1,345	420	31%	925	69%	1,862	552	30%	1,300	70%
<i>Kep</i>	492	139	28%	353	72%	642	192	30%	450	70%
<i>Pailin</i>	558	118	21%	440	79%	714	202	28%	502	70%
<i>Odor Meanchey</i>	888	245	28%	643	72%	1,170	397	34%	773	66%
<b>All provinces</b>	<b>69,900</b>	<b>23,110</b>	<b>33%</b>	<b>47,090</b>	<b>67%</b>	<b>73,490</b>	<b>25,105</b>	<b>34%</b>	<b>48,375</b>	<b>66%</b>

Source: MOEF; \* - PAP province; *Italic*: included in PETS

The provincial budget has slightly increased the allocation to staff from 33% of total budget in 2003, to 34 percent in 2004. In 2003, allocation between staff and non-staff operational costs ranged from 79% of non-staff operational cost budget from the total budget in Pailin to Battambang with 55%. In 2004, the range was between 74% in Kandal province and 23% in Rattanakiri (the very low allocation in Rattanakiri was explained by central PAP transfer directly to the OD contractor).

#### 4.1.2 Government Health Expenditure

##### (a) Central health expenditure

**Table 4-3:** Central health expenditures 2003-2004 by chapter and budget execution rate

Items	2003			2004		
	Amount	Share	BE rate	Amount	Share	BE rate
<i>Chapter 10</i>	4,438	4%	84%	5,370	4%	72%
<i>Chapter 11</i>	73,969	66%	85%	88,747	67%	85%
Incl. Drugs	52,940	47%	N/A	55,984	42%	N/A
<i>Chapter 12</i>	4,516	4%	64%	6,302	5%	83%
<i>Chapter 13</i>	28,595	26%	89%	31,950	24%	92%
<i>Chapter 31</i>	45	0%*	12%	72	0%*	29%
<b>TOTAL</b>	<b>111,563</b>	<b>100%</b>	<b>84</b>	<b>132,441</b>	<b>100%</b>	<b>86</b>

Source: MOH; Amounts in million Riel; BE = Budget Execution; \* = Very small share

Central budget expenditure increased by 18.7%, while the budget execution rate increased from 84% to 86% from 2003 to 2004. The highest share of total expenditure was Chapter 11, with 66% in 2003 and 67% in 2004. A large proportion of Chapter 11 was spent on drugs and medical consumables, with most eventually distributed to the frontline health facilities. The highest execution rates for both 2003 and 2004 were for the Chapter 13 that included PAP expenditures for national programs and national hospitals. In 2003, budget implementation was disrupted by the general elections and available cash was allocated by priority. In 2004, a political deadlock affected budget implementation rates in the provinces.

**(b) Provincial health expenditure**

Based on the MOH information adjusted with the PETS data, Table 4-4 summarizes total expenditures and budget execution rates by province in 2003 and 2004, and budget execution rates showing the transfer of PAP funds from the central MOH to contracting ODs in 2004. According to the PETS data collected in the 17 sample provinces, the MOH data under-reported actual expenditures by 0.03% in 2003 and 4% in 2004. For the expenditure figures in non-PETS provinces (marked \*), the PETS extrapolated the MOH data based on the findings in the sample provinces.

**Table 4-4.** Provincial health expenditures (million Riel)

Province	2003				2004			
	Total	Rate	PAP transfer	Net Exp	Total Exp	Rate	PAP transfer	Net Exp
02 Phnom Penh*	2,896	95%	0	2,896	2,844	79%	0	2,844
03 Kandal	5,137	80%	0	5,137	5,715	91%	0	5,715
04 Kompong Cham*	7,033	95%	0	7,033	6,730	83%	844	7,574
05 Battambang	4,770	81%	0	4,770	5,714	95%	0	5,714
06 Prey Veng	4,685	91%	0	4,685	3,871	82%	1,140	5,011
07 Siem Reap*	3,406	85%	0	3,406	3,394	82%	0	3,394
08 Kompong Thom*	3,023	92%	0	3,023	2,847	77%	0	2,847
09 Takeo	3,659	88%	0	3,659	3,299	86%	779	4,078
10 Svay Rieng	2,478	86%	0	2,478	2,387	79%	0	2,387
11 Pursat*	2,440	96%	0	2,440	2,243	81%	0	2,243
12 Kompong Chhnang	2,354	90%	0	2,354	2,293	69%	0	2,293
13 Kompong Speu	2,438	71%	0	2,438	2,389	65%	0	2,389
14 Kampot	3,647	96%	0	3,647	3,564	81%	0	3,564
15 Sihanouk Ville*	1,191	89%	0	1,191	1,122	74%	0	1,122
16 Koh Kong	1,104	96%	0	1,104	1,070	78%	0	1,070
17 Preas Vihea	959	74%	0	959	590	80%	700	1,290
18 Kratie	1,718	76%	0	1,718	1,747	75%	0	1,747
19 Ratanakiri	1,151	84%	0	1,151	854	79%	780	1,634
20 Modulkiri	594	84%	0	594	509	93%	441	950
21 Batey Meanchey	3,724	98%	0	3,724	3,427	85%	0	3,427
22 Stung Treng*	1,262	94%	0	1,262	1,040	56%	0	1,040
23 Kep	406	83%	0	406	427	67%	0	427
24 Pailin	543	97%	0	543	220	31%	0	220
25 Odor Meanchey	825	93%	0	825	1,114	95%	0	1,114
<b>TOTAL</b>	<b>61,444</b>	<b>88%</b>	<b>0</b>	<b>61,444</b>	<b>59,409</b>	<b>81%</b>	<b>4,684</b>	<b>64,093</b>

Source: MOH with adjustment from PETS PHD data.

According to PETS, the total provincial health expenditure decreased by 3.3% from 2003 to 2004. But when taking the MOH transfers to contracting districts into account, the provincial level expenditures increased 4.3% in nominal terms, but the provincial budget execution rate decreased from 88 to 81%.

**(c) Total health expenditures**

As total health expenditure increased by 10.9% from 2003 to 2004 the share of provincial to total health expenditure decreased from 36 to 31 percent (see Table 4-5). This analysis however does not take into account the increased central expenditures on drugs and medical consumables, a large portion of which were transferred to health service providers in the provinces. Later in this chapter an analysis of the consolidated resource flow of in-kind resources from central to provincial will be discussed.

**Table 4-5.** Summary of government health expenditure in 2003-2004 (million Riel)

	2003		2004	
	Amount	%	Amount	%
Central expenditure	111,563	64	132,441	69
Provincial expenditure	61,444	36	59,409	31
<b>TOTAL</b>	<b>173,007</b>	<b>100</b>	<b>191,850</b>	<b>100</b>

Source: MOH, and Health PETS PHD database

**(d) Drugs and medical consumables expenditure and distribution**

Drugs and medical consumables are centrally procured by the MOH and distributed to provinces by the CMS. CMS data was used to calculate the total expenditure by province summarized in Table 4-6 by central and provincial health facilities, further detail by provinces is shown in



Table 4-7.

**Table 4-6.** Expenditure and distribution of drugs and medical consumables (million Riel)

	2003	%	2004	%
Total MOH expenditure on drugs and medical consumables (incl. donors)	52,940	82	55,984**	82
Total Drug and medical consumables distributed	64,348	100	68,081	100
<i>Central hospital</i>	10,076	16	16,591	24
<i>Provincial health institution</i>	54,272	84	51,490	76

Source: CMS 2003-2004.

\*\* - reference?

Both in 2003 and 2004, 18 percent more drugs were distributed than was spent by the government on drugs and medical consumables. This gap includes the drugs and consumables financed by other sources as well as possible distribution from stocks from previous years. Although the value of drugs and consumables distributed at a provincial level from 2003 and 2004 decreased both in absolute value and as a percentage of total drugs and consumables, less drugs and consumables were retained at the PHDO and Operational District Office (ODO) levels, because referral hospitals and health centers received more drugs and supplies in 2004 compared to 2003.

**Table 4-7:** Drug and medical consumable distribution by province

Province	2003		2004	
	Amount (million Riel)	Per Capita (Riel)	Amount (million Riel)	Per Capita (Riel)
<i>Phnom Penh*</i>	2,750	2,731	2,193	2,178
Kandal	5,504	4,739	4,469	3,769
<i>Kompong Cham*</i>	5,961	3,469	5,565	3,186
<i>Battambang</i>	3,714	4,045	3,174	3,346
<i>Prey Veng</i>	3,944	3,754	4,052	3,803
<i>Siem Reap*</i>	3,299	4,325	3,493	4,496
<i>Kompong Thom*</i>	2,749	4,460	2,505	4,009
<i>Takeo</i>	4,561	5,289	4,568	5,179
<i>Svay Rieng</i>	2,814	5,646	2,268	4,283
<i>Pursat*</i>	1,407	3,717	1,975	5,126
Kompong Chhang	1,823	4,174	1,550	3,487
<i>Kompong Speu</i>	2,710	4,009	2,554	3,696
<i>Kampot</i>	2,930	5,181	3,018	5,249
Sihanouk Ville*	683	4,155	801	4,606
Koh Kong	732	5,782	652	4,994
Preah Vihear	919	6,708	925	6,526
<i>Kratie</i>	1,262	4,499	1,282	4,494
<i>Rattanakiri</i>	1,135	9,950	718	5,772
<i>Monduliri</i>	518	12,028	455	9,601
<i>Bantey Meanchey</i>	2,770	4,135	3,176	4,702
<i>Stung Treng*</i>	617	6,687	606	6,525
<i>Kep</i>	267	7,941	147	4,315
Pailin	580	10,599	461	8,424
Odor Meanchey	624	4,576	883	6,116
<b>TOTAL</b>	<b>54,273</b>	<b>4,340</b>	<b>51,490</b>	<b>4,034</b>

Source: CMS data reprocessed by PETS

\* Non-PETS

PETS reprocessed the CMS reports to calculate the distribution of drugs and medical consumables by province to include both central government and donor expenditure. Expenditures on drugs and medical consumable per capita decreased by 7.1% between 2003 and 2004 (see

Table 4-7). Per capita value of drugs distributed varied significantly. The highest expenditure was in Mondulkiri province with 12,028 Riel per capita in 2003 and 9,601 Riel in 2004. Phnom Penh had the lowest drugs expenditure per capita. It should be noted that the drug and consumable supplies for the national hospitals in Phnom Penh came from the central level budget.

#### **4.1.3 Consolidated net government expenditure: central and provincial**

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Table 4-8 consolidates governmental health expenditure allocation between the central level and the provinces, accounting for drugs and medical consumables and funds transferred from the central expenditure to contracting OD.

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**Table 4-8.** Consolidated actual governmental resources allocated to center and provinces (million Riel)

	2003		2004	
	Amount	%	Amount	%
<b>Central expenditure</b>	<b>111,563</b>	<b>64</b>	<b>132,441</b>	<b>69</b>
<i>Drug and medical consumable transferred to provinces (total)</i>	<i>(54,202)</i>	<i>N/A</i>	<i>(51,490)</i>	<i>N/A</i>
Estimated value of government financed drugs in central budget distributed to province*	(39,025)*	(22)*	(31,924)*	(17)*
<i>Central PAP funds transferred to contracting ODs</i>	0	0	(4,684)	(2)
<b>Net central expenditure</b>	<b>72,538</b>	<b>42</b>	<b>95,833</b>	<b>50</b>
<b>Provincial expenditure</b>	<b>61,444</b>	<b>36</b>	<b>59,409</b>	<b>31</b>
Estimated value of government financed drugs in central budget distributed to province*	39,025	22	31,924	17
Funds received from central PAP	0	0	4,684	2
<b>Net Provincial expenditure</b>	<b>100,469</b>	<b>58</b>	<b>96,017</b>	<b>50</b>
<b>TOTAL</b>	<b>173,007</b>	<b>100</b>	<b>191,850</b>	<b>100</b>

Source: MOH, CMS.

Estimated value of drugs and consumables distributed to the provinces

The net central health government expenditure is defined by the total central expenditure minus the value of drugs and medical consumables transferred to provinces and minus the value of PAP funds transferred to contracting ODs. Estimated value of drugs and consumables distributed to the provinces (\* in the

Table 4-8) is based on PETS data indicating that in 2003 (72%) and in 2004 (62%) of the total value of drugs and medical consumables distributed by the CMS was financed by central governmental expenditure. Similarly, the net provincial government expenditure equals the provincial health governmental expenditure plus the value of drugs and medical consumables, expensed by central expenditure, plus the PAP funds from central expenditure for the contracting OD. According to this analysis, the net provincial health governmental expenditure was 100,469 million Riel in 2003, i.e. 58% of the total governmental health expenditure, compared with 96,017 million Riel in 2004, i.e. only 50% of the total governmental health expenditure. The budget increase from 2003 to 2004 did not benefit the provincial level where most health facilities are located and providing health services to the majority of the population. Instead it was allocated to the central level where most resources are spent on administration and policy work.

## 4.2 Government Health Expenditures: Provincial Level View

This section presents data from the PETS survey conducted at the provincial level. It will analyze the total health expenditures as recorded at the provincial level, including the government budget, in-kind resources distributed by the CMS, donor resources and user fees. Public expenditure by source will also be discussed in more detail.

### 4.2.1 Total Health Expenditures at Provincial Level

The total resources measured by PETS at the provincial level include government expenditure, donor expenditure, user fees and the in-kind drugs and medical consumables transferred from the Central Medical Store (CMS) co-financed by central governmental expenditure and external donors. The analysis does not include resources provided by NGOs and international organizations using independent accounting systems and/or working directly with ODs, health facilities and communities.

Table 4-9 presents the consolidated health expenditure in the 17 PETS provinces in 2003. The total income at the Provincial level was 104,022 million Riel. 47 percent of the total was from government budget expenditure at the provincial level. Drugs and medical consumables distributed in kind accounted for 42 percent (estimated 29% of total financed from governmental central budget and 13% by donors). User fees in government health facilities accounted for 6% of total expenditures at provincial level.

**Table 4-9.** Consolidated health expenditures in PETS provinces in 2003 (million Riel)

Province Name	Gov Exp	%	Gov In- kind	%	Donor- In-kind	%	Donor	%	User fee	%	Total	Per Capita (in Riel)
Kampong Cham	7,033	49	4,390	30	1,734	12	729	5	591	4	14,477	8,425
Kampong Speu	2,438	43	1,796	32	1,088	19	96	2	247	4	5,665	8,380
Kampong Thom	3,022	47	2,077	32	768	12	283	4	254	4	6,404	10,238
Kampot	3,647	54	1,943	29	828	12	109	2	209	3	6,736	11,912
Kep Ville	406	59	204	29	69	10	15	2	-	0	694	20,631
Kratie	1,718	52	1,041	31	310	09	77	2	167	5	3,313	11,809
Takeo	3,659	39	2,741	29	1,851	20	68	1	1,129	12	9,448	10,957
Battambang	4,770	50	2,806	30	1,126	12	244	3	521	5	9,467	10,311
Banteay Meanchey	3,724	46	1,956	24	740	09	953	12	705	9	8,079	12,058

*Resources Flow in the Health Sector*

Prey Veng	4,685	50	2,613	28	981	10	670	7	426	5	9,375	8,922
Pursat	2,440	55	896	20	535	12	263	6	319	7	4,453	11,762
Phnom Penh City	2,896	43	2,084	31	822	12	20	0	877	13	6,698	6,652
Mundulkiri	594	51	315	27	207	18	40	3	-	0	1,157	26,868
Rattanakiri	1,151	52	774	35	233	10	37	2	33	1	2,228	19,534
Steung Treng	1,261	58	503	23	267	12	65	3	68	3	2,165	22,105
Siem Reap	3,406	44	2,365	31	1,112	14	27	0	757	10	7,666	10,050
Svay Rieng	2,478	41	1,743	29	1,134	19	269	4	373	6	5,998	12,035
<b>TOTAL</b>	<b>49,327</b>	<b>47</b>	<b>30,247</b>	<b>29</b>	<b>13,807</b>	<b>13</b>	<b>3,965</b>	<b>4</b>	<b>6,676</b>	<b>6</b>	<b>104,022</b>	<b>10,090</b>

In 2004, the expenditure from the government budget accounted for 45% of the total at provincial levels. In-kind distribution of drugs and medical consumables accounted for 40% (23% from central government and 17% donor funded). Donor share of expenditure increased from 3 percent of total in 2003 to 7 percent in 2004. User fee revenue increased from 6 percent of total income in 2003 to 8% in 2004. The highest rates of user fee revenue were in Phnom Penh and Takeo. The central budget financed drugs and medical consumables accounted for 29 percent of the provincial expenditure and donor financed drugs and consumables for 13 percent.

**Table 4-10.** Consolidated health expenditures in PETS provinces in 2004 (million Riel)

Province	Gov Exp	%	Gov In- kind	%	Donor- In- kind	%	Donor	%	User fee	%	Total	Income Per Capita*
Kampong Cham	6,730	46	3,309	23	2,441	17	1,232	8	832	6	14,543	8,326
Kampong Speu	2,389	42	1,250	22	1,359	24	418	7	334	6	5,749	8,321
Kampong Thom	2,847	46	1,538	25	1,023	17	428	7	330	5	6,166	9,782
Kampot	3,564	51	1,526	22	1,348	19	373	5	209	3	7,020	12,209
Kep Ville	427	64	78	12	64	10	101	15	-	0	671	19,696
Kratie	1,747	51	726	21	518	15	246	7	187	5	3,424	12,003
Takeo	3,300	33	2,674	27	2,240	22	217	2	1,656	16	10,087	11,438
Battambang	5,714	57	1,838	18	1,309	13	707	7	523	5	10,092	10,637
Banteay Meanchey	3,427	41	1,841	22	1,029	12	1,349	16	719	9	8,365	12,384
Prey Veng	3,871	42	2,385	26	1,440	15	682	7	921	10	9,298	8,726
Pursat	2,243	43	1,036	20	970	18	643	12	373	7	5,266	13,684
Phnom Penh City	2,844	46	1,467	24	653	11	174	3	1,054	17	6,192	6,150
Monduliri	509	52	189	19	183	19	106	11	-	0	987	30,125
Rattanakiri	855	53	417	26	182	11	97	6	69	4	1,620	19,290
Stung Treng	1,040	52	394	20	322	16	174	9	88	4	2,018	21,727
Siem Reap	3,394	42	2,226	28	1,299	16	283	4	866	11	8,067	10,383
Svay Rieng	2,387	42	1,261	22	1,170	20	425	7	486	8	5,729	10,819
<b>TOTAL</b>	<b>47,287</b>	<b>45</b>	<b>24,153</b>	<b>23</b>	<b>17,550</b>	<b>17</b>	<b>7,656</b>	<b>7</b>	<b>8,648</b>	<b>8</b>	<b>105,294</b>	<b>10,090</b>

It is interesting to note that the average per capita total health expenditure was 10,090 Riel both in 2003 and 2004. In 2004 the share of donor expenditure on drugs and the share of user fees increased, while the corresponding share of government expenditure decreased. Monduliri, Stung Treng, Kep and Rattanakiri provinces had the highest expenditures per capita. Kep and Monduliri had high per capita expenditures without user fee income. They had refrained from introduction of user fees in fear of reducing access to care.

## 4.2.2 Provincial Health Budget and Expenditure

### (a) Execution of Provincial Health Budgets



Table

4-11

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Table 4-12 provide information about provincial health budget, expenditures and budget execution rate in 2003 by chapter and total expenditure.

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**Table 4-11:** Budget and expenditure by provinces by chapter in 2003

	Chapter 10			Chapter 11			Chapter 13			Chapter 31			All Chapters		
	Bud	Exp	ER	Bud	Exp	ER	Bud	Exp	ER	Bud	Exp	ER	Bud	Exp	ER
Kampong Cham	2,073	1,729	83	0	0		5,288	5,285	100	76	19	24	7,437	7,033	95
Kampong Speu	1,081	792	73	1,876	1,233	66	394	394	100	77	19	25	3,428	2,438	71
Kampong Thom	862	784	91	0	0		2,354	2,217	94	74	22	30	3,290	3,022	92
Kampot	1,226	1,186	97	1,933	1,866	97	588	588	100	60	7	12	3,807	3,647	96
Kep Ville	114	88	77	263	234	89	90	84	93	25	-	0	492	406	82
Kratie	607	473	78	1,433	1,051	73	171	171	100	54	23	42	2,265	1,718	76
Takeo	1,205	1,033	86	2,055	1,728	84	821	821	100	91	77	85	4,172	3,659	88
Battambang	2,600	1,791	69	2,749	2,475	90	477	477	100	52	27	51	5,878	4,770	81
Banteay Meanchey	1,070	1,046	98	2,227	2,209	99	452	452	100	35	17	48	3,784	3,724	98
Prey Veng	1,186	1,170	99	3,175	2,760	87	734	734	100	45	21	47	5,140	4,685	91
Pursat	900	828	92	0	0		1,610	1,610	100	25	3	11	2,535	2,440	96
Phnom Penh City	1,210	1,111	92	0	0		1,774	1,774	100	66	10	15	3,050	2,896	95
Monduliri	208	209	101	390	305	78	80	80	100	25	-	0	703	594	85
Rattanakiri	351	340	97	809	605	75	162	156	96	50	50	100	1,372	1,151	84
Stung Treng	384	328	85	0	0		925	925	100	36	9	24	1,345	1,261	94
Siem Reap	1,430	879	61	0	0		2,511	2,511	100	83	16	19	4,024	3,406	85
Svay Rieng	692	631	91	1,567	1,268	81	560	560	100	66	19	28	2,885	2,478	86
<b>17 PHD</b>	<b>17,199</b>	<b>14,417</b>	<b>84</b>	<b>18,477</b>	<b>15,735</b>	<b>85</b>	<b>18,991</b>	<b>18,838</b>	<b>99</b>	<b>940</b>	<b>337</b>	<b>36</b>	<b>55,607</b>	<b>49,327</b>	<b>89</b>
PAP	6,859	5,659	83	0	0		14,462	14,321	99	360	78	22	21,681	20,058	93
Non-PAP	10,340	8,758	85	18,477	15,735	85	4,529	4,517	100	580	260	45	33,926	29,270	86

Note: ER = Budget execution rate; Bud = Budget amount; Exp = Expenditure amount

In 2003, the total provincial expenditure in 17 PHDs sampled by PETS was 49,327 million Riel, in which Chapter 10 was 14,417 million Riel; Chapter 11 was 18,838 million Riel; and Chapter 31 (social subsidies) 337 million Riel. The overall budget execution rate was 89 percent. The highest budget execution rate was for Chapter 13, with 98 percent of the budget spent comparing to 84 percent for Chapter 10 and 85 percent for Chapter 11. The lowest rate of budget execution was Chapter 31, with only 36 percent. The budget execution rate of the PAP provinces was 93 percent comparing to 86 percent for non-PAP provinces. The highest rate of budget execution in Chapter 13.1 was 100 percent in an ADD province, which demonstrates the success of the advanced disbursement procedures.

**Table 4-12: Budget and expenditure by provinces by chapter in 2004**

	Chapter 10			Chapter 11			Chapter 13			Chapter 31			All Chapters		
	Bud	Exp	Rate	Bud	Exp	ER	Bud	Exp	ER	Bud	Exp	ER	Bud	Exp	ER
Kampong Cham	2,499	1,924	77	200	0	0	5,544	4,794	86	76	11	15	8,319	6,730	81
Kampong Speu	1,217	793	65	1,809	1,201	66	582	394	68	84	1	2	3,692	2,389	65
Kampong Thom	1,022	731	71	0	0	0	2,414	2,092	87	94	24	25	3,531	2,847	81
Kampot	1,277	1,195	94	2,162	1,774	82	668	588	88	60	8	13	4,167	3,564	86
Kep Ville	145	78	54	362	269	74	90	80	89	20	-	0	617	427	69
Kratie	668	487	73	1,175	960	82	308	267	87	54	32	59	2,205	1,747	79
Takeo	1,314	1,161	88	1,649	1,320	80	821	753	92	91	66	73	3,875	3,300	85
Battambang	2,055	1,896	92	3,615	3,309	92	477	477	100	52	31	61	6,199	5,714	92
Banteay Meanchey	1,169	1,075	92	2,213	1,855	84	562	488	87	34	9	26	3,979	3,427	86
Prey Veng	1,315	1,172	89	2,337	1,949	83	838	734	88	45	16	35	4,534	3,871	85
Pursat	843	765	91	0	0	0	1,701	1,476	87	25	3	12	2,569	2,243	87
Phnom Penh City	1,505	1,186	79	0	0	0	1,899	1,648	87	67	9	14	3,471	2,844	82
Mondulakiri	274	193	70	410	316	77	80	0	0	25	-	0	789	509	65
Rattanakiri	728	447	61	469	358	76	162	0	0	50	50	99	1,409	855	61
Stung Treng	572	338	59	170	0	0	925	694	75	36	9	25	1,703	1,040	61
Siem Reap	1,568	872	56	0	0	0	2,511	2,511	100	83	11	13	4,162	3,394	82
Svay Rieng	795	659	83	1,517	1,276	84	560	420	75	64	33	52	2,936	2,387	81
<b>17 PHD</b>	<b>18,966</b>	<b>14,972</b>	<b>79</b>	<b>18,088</b>	<b>14,587</b>	<b>81</b>	<b>20,142</b>	<b>17,416</b>	<b>86</b>	<b>960</b>	<b>313</b>	<b>33</b>	<b>58,157</b>	<b>47,287</b>	<b>81</b>
PAP	8,010	5,816	73	370	0	0	14,994	13,215	88	381	67	18	23,755	19,098	80
Non-PAP	10,957	9,156	84	17,718	14,587	82	5,148	4,201	82	579	246	42	34,402	28,189	82

In 2004, the overall budget expenditures of 47,287 million Riel were lower than in 2003. The budget execution rate was only 81 percent in the sampled provinces. The PAP performance was also reversed: PAP was implemented at a lower rate than non-PAP province (PAP = 80%, Non PAP = 82%). The budget Chapter 10 execution rate in 2004 was only 79 percent comparing 84% in 2003. The lowest rates of execution were in Stung Treng, 61%, Rattanakiri, 61% and Mondulakiri 65%.<sup>9</sup>

In terms of provincial health budget and expenditure per capita, Pursat had the largest expenditure per capita in both 2003 and 2004. Mondulakiri and Rattanakiri were the two remote provinces which may have a larger expenditure capita due to smaller population densities. Kampong Thom and Pursat are rural areas which may suggest expenditure is affected by additional factors.

#### (b) Provincial Health Expenditures and Poverty

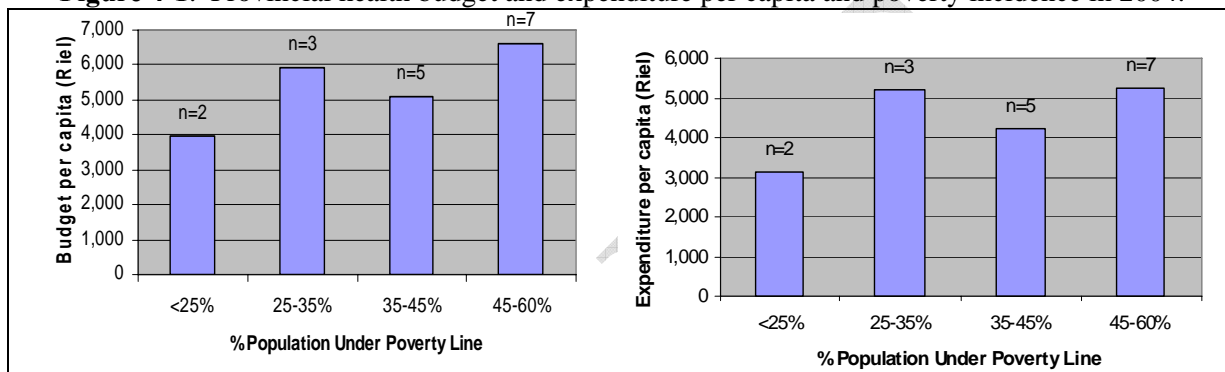
Is the provincial health budget and actual health expenditure pro-poor? Based on the share of population living below the poverty line in 2004 in each province based on the 2004 CSES,<sup>3</sup> the 17 PETS provinces were divided into four groups from lowest to highest percentage of the population living under the poverty line. Average per capita health budget and expenditure amounts per group was calculated by weighting the average of per-capita values by province population. One should note that due to small

<sup>9</sup> Stung Treng reports expenditure by calendar year rather than fiscal year and therefore records may not have captured the full amount. Accounting capacity was weak as well in Stung Treng. PETS found that in Mondulakiri and Rattanakiri there apparently was double accounting for PAP budget in 2004 at central and provincial level but only central PAP budget was spend for direct transfers to OD level.

sample size, poverty data for the smaller provinces – Mondulkiri, Rattanakiri, Kep, Pursat, Kratie and Stung Treng – did not reach statistical significance at the provincial level, which lessens the strength of poverty-related findings.

Average budget per capita and average expenditure per capita increased with increasing poverty levels suggesting that provincial budget allocation and spending might be pro-poor (see Figure 4-1). However, higher budget and expenditures in poorer provinces do not necessarily indicate whether the poor are accessing services at the health facility level and further research is recommended to assess access and poverty.

**Figure 4-1.** Provincial health budget and expenditure per capita and poverty incidence in 2004.



### (c) Allocation of Provincial Health Expenditures

PETS compared the budget and expenditure allocation between personnel costs and other operational expenditures within the provincial health budgets. For the analysis, Chapter 10 (staff salaries and allowances) were combined with Chapter 31 (social subsidies to staff) to estimate expenditures personnel. Similarly, Chapter 11 (non-salary operational expenses) and Chapter 13 (programming expenditure) were combined to estimate non-salary operational expenditures. The provinces allocated a similar share of their total budget to Chapters 10/31 and 11/13. On average, in 2003 Chapters 11/13 (non-salary operational and programming expenses) accounted for more than twice the allocation the personnel expenses (Chapters 10/31), 68% and 32% respectively. In 2004, the difference in budget shares narrowed slightly to 65% and 35% respectively. The share proportions are similar within non-PAP and PAP PHDs, with non-PAP provinces allocating slightly smaller shares of the total budget to staff salaries, allowances and social subsidies than PAP provinces.

The actual expenditures follow the budget allocation pattern. On average, non-salary operational and programming expenses (Chapter 11/13) accounted for 70% in 2003 and 68% in 2004 (see

Table 4-13). The share of actual expenditures on staff was slightly less than budgeted and expenditure share on non-salary operational costs slightly more than budgeted in both years.

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**Table 4-13.** Allocation of provincial health expenditures (million Riel and percentage of total)

Province	2003					2004				
	Ch 10/31		Ch 11/13		Total	Ch 10/31s		Ch 11/13		Total
Kampong Cham	1,748	25%	5,285	75%	7,033	1,935	29%	4,794	71%	6,730
Kampong Speu	811	33%	1,627	67%	2,438	795	33%	1,594	67%	2,389
Kampong Thom	805	27%	2,217	73%	3,022	755	27%	2,092	73%	2,847
Kampot	1,193	33%	2,454	67%	3,647	1,202	34%	2,362	66%	3,564
Kep Ville	88	22%	318	78%	406	78	18%	349	82%	427
Kratie	496	29%	1,222	71%	1,718	519	30%	1,228	70%	1,747
Takeo	1,110	30%	2,549	70%	3,659	1,227	37%	2,073	63%	3,300
Battambang	1,818	38%	2,952	62%	4,770	1,928	34%	3,786	66%	5,714
Banteay Meanchey	1,062	29%	2,661	71%	3,724	1,084	32%	2,343	68%	3,427
Prey Veng	1,191	25%	3,494	75%	4,685	1,188	31%	2,683	69%	3,871
Pursat	830	34%	1,610	66%	2,440	768	34%	1,476	66%	2,243
Phnom Penh City	1,122	39%	1,774	61%	2,896	1,195	42%	1,648	58%	2,844
Mondulhiri	209	35%	385	65%	594	193	38%	316	62%	509
Rattanakiri	390	34%	761	66%	1,151	497	58%	358	42%	855
Steung Treng	336	27%	925	73%	1,261	346	33%	694	67%	1,040
Siem Reap	895	26%	2,511	74%	3,406	883	26%	2,511	74%	3,394
Svay Rieng	650	26%	1,828	74%	2,478	692	29%	1,696	71%	2,387
<b>17 PHD</b>	<b>14,754</b>	<b>30%</b>	<b>34,573</b>	<b>70%</b>	<b>49,327</b>	<b>15,285</b>	<b>32%</b>	<b>32,002</b>	<b>68%</b>	<b>47,287</b>
<i>PAP</i>	5,736	29%	14,321	71%	20,058	5,883	31%	13,215	69%	19,098
<i>Non-PAP</i>	9,018	31%	20,252	69%	29,270	9,402	33%	18,788	67%	28,189

Source: PETS provincial level database

Provincial budget allocation and spending is dominated by non-salary operational and program expenditure. In-kind drug and medical consumables are not included in this comparison. If included, the staff cost ratio would be even lower. Based on international experience, the staff cost ratio to non-salary operational cost ratio should be the opposite of Cambodia's practice today. Although some of the non-salary operational expenditures are used for per diems, transport or accommodation allowances and are being used to supplement the staff salaries, this practice distorts incentives for health services staff to be away from service delivery function. Although there may be options for improving efficiency of non-salary operational expenditures and reallocate the savings to improved funding of staff costs, the main focus for the policy makers should be seeking ways how to improve the incentive packages for health service delivery staff through mobilizing additional resources. If successful, this would also reverse the ratio of staff costs over the non-salary operational expenditures.

#### (d) Managing non-salary operational expenditures

As discussed in Chapter 3, public expenditures are subjected to either pre- or post-audit expenditure management arrangements. This section reviews how funds the provincial health expenditures were managed under different arrangements: petty cash, public procurement, and direct payment to state owned enterprises providing mostly utility services. This is important for assessing the risk of potential leakages.

**Table 4-14.** Mode of expenditure of non-salaries operational expenses (million Riel)

PHD	2003							2004						
	All	Cash	%	PP	%	SOE	%	All	Cash	%	PP	%	SOE	%
Kampong Cham	5,285	3,035	57	1,924	36	326	06	4,794	2,901	61	1,551	32	343	07
Kampong Speu	1,627	625	38	897	55	105	06	1,594	636	40	807	51	151	09
Kampong Thom	2,217	754	34	1,302	59	161	07	2,092	752	36	1,154	55	186	09
Kampot	2,454	1,066	43	1,149	47	239	10	2,362	878	37	1,241	53	243	10
Kep Ville	318	143	45	169	53	6	02	349	157	45	189	54	3	01
Kratie	1,222	450	37	615	50	157	13	1,228	463	38	636	52	128	10
Takeo	2,549	1,329	52	1,043	41	177	07	2,073	1,185	57	787	38	101	05
Battambang	2,952	1,126	38	1,468	50	359	12	3,786	1,345	36	2,091	55	350	09
Banteay Meanchey	2,661	1,783	67	656	25	222	08	2,343	1,403	60	568	24	372	16
Prey Veng	3,494	1,051	30	2,291	66	152	04	2,683	1,185	44	1,364	51	135	05
Pursat	1,610	1,359	84	123	08	128	08	1,476	1,160	79	168	11	147	10
Phnom Penh City	1,774	1,161	65	205	12	409	23	1,648	503	31	695	42	450	27
Mundulkiri	385	206	53	179	47	-	00	316	72	23	244	77	-	00
Rattanakiri	761	309	41	452	59	-	00	358	125	35	233	65	-	00
Steung Treng	925	447	48	478	52	-	00	694	694	1.00	-	00	-	00
Siem Reap	2,511	1,152	46	1,117	44	242	10	2,511	1,127	45	1,121	45	264	10
Svay Rieng	1,828	761	42	897	49	170	09	1,696	739	44	757	45	200	12
<b>17 PHD</b>	<b>34,573</b>	<b>16,758</b>	<b>49</b>	<b>14,962</b>	<b>43</b>	<b>2,853</b>	<b>08</b>	<b>32,002</b>	<b>15,323</b>	<b>48</b>	<b>13,607</b>	<b>43</b>	<b>3,073</b>	<b>9</b>
PAP	14,321	7,908	55	5,148	36	1,265	09	13,215	7,136	54	4,689	35	1,390	11
Non-PAP	20,251	8,850	44	9,814	48	1,588	08	18,788	8,186	44	8,918	47	1,683	09

Source: PETS provincial level database

In the 17 PHDs sampled, 49% and 48% non-salary expenses were in cash in 2003 and 2004 respectively (not including direct cash transfers from the MOH to the contracting districts). In PAP provinces cash expenditure accounted for 55% compared to 44% in non PAP provinces in both 2003 and 2004 (see



Table 4-14). In non-PAP provinces that had ADD districts, 100% expenditures were in cash directly to these ADD ODs that contributed to the increased share of cash spent on non-salaries operational expenses as aggregated at the provincial level. PAP provinces managed 36 percent non-salary operational expenditures through public procurement compared 48 percent by non-PAP provinces in 2003. As will be discussed in the Chapter 5, public procurement procedures can lead to delays and can yield higher prices for goods and services than in retail.

**(e) Timing of provincial budget disbursement to PHD in 2003-2004**

There were problems with disbursement in the beginning of the year: In 2003, 15 of the 17 provinces reviewed by PETS did not cash in the first month 2003; in 2004, they were only 5 provinces in that situation. There is more variability in the shares of total PHD cash in-flows in 2003 versus 2004 in all chapters. Disbursements under Chapter 10 (staff salaries and allowances) were relatively consistent between 2003 and 2004. The difference in variability is highest in Chapter 31 (social subsidies) where a large percentage of the total cash in-flow occurred in the last quarter in 2003. The opposite trend occurs in 2004, where the largest percent of total in-flows occurred in the first quarter. Variability is the lowest in Chapter 11 (non-salary operational expenses) in 2004. See

Table 4-15.

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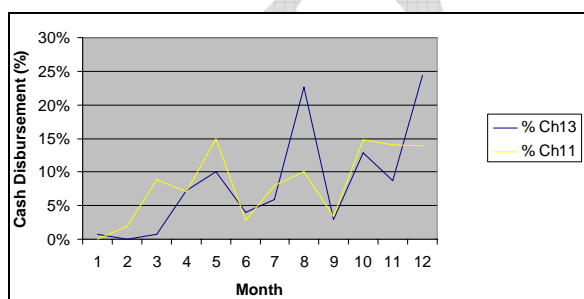
**Table 4-15.** Budget Cash Disbursement from provincial treasury to PHD (% of annual total).

Year	Chapter	Q1	Q2	Q3	Q4	SD	Total (million Riel)
2003	10	14.2%	23.9%	26.8%	35.1%	8.6%	12,268
	11	10.9%	24.9%	21.5%	42.7%	13.2%	2,553
	13	1.5%	21.3%	31.4%	45.9%	18.7%	4,296
	31	2.9%	3.8%	9.1%	84.1%	39.5%	169
2004	10	22.7%	20.6%	23.5%	33.2%	5.6%	13,796
	11	21.6%	23.8%	30.0%	24.7%	3.6%	3,758
	13	50.4%	19.5%	18.2%	12.0%	17.2%	14,511
	31	40.0%	27.3%	15.5%	17.2%	11.3%	644

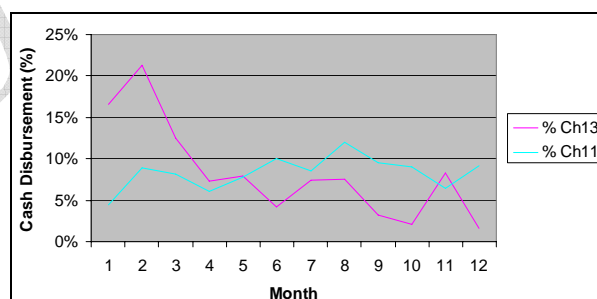
Note: Data presented is for the fiscal years. Records did not capture 2002 expenditure disbursed in 2003. The majority of 2003 cash disbursement for Chapters 13 and 31 lagged into 2004.

The average flows of provincial cash disbursement in Chapter 11 (non-salary operational expenses) and in Chapter 13 (programming expenditure) were inconsistent between 2003 and 2004. This indicates the average PHD can not rely on similar levels of cash being available at the same month the following year. Without user fees as a source of revenue for running costs, the unpredictable cash flow may delay spending on lower levels in the case subsequent cash disbursements are delayed. The Chapter 13 cash flow shows an a high peak in the first quarter of 2004 that may be explained by final disbursements from 2003 budget and/or reflects the first advance payment on PAP and/or both. Chapter 11 cash flow was more consistent and lacks an obvious higher disbursement pattern in the last quarter. See Figure 4-2 and Figure 4-3.

**Figure 4-2** Chapter 11 & 13 cash inflows to PHD in 2003



**Figure 4-3** Chapter 11 & 13 cash inflows to PHD in 2004



#### (f) Budget and Expenditure allocation between PHD Office and OD

PHD office comprises provincial level health care administration. The ODs comprise operational district level health administration, referral hospitals and health centers. As no budgets exist below provincial level, comparison of health expenditure against approved budget was not possible. Therefore the analysis focuses only on actual expenditures.

**Table 4-16.** Resource flows: PHD to OD (actual expenditure)

	2003			2004		
	All	PAP	Non- PAP	All	PAP	Non PAP
Total expenditure of PHD (million Riel)	49,328	20,058	29,270	47,287	19,098	28,189
Share of PHD total	100%	100%	100%	100%	100%	100%
Total expenditure of PHD Office	12,134	4,114	8,020	11,012	3,625	7,387
Share of PHD total	25%	21%	27%	23%	19%	26%
Total expenditure of OD	37,194	15,944	21,250	36,276	15,473	20,803
Share of PHD total	75%	79%	73%	77%	81%	74%
Average (million Riel)	630	693	590	615	673	578
Average PAP OD	732	732	-	721	721	-
Average contracting I OD	238	77	291	135	106	145
Average contracting II OD	640	485	692	424	209	502
Average ADD OD	679	-	679	700	-	700
Average Non-ADD OD	383	-	383	395	-	395

Source: PETS (PHD database)

In 2003, 25% of provincial public health expenditure was spent on health care administration at the provincial level. In 2004, the proportion declined somewhat to 23% but still accounted for significant share. Provincial health administration is not directly involved in service delivery. See

Table 4-16.

In 2003, 87% of staff expenditures and 70% of non-salary expenditures were allocated to ODs. The pattern was similar in 2004. Average staff expenditures per OD were 218 million Riel in 2003, increasing to 228 million in 2004. Non staff operational expenses decreased from 412 million in 2003 to 387 million in 2004. See Table 4-17. At OD level, as total average expenditure has decreased, more expenditure was allocated to staff expenditures. But these data do not include central PAP transfers in 2004 to contracting ODs that financed non-staff operational expenditures. If these are accounted for, the share of staff expenditures at OD level fell from 38% to 36% (see Table 4-24 page 63).

**Table 4-17.** Expenditure flows by type in 2003 and 2004

	2003			2004		
	All	Staff	Operational Expense	All	Staff	Operational Expense
Sum of total expenditure of PHD	49,327	14,754	34,573	47,287	15,285	32,002
<i>Share of PHD total</i>	100%	100%	100%	100%	100%	100%
Sum of total expenditure of PHD Office	12,135	1,873	10,262	11,012	1,847	9,165
<i>Share of PHD total</i>	25%	13%	30%	23%	12%	29%
Sum of total expenditure of OD	37,193	12,882	24,311	36,275	13,438	22,837
<i>Share of PHD total</i>	75%	87%	70%	77%	88%	71%
Average expenditure per OD	630	218	412	615	228	387

Source: PETS provincial level database.

### 4.2.3 Drugs and medical consumables

The Central Medical Store (CMS) distributed large amount of drugs and medical consumables (co-financed by government central budget and donors) directly to ODs with distribution records copied to PHDs. PETS found that PHD kept good records of the drugs and medical consumables they re-distributed to ODs. PHD also purchased some drugs and medical consumables locally and distributed them to ODs. Table 4-18 shows the value of drugs distributed in 2003 and 2004 based on records from PHDs in 17 provinces and cross-checked with the the CMS records.

**Table 4-18:** Drugs and medical consumables by province and donor in 2003-04 (million Riel)

Province	2003					2004				
	Gov Exp		Donor		Total	Gov Exp		Donor		Total
	Amount	%	Amount	%	Amount	Amount	%	Amount	%	Amount
Kampong Cham	4,390	72	1,734	28	6,124	3,309	58	2,441	42	5,750
Kampong Speu	1,796	62	1,088	38	2,884	1,250	48	1,359	52	2,609
Kampong Thom	2,077	73	768	27	2,845	1,538	60	1,023	40	2,561
Kampot	1,943	70	828	30	2,771	1,526	53	1,348	47	2,874
Kep Ville	204	75	69	25	273	78	55	64	45	143
Kratie	1,041	77	310	23	1,351	726	58	518	42	1,244
Takeo	2,741	60	1,851	40	4,592	2,674	54	2,240	46	4,914
Battambang	2,806	71	1,126	29	3,932	1,838	58	1,309	42	3,147
Banteay Meanchey	1,956	73	740	27	2,697	1,841	64	1,029	36	2,870
Prey Veng	2,613	73	981	27	3,594	2,385	62	1,440	38	3,824

Pursat	896	63	535	37	1,431	1,036	52	970	48	2,006
Phnom Penh City	2,084	72	822	28	2,906	1,467	69	653	31	2,120
Mundulkiri	315	60	207	40	523	189	51	183	49	372
Rattanakiri	774	77	233	23	1,007	417	70	182	30	599
Steung Treng	503	65	267	35	770	394	55	322	45	715
Siem Reap	2,365	68	1,112	32	3,477	2,226	63	1,299	37	3,525
Svay Rieng	1,743	61	1,134	39	2,877	1,261	52	1,170	48	2,431
<b>TOTAL</b>	<b>30,247</b>	<b>69</b>	<b>13,807</b>	<b>31</b>	<b>44,054</b>	<b>24,153</b>	<b>58</b>	<b>17,550</b>	<b>42</b>	<b>41,703</b>

The total value of drugs and medical consumables distributed to ODs and PHD Offices decreased by 5.3% from 2003 to 2004. According to the distribution records, 69 percent of drugs received from the CMS were from government expenditure and 31 percent were donor funded in 2003. In 2004, the share from government decreased to 58 percent and donor contribution increased to 42 percent.

Table 4-19 describes allocation of drugs and medical consumables between PHD offices and ODs. PHD offices do not provide health service to the population but their technical offices conduct immunization campaigns and work with national programs that require drugs and medical consumables; e.g. drug and medical consumables for the HIV program are managed at the provincial level.

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**Table 4-19.** Drugs and medical consumables distribution between PHD office and OD (million Riel)

	2003			2004		
	All	PAP	Non PAP	All	PAP	Non PAP
Total Province						
Sum (17 PHD)	44,054	17,552	26,502	41,703	16,677	25,026
Share (%)	100	100	100	100	100	100
Average (17 PHD)	2,591	2,925	2,409	2,453	2780	2,275
PHD Office						
Sum (13)	7,185	3,260	3,925	6,844	3,036	3,808
Share (%)	16	19	15	16	18	15
Average	553	652	491	526	607	476
Operational District						
Sum (59)	36,870	14,292	22,577	34,859	13,641	21,218
Share to PHD (%)	84	81	85	84	82	85
Average per OD	625	621	627	591	593	589

Source: PETS provincial level database.

In 2003 and 2004, 84 percent of drugs and medical consumables received by provinces were distributed to ODs. There was no significant difference between PAP and non-PAP ODs, as the PAP program was about management of government cash expenditures but drugs were distributed in-kind regardless of PAP status. The PETS also revealed that most of the donor supported drugs contributed to the national programs managed at the provincial level and government purchased drugs and supplies dominated at the serviced delivery level in ODs. Donors' role in funding drug supplies increased significantly from 2003 and 2004. See Table 4-20.

**Table 4-20.** Drugs and medical consumable distribution by OD and by source in 2003-04

	2003			2004		
	All	Gov	Donors	All	Gov	Donors
Provincial Health Department						
Sum (17PHD)	44,054	30,247	13,807	41,703	24,153	17,550
Share (%)	100	100	100	100	100	100
PHD Office						
Sum (13)	7,185	3,376	3,809	6,844	1,613	5,231
Share (%)	16	11	28	16	7	30
Average	553	260	293	526	124	402
Operational District						
Sum (59)	36,870	26,871	9,998	34,859	22,541	12,318
Share to PHD	84	89	72	84	93	70
Average per OD	625	455	169	591	382	209



#### 4.2.4 Provincial Expenditure of Donor Budget

PETS also compared the execution rates of government and donor expenditures at provincial level See Table 4-21. As there were not records about donor expenditures below provincial level, more detailed analysis was not possible. In both years covered by PETS, the government budget execution rate was higher than that of donor budget (87.2% government vs. 71.9% donor in 2003; and 84.6% government vs. 73.9% donor in 2004). In the PAP provinces the difference was even larger. The lower donor budget execution rate is surprising finding given that this was not subject to cash flow constraints. Other factors may have been in play.

**Table 4-21.** Provincial Budget Execution of Donor Budget in 2003 and 2004 (million Riel)

Province	2003		2004	
	Budget	Execution	Budget	Execution
Banteay Meanchey	1,249	76%	1,645	82%
Battambang	542	45%	1,227	58%
Kampong Speu	128	75%	876	48%
Kampt	159	68%	617	60%
Kep Ville	17	86%	186	54%
Kratie	116	66%	284	87%
Mundulkiri	49	82%	136	78%
Prey Veng	837	80%	862	79%
Rattanakiri	55	68%	121	80%
Svay Rieng	499	54%	499	85%
Takeo	76	89%	286	76%
Kampong Cham <sup>P</sup>	189	385%	1,537	80%
Kampong Thom <sup>P</sup>	369	77%	609	70%
Phnom Penh City <sup>P</sup>	62	32%	224	78%
Pursat <sup>P</sup>	206	128%	481	134%
Siem Reap <sup>P</sup>	40	68%	498	57%
Steung Treng <sup>P</sup>	113	58%	344	51%
<b>Average</b>	<b>277</b>	<b>72%*</b>	<b>614</b>	<b>74%</b>
Non-PAP PHD	339	72%	613	72%
PAP PHD	163	72%*	615	78%

\*Excludes Kampong Cham; <sup>P</sup> PAP Provinces

#### 4.3 Government Health Expenditures: Operational District Level View

This section is based on PETS data collected in the sampled Operational Districts. The Operational Districts receive resources from: (i) provincial budget both as cash and in-kind; (ii) central budget in-kind in the form of drugs and medical consumables distributed by the CMS; and (iii) user fee revenue collected by health facility. ODs may also receive donor funds but the PETS did not find records at the OD level except in provinces comprising only one OD. Some national programs also provide resources directly to health facilities (e.g. National TB Program) but again there were no records available at the OD level.

### 4.3.1 Provincial health expenditure at OD level

The government expenditure at OD level generally was from the provincial budget viz the PHD, except for contracting ODs, who were financed through the PAP fund from the central budget. The PHD provided cash for expenses in the OD and in-kind resources procured at the provincial level.

PETS compared the data obtained from the PHD level with the data available at the OD level to check for any differences that may point towards possible leakages. The PETS also sampled 30 ODs for detailed analysis of records and drug inventories. In 2003, the value of funds received by OD was 95 percent of the value of resources reported by PHDs of having been transferred to ODs. In 2004, the difference was 10 percent. Note that this estimate excluded the central transfers to contracting ODs to give more accurate estimate for the interface between PHD and OD. See Table 4-22.

**Table 4-22:** Comparing values of transfers recorded in PHDs with receipts recorded in ODs

	2003		2004	
	PHD data	OD data	PHD data	OD data
PAP OD	8,110	8,019	7,303	7,105
Contracting OD	953	803	2,260	5,590
ADD OD	9,398	8,936	8,276	6,900
Non- ADD	1,320	1,093	1,069	926
<b>TOTAL</b>	<b>19,780</b>	<b>18,852</b>	<b>18,908</b>	<b>20,522</b>
<i>Excluding contracting ODs</i>	<i>18,827</i>	<i>18,048</i>	<i>16,648</i>	<i>14,931</i>
<b>OD/PHD</b>		<b>0.953</b>		<b>0.897</b>

### 4.3.2 Expenditure allocation between OD administration and health care facilities

ODs receive cash and in-kind transfers from PHDs. They further distribute part of it to health facilities. PETS included in the analysis cash and in-kind resources provided PHDs and through central PAP for contracting ODs. Analysis excludes drugs and consumables distributed by the CMS that will be analyzed separately in the next section.

Within the sample of 30 ODs, total expenditures increased from 18,852 million Riel to 20,522 million Riel between 2003 and 2004. The increase was due to 8 contracting ODs in the sample where PAP funds were transferred from the MOH in 2004. However, by excluding contracting ODs, the expenditure in non-contracting ODs decreased in 2004 comparing to 2003 from average of 694 to 679 million Riel respectively.

On average, OD administrative office costs accounted for 24 percent of OD expenditures. In 2004, a slightly higher proportion of OD expenditures was allocated to health center in 2004 over 2003.

The average expenditure per health center increased from 18 million Riel per health center in 2003 to 21 million in 2004 – including expenditure on staff (Chapter 10 and 31). Health centers in the PAP provinces received more than a non-PAP health center. The average expenditure per referral hospital has slightly increased from 254 million Riel to 263 million Riel. PAP hospitals received more than their non-PAP counterparts. Limited

amounts of provincial expenditure was allocated to contracting ODs to finance staff costs in 2003 as for the contracting ODs under “contracting out arrangement,” the staff costs were covered from the contract funded by HSSP under ADB financing For operational expenditures the contracting ODs received funds from central budget in 2004.

**Table 4-23:** Resource flows from ODs to health facilities - PAP and non-PAP provinces (million Riel)

Type of Province	2003			2004		
	All	PAP	Non PAP	All	PAP	Non PAP
<b>Operational District</b>						
Sum (All=30OD, PAP=11,Non PAP =19)	18,852	8,086	10,766	20,522	8,300	12,222
Average per OD	628	735	567	684	755	643
PAP	837	837	-	789	789	-
Established Contracting*	201	67	245	601	827	526
Newly contracting	614	484	657	796	368	939
ADD	719	-	719	690	-	690
Non-ADD	289	-	289	309	-	309
<b>Operational District Office</b>						
Sum (All=30OD, PAP=11,Non PAP =19)	4,460	1,858	2,601	4,983	1,675	3,308
Share to OD (%)	24	23	24	24	20	27
Average	149	169	137	166	152	174
PAP	190	190	-	146	146	-
Established Contracting*	39	6	50	259	259	260
Newly contracting	243	147	275	265	99	321
ADD	140	-	140	135	-	135
Non-ADD	77	-	77	72	-	72
<b>Referral Hospital</b>						
Sum (29 RH)	7,370	3,280	4,090	7,628	3,354	7,273
Share to OD (%)	39%	41%	38%	37%	40%	35%
Average	254	328	215	263	335	225
PAP	390	390	-	368	368	-
Established Contracting*	53	24	63	146	307	93
Newly contracting	161	135	170	201	106	232
ADD	316	-	316	304	-	304
Non-ADD	77	-	77	86	-	86
<b>Health Center</b>						
Sum exp of HC	7,022	2,947	4,074	7,911	3,271	4,640
Share to OD (%)	37%	36%	38%	39%	39%	38%
Average	18	22	16	21	24	18
PAP	25	25	-	26	26	-
Established Contracting*	8	4	9	14	26	12
Newly contracting	21	13	26	32	10	46
ADD	19	-	19	18	-	18
Non-ADD	10	-	10	11	-	11

Source: HPETS (OD database);

\* Contracting in 2003 (two types of contracting: contracting in and contracting out)

### 4.3.3 Expenditure allocation between staff and non-salary operational expenditures

Expenditure allocation changes between staff and non-staff operational expenses. At the health center level about half of the expenditure was allocated to staff costs. At the referral hospital level more than 60 percent of total expenditure was allocated to non-salary operational costs, and at the OD administrative office level the percentage was 85%. See Table 4-24. High share of non-salary operational expenditures at the OD office level is surprising as they are not involved in direct service provision and do not incur related expenses on supplies. The likely reason is allocation for supervision costs of per diems and transportation cost that is covered from non-salary operational budget.

**Table 4-24:** Resource flow: Staff and Operational expenses (million Riel)

	2003			2004		
	All	Staff expenses	Operational Expense	All	Staff expenses	Operational expense
<b>Operational District</b>						
Sum (All=30OD, PAP=11,Non PAP =19)	18,852	7,081	11,771	20,522	7,297	13,225
Average per OD	628	236	392	684	243	441
<b>Operational District Office</b>						
Sum (All=30OD, PAP=11,Non PAP =19)	4,460	707	3,753	4,982	739	4,243
Share of OD expenditures (%)	42	10	32	42	10	32
Average	149	24	125	166	25	141
<b>Referral Hospital</b>						
Sum (29 RH)	7,371	2,895	4,476	7,628	2,870	4,758
Share of OD expenditures (%)	79	41	38	75	39	36
Average	254	100	154	263	99	164
<b>Health Center</b>						
Sum exp of HC	7,022	3,479	3,543	7,910	3,686	4,224
Share of OD expenditures (%)	79	49	30	83	51	32
Average	18	9	9	21	10	11

Source: HPETS (OD database)

### 4.3.4 Drugs and medical consumables

Drugs and medical consumables were distributed directly to ODs by the Central Medical Store (CMS). The value of distributed drugs and supplies almost doubles the public expenditure at OD level (See Table 4-25). Reports on distribution were given by the CMS to PHDs. The PETS compared the records at the PHD level with actual receipts at OD level and found a gap of 4% for both 2003 and 2004. As drugs and supplies were distributed directly by the CMS, the gap was not an issue of possible leakage between PHD and OD. The gap could reflect poor record keeping practices at OD level or leakage at the point of receipt of drugs from the CMS.

There was a more significant gap revealed between the value of drugs and consumables received by ODs and the value of drugs and medical consumables dispensed. The PETS estimated that the gap was 15% in 2003 and 7% in 2004. The gap may be an indication of weaknesses in managing drugs at health facility level but it could also be an evidence

for leakage of drugs for private use by health facility staff. More time series data points are required to assess whether observed improvement in 2004 is sustained.

**Table 4-25:** Value of centrally distributed drugs and supplies at OD level (million Riel or %)

	2003	2004
<b>Operational District</b>		
Sum (All=30OD, PAP=11,Non PAP =19)	16,582	17,763
Average per OD	553	593
<b>Operational District Office</b>		
Sum (All=30OD, PAP=11,Non PAP =19)	823	435
Share to OD drug expenditures (%)	5%	2%
Average	27	15
<b>Referral Hospital</b>		
Sum (29 RH)	5,873	6,359
Share to OD drug expenditures (%)	35%	36%
Average	203	219
<b>Health Center</b>		
Sum exp of HC	9,886	10,969
Share to OD drug expenditures (%)	60%	62%
Average	32	36

Source: HPETS (OD database)

### 4.3.5 User fee revenue

In the PETS most of the ODs sampled for detailed expenditure analysis did not have records of user fee revenue of the health facility under its administration. Eight ODs reported user fees in 2003 and nine in 2004. The average amount of user fees per OD was 203 million Riel in 2003 and 207 million Riel in 2004. In qualitative interviews, the respondents at OD level considered user fees as an important source of financing the costs of health facilities.

## 4.4 Government Health Expenditures: Health Facility View

Health centers and referral hospitals are the key health facilities providing health care services to the population. The health center services are defined as the Minimum Package of Activities (MPA) comprising outpatient consultations for common illnesses, antenatal and postnatal care and deliveries; birth spacing; immunizations and health promotion and education activities. Services are provided in the health centers and through outreach activities. In the health services coverage plan there were 942 health centers in Cambodia in 2002. Referral hospitals provide inpatient care to the population of operational district where they are located. The services are defined as the Complementary Package of Activities (CPA) and the hospitals are divided into 3 CPA categories depending on the service mix they provide. In the health coverage plan, there were 68 referral hospitals in 75 operational districts in Cambodia.

Both the health centers and referral hospitals receive their resources through the PHD and OD health administration. Resources are provided in cash or in-kind. Health facilities also collect user fees they can use for staff incentives and to cover operational costs.

Hospitals with more than 100 beds can have their own accountant. For smaller hospitals and health centers, the OD accountant is responsible for accounting.

In the sample of 187 health centers, the average government expenditure in a health center was 55 million Riel in 2003 and 63 million Riel in 2004. User fee income accounted for 13% of income for the both years. Assuming that the health centers allocated the user fee income according to the MOF guidelines (50% to staff incentives and 49% to non-wage operational expenditures), the total expenditure allocation to salaries and staff incentives was 23% and 22% in 2003 and 2004 respectively, 23% and 24% on non-wage operational cost, and the rest was accounted for by drugs and consumables received in-kind. See Table 4-26.

**Table 4-26.** Average health center income and expenditure (million Riel).

<b>Income</b>	<b>2003</b>	<b>2004</b>
Provincial budget expenditure	18	21
Salaries	9	10
Operational expenses	9	11
In-kind (drugs and medical consumables)	29.8	33.6
National program	NA	NA
User fee	7.3	8.0
<b>TOTAL</b>	<b>55.1</b>	<b>62.6</b>

Based on the sample of 29 referral hospitals, the average income of referral hospitals comprised 575 and 617 million Riel in 2003 and 2004 respectively. User fees accounted for 21% and 22% of the income respectively. Assuming that the hospitals allocated the user fee income according to the MOF guidelines, the total expenditure allocation was 28% and 27% for staff salaries and incentives in 2003 and 2004 respectively, 37% and 38% on non-wage operational cost, and the rest was accounted by drugs and consumables received in kind. See Table 4-27. Compared to the expenditure breakdown in health centers, the drugs accounted for lesser share of total expenditure in hospitals (35% in hospitals compared to 54-55% in health centers).

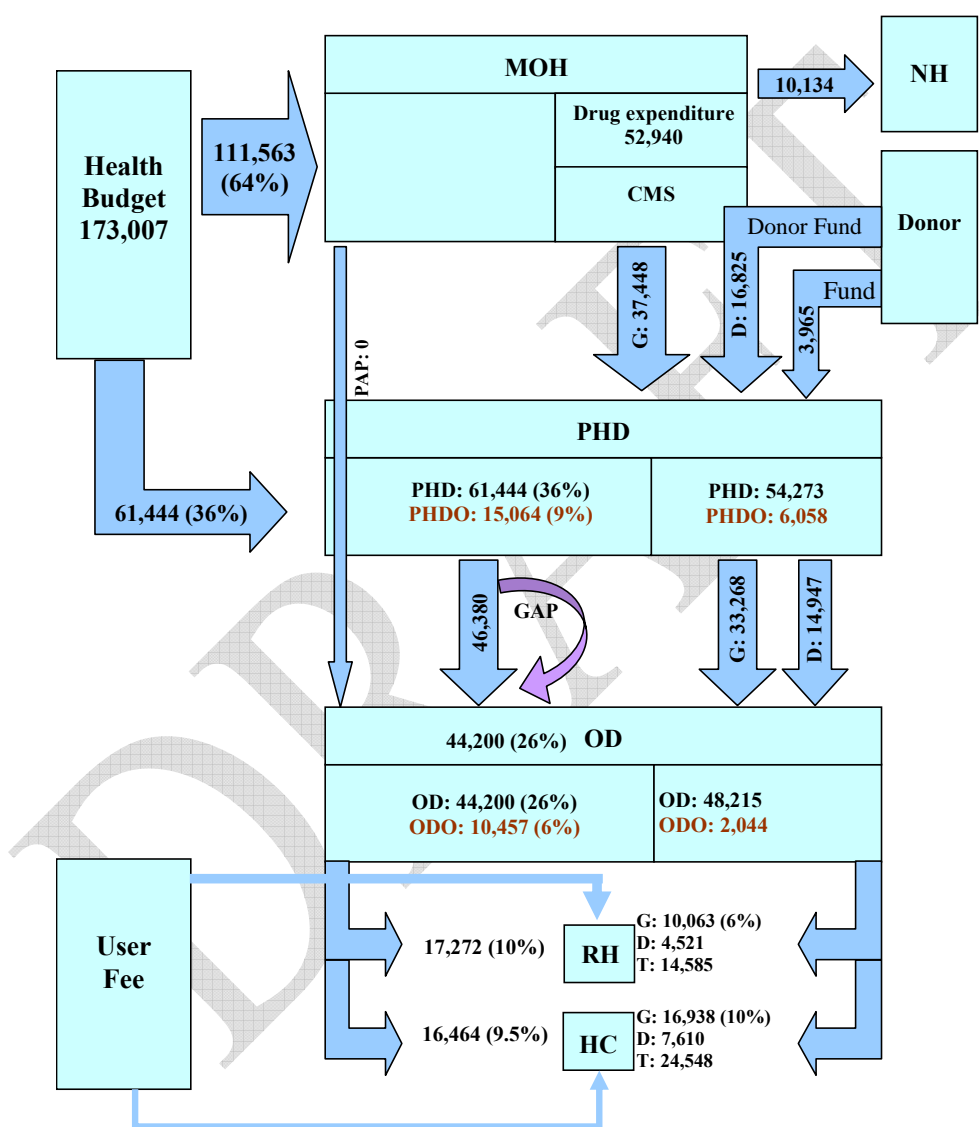
**Table 4-27.** Average referral hospital income and expenditure (million Riel).

<b>Income</b>	<b>2003</b>	<b>2004</b>
Provincial budget expenditure	254	263
Salaries	100	99
Operational expense	154	164
In-kind (drugs and medical consumables)	203	219
National program	NA	NA
User fee	118	135
<b>TOTAL</b>	<b>575</b>	<b>617</b>

#### 4.4 Government Health Expenditures: Consolidated View

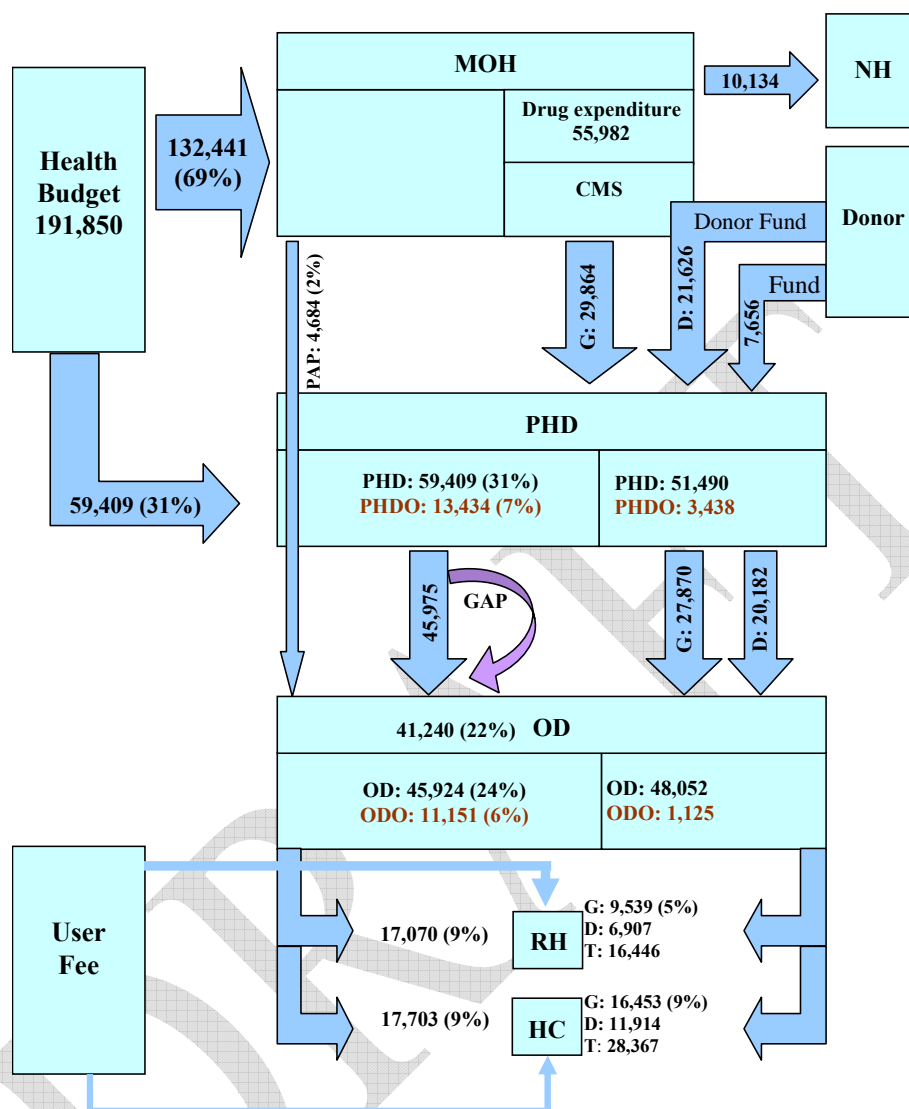
The flowcharts below present the consolidated resource flow from the central government to provincial level, operational districts and health facilities. The analysis takes into account the value of drugs distributed to provincial level health services as well as allocation of central PAP funds to contracting operational districts.

Figure 4-4. Consolidated resource flows in 2003 (million Riel).



The total government health expenditure in 2003 was estimated at 173 billion Riel. In 2004, the total expenditure was estimated at 192 billion Riel, an increase of 11% in nominal terms. The total expenditure per capita was 13,835 Riel and 15,026 Riel in 2003 and 2004 respectively. These estimates did not include donor support to national programs and organizations at central level.

**Figure 4-5. Consolidated resource flows in 2004 (million Riel).**



However, the share of net provincial level government budget expenditure (including provincial level budget allocations, central budget PAP expenditures for contracting operational districts, and value of distributed drugs) decreased from 98 billion Riel to 94 billion Riel and its share of total government expenditure from 57% to 49%. The fall came from the decrease of the share of provincial health budget expenditures in total (from 36% to 31%) and decrease in domestically financed drugs and supplies that were distributed to the provincial level (from 37 to 30 billion Riel, or from 22% to 16% as a proportion of total government health expenditure). When donor funds (drugs and expenditures at the provincial level) were taken into account, total provincial level health expenditures declined from 116 to 111 billion Riel from 2003 to 2004. The donor financing at provincial level increased significantly from 2003 to 2004 – from 21 to 29 billion Riel equivalent, or 41% increase. Donor funds accounted for a larger share of the



value of drugs distributed in 2004 and there was also increased funding to provincial level through the Health Sector Support Project.<sup>10</sup>

Provincial Health Departments and Operational District Offices retained 9% and 6% of total government health expenditures in 2003, and 7% and 6% in 2004 respectively. The PHD also retained 11% and 7% of drugs distributed to provincial level in 2003 and 2004 respectively that ostensibly were related to the implementation of national programs. The ODO's retained 4% and 2% of drugs distributed to the OD level in 2003 and 2004 ostensibly for the same purpose.

Overall, the PETS estimated that in 2003, 35.5% of government health expenditures were spent at health facility level, i.e. contributing directly for service delivery at the health centre and referral hospital level. This included also the value of drugs procured with government funds. In 2004, the proportion of government expenditures on service delivery were 32% of total domestically financed government health expenditure. In monetary terms this translates into 28 and 27 billion Riel spent at referral hospital level and 33 and 34 billion Riel at health centre level in 2003 and 2004 respectively. It appears that the 11% rise in total government health expenditures from 2003 to 2004 did not have impact on expenditures at service delivery level. On per capita terms, the government actual health expenditures at service delivery level were 4,911 and 4,808 Riel in 2003 and 2004 respectively (US\$ 1.23 and 1.20 equivalent).

When donor funded drugs are taken into account, expenditures at health centre and referral hospital level increased by 17% and 30% in 2003 and 2004 respectively.

Estimated user fee income in the 17 sample PETS provinces increased from 649 Riel per capita in 2003 to 824 Riel per capita in 2004 (US\$0.16 and US\$0.20 equivalent respectively). These estimates are significantly less than private expenditures reported in socio-economic surveys reflecting the fact that most of private expenditures are spent with private providers. The impact of possible under-reporting was not estimated.

Based on above estimates, the total expenditures at government referral hospitals and health centers were estimated at around 6,395 Riel in 2003 and 7,075 Riel in 2003 (US\$1.60 and US\$1.77 equivalent respectively).<sup>11</sup>

Above analysis was based on triangulating PETS data with government data. The analysis points to gaps in what was reported to have been distributed by the PHDs and received by the ODs. The gaps were estimated for both cash and in-kind resources. In 2003, the estimated gap was 2 billion Riel, and in 2004 5 billion Riel, or 5% and 10% of provincial level health expenditures respectively. Poor record keeping at PHD and OD levels or leakage are the possible explanations for the observed gap. The following chapter will discuss public finance and drugs management issues in the health sector.

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<sup>10</sup> The value of donor financing in the value of drugs distributed was estimated based on the CMS records that indicated that in 2003 the donors financed overall 31% of the drugs received by CMS and 42% in 2004.

<sup>11</sup> This does not take into account expenditures by national programs in referral hospitals and health centers, donor expenditures at provincial level where no breakdown was available for lower levels, donor expenditures in contracting districts.

## 5. RESOURCE MANAGEMENT ISSUES

This chapter is based on the findings from the PETS qualitative survey. The multiplicity of resources managed by various levels of health administration and health facilities face different management issues. The source of funds include: (i) provincial level government health budget; (ii) resources received in-kind from the Central Medical Store - drugs and medical consumables; (iii) donor support; (iv) user fee revenue.

### 5.1 Provincial level government health budget

The Provincial health budget is the main source for funding public health services. Implementation of the budget follows the guidelines as described previously in Chapter 3. Table 5-1 summarizes the different modalities of implementing budget expenditure and the issues associated in each budget chapter and sub-chapter at the PHD level. The main issues are related to cash-flow delays and resulting shortfalls and leakages.

**Table 5-1.** Management modalities of provincial health budget and issues identified.

Chapter	Sub-chapter	Expenditure modality	Issues/Comments
Ch10	Basic salaries	Pre-audit system	No major problem
		Cash payment	
	Over-time fee	Pre-audit system	Delay in payment and leakage (medium)
		Cash payment	
	Temporary worker	Pre-audit system	Delay in payment and leakage (medium)
		Cash payment	
Ch11	Petty Cash	Post-audit system	Advance is too small
		Cash payment	Disbursements are late
	Public procurement		Leakage (medium)
		Pre-audit system	Very long process
		Direct transfer to contractor	Delay in the delivery of goods and services
			Leakage (high)
	Direct payment to SOE	Pre-audit	No leakage
		Direct transfer to supplier	
	Cash payment for mission allowance	Pre-audit	Delay in payment and leakage (medium)
		Cash payment	
Ch13	ADD	Post-audit	Delay in payment and leakage (medium)
		Cash payment	
	PAP	Post-audit	Delay in payment and leakage (medium)
		Cash payment	
	Public procurement	Post-audit	Very long process
		Direct transfer to contractor	Delay in the delivery of goods and services
Ch31	All sub-chapters		Leakage (high)
		Pre-audit system	Small budget with low leakage
		Cash payment to staff	

This section will discuss the provincial budget issues from the following perspectives: (i) general government budget planning and execution issues; (ii) budget and expenditure allocation issues including transparency and predictability; (iii) procedural and implementation issues; (iv) delays in disbursement; (v) institutional capacity and record management issues; (vi) controlling and auditing issues, and (vii) leakage/unproductive expenditure.

### **5.1.1 General government budget planning and execution issues**

The PETS interviews pointed to the following perceptions of main issues with the budget planning process:

- Different guidelines from the MOH and the MOEF over-burden the officers in charge of budget planning. This reduces the efficiency and effectiveness of the planning process as PHDs have to respond to different requirements. Clearer links between activity based planning and MOEF budget formulation need to be established. Program budgeting initiative introduced in 2006 may offer opportunities to do that.
- MOEF guidelines are informed by historical data and are mainly based on line item expenditures. Norms are used to calculate the amounts and cost of each line item. This greatly limits the possibilities to effectively manage service inputs and link them with the quantity and quality of service outputs, and affects human resources in particular. Neither the MOH nor the PHD can directly recruit health personnel or increase their remuneration. Recruitment needs to be approved by the Cabinet of Ministers and remuneration follows the scale determined by the Secretariat of Public Function. This results in large proportion of budget increases being allocated to operational expenses – utilities, drugs, office supplies, fuel etc. Over time this has resulted in declining budget share of salaries greatly affecting the motivation and availability of staff for service delivery.
- Lack of official budgeting mechanisms below the PHD level affects ODs and health facilities because they are unaware of their entitlements.

The interviews also raised the following general issues of governmental budget execution:

- Cash flow and liquidity. The root of the cash flow concern was an over-estimation of budget revenue. When there was a revenue shortfall the national treasury did not have enough cash to cover planned expenditure. Without security of the market to support the public financing, the government has faced serious liquidity problems and has had to prioritize expenditure. In general Chapter 10 and basic salaries were recognized as priority. Hence the assessment that the management of salaries did not have major issues (Table 5-1).
- High level of centralization. Because budget execution in Cambodia has been centralized,, long administrative delays for approvals has lead to inefficiencies and ineffective public expenditure as well as providing opportunities for leakage.
- Misaligned authority. There has been an overall perception that decisions on budgeting and expenditure have resided with the MOEF and not with the authorizing agency – the MOH. This scene was amplified for the disbursement

decisions under the cash shortage. This made it difficult for the authorizer to rationalize expenditure to maximize target output. However in 2005 the MOEF did decentralize some key decision rights to the authorizer, for example decisions on public procurement to the Ministry of Health.

### **5.1.2 Budget and expenditure allocation issues**

As seen from the resource flow analysis, expenditures at health facility level accounted for only 36 percent of total government health expenditure in 2003 and 32 percent in 2004. As cash expenditures for health facilities come from provincial level budget, the budget allocation between central and provincial level is an important proxy for the health facility level expenditures. The health provincial budget was only 34 percent of total health budget in 2003 and 32 percent in 2004, largely corresponding to trends observed at the facility level. It was also clear that at the time of overall increase in budget, the larger share went to the central budget allocation. This may reflect relative priority setting in the MOH and the MOEF, however as indicated in some interviews, it may also be a reflection of the fact that when increases were allocated by the MOEF late in the budget formulation process, it was easier to allocate these increases to the central budget. There were also limitations to taking advantage of this increase due to bureaucratic processes for example, prior approval by the Council of Ministers would be needed to increase staff numbers at PHDs or ODs

Lack of official budgets below provincial level resulted in a number of concerns. Firstly, it was not possible to measure actual expenditures against the budget. Secondly, without knowing what to expect under the budget, managers at various levels were left at the mercy of Treasury officials in getting timely disbursements. This asymmetric information situation provides an incentive for informal facilitation fees being charged for disbursement, that is only exacerbated by cash shortages in the Treasury. Lack of information about the budget and entitlements also precluded any possible accountability mechanisms from a grassroots level and above. Communities did not know about the budget allocation for their health facilities to compare it what had been received, thereby creating an enabling environment for informal and formal user charges. OD managers did not know the OD level allocations, and by this means enabling PHD level managers to keep more expenditure at the PHD level. Even at the PHD level, the managers did not know about the cash situation in the Provincial Treasury to argue for fair share of available resources for health related services/programs.

For some budget chapters, and without clear guidelines, some PHDs preferred to manage resources for ODs by providing them in-kind resources rather than cash. Some ODs in turn preferred to manage resources for health facility by providing them with in-kind resources as well. Opinions gained during interviews found that health facilities would use in-kind resources less effectively, particularly as they were “free” and not reconciled with budgets (that did not exist), and in addition health facilities often had different priorities compared to those of the ODs and PHDs.

### **5.1.3 Procedures and implementation issues**

Based on the law/regulation reviews and discussion with stakeholders, general issues related to financial regulation and law were summarized in following:

- There was desire to have more policy discussion and consensus among stakeholders to develop and institute regulations. There was a perception that the main objective for regulations was to have authority in decision making. MOEF Prakas, and ministerial regulations were seldom consulted with line ministries.
- Interpretation of rules and regulations were often ambiguous or contradictory and usually relied on individual opinions in the MOEF, while the line agencies had little say.
- Financial rules and regulations changed frequently. This made it more difficult for accountants, already with limited capacity and knowledge to comprehend. In particular, when there were contradictions, such as the differences between PAP guidelines and Prakas on procurement. For example, the 2000 PAP guidelines authorized the PHDs to procure packages less than 10 million Riel, but the 2005 public procurement Prakas took assigned the authority of all procurement decisions (including less than 10 million ) to the provincial procurement unit.

The following was specific issues related to the pre-audit and post audit system:

#### **(a) Pre-audit system**

The pre-audit system of governmental public expenditure did not fit with the needs of operation of health facilities. Sometimes current and urgent expenditures at the health facility level could not wait for approval from provincial financial controller who sometimes did not quite understand the needs of health facilities that generally were located outside provincial town. It often led to delays in public expenditure at the health facility level.

Public procurement is part of the pre-audit system. Interviews with key informants during field visits implied that public procurement was neither effective or efficient. The centralized process appeared to have very limited accountability, and it was cumbersome and negatively affected the effectiveness and efficiency of public expenditure. As critical aspects of public expenditure decision-making process were outside line ministry control, it made it more difficult to hold line ministries accountable for ensuring timely delivery of service inputs and outputs. This also took away means and responsibilities of frontline service providers to adapt and respond to the local needs of their catchments areas. According to officials interviewed by PETS, the long public procurement process also led to delays coupled with the goods or services provided not being appropriate to meet the requirements of health facilities.

In 2003 and 2004, all procurement at the provincial level was controlled by the MOEF. From 2005, the authority to approve procurement decisions was delegated to Provincial Department of Economy and Finance and the Governor. Line departments still did not have authority for purchasing of goods and services at provincial level except managing petty cash – and so the issues described above were not resolved.

Cumbersome red tape increased risk for leakages. For example, for the commitment phase for gaining a provincial Governor Commitment Visa would require document verification by 6 to 8 offices in the PDEF, and other 5 reviews by the provincial Governor's administration. Facilitation fees need to be paid to hasten processes; all of which are financed from the same expenditures ensuring less cash reaches service delivery and prices of procured goods that are higher than market prices. Although the PETS could not quantify the magnitude of the problem, findings from the qualitative survey and analysis of expenditure records confirmed that these risks are present in Cambodia (See section 5.1.7 Leakage issues, page 63).

**(b) Post-audit system**

Post-audit system covered petty cash expenditures and the new budget disbursement modalities – PAP and ADD. The following issues were raised during the PETS interviews about the petty cash system:

- Advance amount was small, covering only about 1.5 month of eligible expenditure. Line ministries or their departments submitted their lists of expenditure by the end of the month to replenish the advance amount. If the auditing and replenishment process took more than 15 days, there was no cash left to cover urgent cash expenditures.
- Maximum amount per transaction was too low (500,000 Riel) and did not match the needs of health facilities.
- List of eligible items was very limited and determined by the MOEF with items that were not always most appropriate to the needs of the individual line ministries.
- When there was shortage of cash in the provincial treasury, facilitation fees needed to be paid to get cash disbursed.
- Chapter 11 funds for daily allowances for operational and training travel could be abused at the expense of other operational expenditure necessary to compensate for low salaries. As one high-ranking MOEF official jokingly noted during a PETS interview that “Why would anyone spend money on karaoke, while what one needed was a better salary.?”
- The checks and balances were not very effective, the auditor often knowingly signing off on forged reports for a commission.

ADD and PAP budget disbursement modalities were introduced to deal with some of the problems related to pre-audit system. Although introduced with good intentions, the mechanisms were not effective because of a lack of enforcement and/or weak capacity for financial management procedures. Both, ADD and PAP were based on cash advances for eligible expenditures. However in practice the advances were seldom reconciled and accounted for by PHDs and ODs. One cause of this failure was that these expenditures did not get reconciled accurately in the national accounts by the MOEF. The practice also encourages the payment of facilitation fees when financial management requirements for advance replenishment were not met. Partly for these reasons, the MOEF has decided to discontinue PAP in provinces in 2006 and overall in 2007.

In addition some of the PAP expenditures reverted back to the pre-audit systems (public procurement for purchases above certain thresholds) and the fast track expenditure

benefit of PAP was lost. The above underscores a need for comprehensive financial management reform and capacity building in order for the good intentioned policy initiatives to meet their objectives.

#### 5.1.4 Disbursement delays

The PETS estimated the delay of cash disbursement at PHD level based on the gap between the dates of predicted expenditure and the time of actual disbursement weighted by the amount actually received. The delay was calculated in months by using the following formula:

$$DD = (\sum(t1-t2)Xi) / \sum Xi$$

where DD is delay of cash disbursement/payment;  
t1=actual date of cash receipt; t2=predicted date for disbursement; Xi = amount/value receiving at time t1

To calculate the date for predicted disbursement, PETS used mid-point of the period for the expenses. For example, predicted expenditure for January 2004 should have been paid by 15 January 2004.

Disbursement delays were estimated for each budget chapter and sub-chapter based on the data provided in the PHD cash books. Different budget line chapters had different disbursement delays (see Table 5-2).

**Table 5-2** Average delay of cash disbursement from provincial treasury (in months)

		<b>Delay of cash disbursement in months</b>	
	<b>Sub-chapter</b>	<b>2003</b>	<b>2004</b>
Chapter 10	Basic salaries	1.40	1.04
	Temporary staff	3.95	5.08
	Overtime fee	5.73	2.83
	<i>All</i>	<i>2.18</i>	<i>1.86</i>
Chapter 11	Petty Cash	3.34	2.44
	Mission fee	8.86	5.05
	Others	4.64	1.62
	<i>All</i>	<i>4.41</i>	<i>3.07</i>
Chapter 13	Cash advance	6.55	6.01
Chapter 31	Cash payment	7.95	4.29
<b>All Chapters</b>		<b>4.20</b>	<b>3.78</b>

Source: PETS provincial level database

Average delay of cash disbursement (all chapters) at the PHD level declined from 4.2 months in 2003 to 3.78 months in 2004. The highest disbursement delay was in the Chapters 31 and 13. However in Chapter 11, the mission allowance fee was delayed 8.8 months in 2003, but reduced to 5 months in 2004.

PETS also analyzed the disbursement delays by province. The longest delay of cash disbursement was in Pursat province, with the average delay for all Chapters of 6.68 months in 2003 and 6.54 months in 2004. Prey Veang had the shortest delays: 1.6 months in 2003 and 2.1 in 2004.

As there were no budgets at OD level, the PETS analyzed disbursement delays based on actual disbursements as percentage from the total executed expenditures. By using the

same formula in PHD level, cash disbursement delay at the OD level are summarized in Table 5-3 below. Chapter 13 had the longest delay at the OD level. As on provincial level, the Chapter 10 had the most stable and predictable flows.

**Table 5-3.** Average delay in cash disbursement from PHD to OD (in months)

	2003	2004
Chapter 10	2.58	1.99
Chapter 11	5.88	2.86
Chapter 13	7.17	6.61
Chapter 31	6.82	3.28
All Chapters	4.63	4.27

By comparing across ODs, we could estimate the delay by type financing of OD –PAP, contracting OD, ADD OD and Non-ADD OD. How did different type of financing scheme affect the delay of disbursement? Yes, we should do that. What is the answer, was it done?

Measuring these delays could be used for the future monitoring of budget expenditure. It would enable to record improvements and address any issues as they occur.

The PETS also examined delays in disbursement in the NCMCH and NCHADS, where those interviewed stated PAP disbursements were delayed on average about three to four months (that seems to be better performance still than PAP budget disbursements at the PHD and OD level – see Table 5-2 and Table 5-3).

### 5.1.5 Institutional capacity and record management issues

PETS found that most of the accountants at PHD and OD levels were actually health professionals. They had had limited training in accounting with some experience in bookkeeping. They mostly relied on the advice and on-the-job training from staff of the MOEF. On one occasion, when PETS found that the PHD accountant did not record cash received from the provincial treasury in cash book, he responded that he simply did not know how to record this.

**Table 5-4.** Record keeping practices on budget (percent frequency without record)

Institution	Chapter 10		Chapter 11		Chapter 13		Chapter 31	
	2003	2004	2003	2004	2003	2004	2003	2004
<u>PHD Records</u>								
PHD	0%	0%	0%	0%	0%	0%	0%	0%
PHD Office	92%	92%	88%	100%	58%	67%	92%	90%
OD	90%	90%	86%	73%	57%	64%	85%	73%
<u>OD Records</u>								
OD	57%	56%	50%	55%	31%	29%	55%	60%
OD Office	82%	78%	74%	74%	50%	54%	79%	84%
RH	81%	77%	75%	75%	52%	56%	78%	83%
HC	100%	92%	90%	90%	80%	72%	100%	100%



PETS revealed that the record keeping was not well managed. Reports were inconsistent between sites, and in general, the lower the institutional level the poorer the quality of records. Most of the PHD level offices had budget and expenditure records, only a few ODs had full records and most had partial records, and almost none of the health facilities had full records. The record keeping was very poor at the health facility level (in sampled provinces between 72-100 percent of health centers were without complete records). Among ODs, the newly contracted ODs appeared to have poorest record keeping practices. See Table 5-4 and Table 5-4.

**Table 5-5.** Record keeping practices on expenditures (percent frequency without record)

Institution	Chapter 10		Chapter 11		Chapter 13		Chapter 31	
	2003	2004	2003	2004	2003	2004	2003	2004
<u>PHD Records</u>								
PHD	0%	0%	0%	0%	0%	0%	0%	0%
PHD Office	12%	6%	6%	0%	0%	0%	0%	0%
OD	12%	7%	5%	0%	0%	0%	0%	0%
<u>OD Records</u>								
OD	10%	10%	13%	17%	23%	13%	77%	77%
OD Office	37%	33%	43%	47%	43%	33%	87%	83%
RH	38%	34%	45%	48%	45%	34%	90%	86%
HC	33%	32%	44%	48%	45%	35%	87%	85%

PETS also found pre-filled invoices in some health administration offices and health facilities. This could be used for recording transaction that actually did not take place to cover, for example, leakages.

### 5.1.6 Checks and Balances

Several government institutions were involved in internal and external reviews and inspections. MOEF financial inspectors, procurement and budget department staff as well as MOH inspectors were involved. During the interviews with stakeholders, the following issues were raised about the effectiveness of these control mechanisms:

- In a centralized pre-audit system, every expenditure document is subject to several approvals, including high level officials. The participants questioned the effectiveness of inspectors questioning transactions with high level authorization.
- The audits were based on verifying the expenditures with documentary evidence that could be forged or inflating actual expenditures. No audits were conducted into efficiency of public expenditure, such as comparing procurement prices with actual retail prices.
- Financial and procurement transactions were subject to policies and regulations issued by different government agencies leading to confusion among the accounting staff and even among inspectors. Sometimes regulations by different agencies were contradictory.
- Multiple audits and inspections implied cost to the implementing agencies, PHDs and ODs. The health officials confided that they felt obliged to host and entertain inspectors and auditors in exchange for acceptable reports that would not affect their positions. Health officials at the provincial level estimated that the cost of

- one controller visit was US\$800–1,000, and all costs up to US\$4000-5000 per year in facilitation fees and hosting costs. Obviously, these funds would need to be recovered from leakages and so creating a vicious circle.
- There were no effective sanctions implemented for wrongdoing that would make any deterrent impact of the system of inspections and audits being very weak. The PETS interviews failed to find an individual who had ever received a penalty for financial management irregularities.

### 5.1.7 Leakage issues

Issues about institutional environment of public finance management in health sector made it vulnerable to leakages. Although the current study did not capture leakage directly, several findings from quantitative and qualitative data pointed to the high probability of leakages occurring. The two main mechanisms for possible leakages were facilitation fees and public procurement.

#### (a) Facilitation fees

As described earlier in this report, cash shortages in the treasury at provincial level led to delays in budget execution. Shortages also led to facilitation fees paid by provincial level line departments to treasury staff in order to lay claim to limited resources. This situation was further aided by the fact that provincial treasuries do not inform line departments about their entitlements citing confidentiality regulations by the MOEF thereby effectively increasing the discretionary powers of provincial treasury staff in relation to the distribution of scarce cash.

In order to recuperate losses, these facilitation costs are passed on to lower levels with a possibility of intermediate levels levying additional fees. Lack of budgets below provincial level of health administration make it possible to manipulate budget disbursements at provincial level because OD, referral hospital and health center managers don't know their budget entitlement. This situation creates the opportunity for officials who better understand the process and regulatory framework to abuse the system for personal gain.

Qualitative interviews with PHD, OD and health facility managers and accountants revealed that the imposition of facilitation fees was widespread. There was a commonly shared perception that if facilitation fees were not paid to provincial treasury, the funds would be considerably delayed. Some highlights on the facilitation fees from interviews are presented in the Box 5-1. The scale of facilitation fees was different across budget

#### **Box 5-1. Facilitation fees – selling beef on the market.**

One PHD director compared the cash management in provincial treasury as selling beef in the market. With the scarcity of cash, the provincial treasury (seller) has allocated cash (sell beef) to provincial line departments (buyer) who could offer higher facilitate fee (higher price). If the PHD offered lower price than other departments they would experience delay of cash. Without cash, the PHD could not manage both administration and health service properly. Therefore, in response to the experiences, the PHD needed to pay higher facilitation fee to get better resources. He also said that as a result, the PHD did not pay full amount to ODs but nevertheless arranged the record for the full amount.

chapters; the reported scale also varies in different provinces and across administration levels (see Table 5-6). The estimates from obtained during the interviews with key informants reflected their own perceptions.

**Table 5-6.** Estimates of facilitation fees paid for various expenditure items.

Chapter/sub-chapter	PHD	OD	Facility	Remarks
<u>Chapter 10</u>				
Basic salaries	0-2%	0-2%	0-2%	No reported leakage
Temporary worker	0-10%	5-15%	5-30%	
Overtime fee	10-15%	-	20-30%	
<u>Chapter 11</u>				
Petty cash	15-20%	-	-	Funds mainly used at PHD level
Public procurement	15-50%	10%	20%	Quantity reduced by 10-20%
Mission allowance fee	15-20%	-	30-40%	
SOE	0%	-	-	
<u>Chapter 13</u>				
Cash payment	5-10%	-	-	No information on OD but health facilities received inputs mainly in-kind
Public Procurement	15-50%	-	-	Similar to Chapter 11

Source: PETS qualitative survey

It is worth noting that even the Chapter 10 that overall had shortest disbursement delays experienced significant leakages in some specific sub-chapters such as salaries of temporary workers and overtime fees. As explained by informants, payments to temporary workers occurred only once per semester or even annually and that the main reason for the delay was necessary approvals from the MOH and the Secretariat of Public Function. The Box 5-2 describes difficulties in getting temporary workers paid in a public health facility as reported by a PHD director, an OD accountant and a health center chief. There was no leakage reported for base salaries.

**Box 5-2. Delays and leakages in temporary worker salary payments**

One PHD director complained about leakage and delay of payment of salaries for temporary workers both in health administration and health facility. Employment of the temporary worker needed to be approved every year by MOH and the Secretariat of Public Function. To facilitate the employment approval a one month salary (about 52,000 Riel) of these workers has to be paid to the official responsible for the approval. It is likely that other facilitation fees are being paid throughout the chain as one health center chief told the PETS interviewers that they received salaries for 9 of 12 months with delays up to one year. In one contracting OD, the PETS team was informed that the PHD had reduced the number of temporary staff because the contracted NGO demanded full payment which that the PHD could not afford since they had used funds to pay facilitation fees.

Convolved and multi-stage approval processes makes it possible for officials to demand facilitation fees to speed up the process. Cash disbursement at provincial health department level is a 6-stage process requiring approvals/sign-offs at each stage (see Figure 3-4 page 34). Similarly, procurement of goods and services takes months to

complete and includes a number of stages before approval by the MOEF (see Figure 3-3 page 30).

**(b) Public procurement**

Public procurement was another area with high risk of leakage. In spite of lengthy process, the cost goods and services obtained through public procurement was significantly higher than at retail market. The PETS recorded the price of selected tracer goods and services obtained through procurement and compared them with the price from the MOEF Monthly Bulletin of Statistic (issue No 106 Oct 2004) and the prices that are universally known.

**Table 5-7.** Comparison of public procurement and market prices of selected tracer goods

Items	2003			2004			Price*		% above market	
	Min	Max	Average	Min	Max	Average	2003	2004	2003	2004
Paper A4**	8,500	20,000	13,342	8,500	18,700	13,146	8,800	8,800	52	49
Gasoline(l)	2350	2900	2625	2400	3150	2775	2300	2700	14	3
Diesel (l)	1650	2400	2025	1700	2600	2150	1625	1950	25	10
Mats	9000	25000	16476	8900	28000	18480	13275	13550	24	36
Pillow	3000	7000	4922	3900	8200	6155	2255	2303	118	167
Laundry soap/detergent	3000	5700	4375	3800	4800	4300	3425	3323	28	29
Scarf	4500	4500	4500				2608		73	-
Sarong	8500	8500	8500				6830		24	-

\* Average price from Monthly Bulletin of Statistic, MOEF. \*\* Paper A4: current market price

The average universally known market price for A4 format paper was US\$ 2.2 per box of 500 sheets. The PETS found that the procured prices of paper A4 across the sampled PHDs was on average 52 and 49 percent higher than the market price in 2003 and 2004 respectively. Similarly, the price of gasoline was higher than the market price 14 percent in 2003 and 4 percent in 2004, the price of diesel was higher than the market price 25% in 2003 and 10 percent in 2004. For pillows, the price was higher than the market price up to 118 percent (2003) and 167 percent in 2004 (see Table 5-7).

**Box 5-3. Stated reasons for higher prices in public procurement.**

Most PHD directors acknowledged that public procurement prices were higher than the market by 20-30%. One actually thought that it was higher by 50%. One PHD accountant explained that higher prices were because on official procurement the companies had to pay 10% on VAT and 1% profit tax something that local market sellers did not do. Another PHD accountant explained that the provincial Procurement Unit was responsible for approving the price estimate for goods and services proposed by PHDs. When proposed prices were the market reference prices, the PU could not process procurement because no bids were submitted. The suppliers needed higher prices to compensate for the facilitation fees to expedite payments. In order to avoid delays, the PHDs in real life proposed price estimates higher than the market price.

In PETS interviews, PHD directors and accountants recognized that the prices of procured goods and services were higher than the market price. The Box 5-4 highlights some of the explanations given to higher prices.

PETS interviews with the officials at PHDs also pointed towards a possible oligopoly of suppliers of goods and services who had good relations with different level of authorities at the provincial level. This may have created an environment for collusion in procurement resulting in higher prices of goods and services.

The PETS qualitative research also found that there were cases when goods procured at higher levels in administration (e.g. at the PHD level) were not distributed in full to the lower level health system (ODs, health facilities). A typical example is the practice using fuel vouchers where the fuel actually received was less than the voucher value (receipts between 60-95% at health facility level).

Poor record keeping practices also created an accommodating environment for leakages. As previously discussed, there were either no records, or the records were incomplete below provincial level health administration. PETS analysis of 30 sample ODs revealed a gap between expenditures recorded at provincial and OD level. In 2003, the ODs accounted for 5% less budget expenditures than at provincial level, and in 2004 the gap was less 10%. This gap could indicate poor quality of records and/or a possibility of leakages (see Table 5-8).

**Table 5-8.** Comparison of transfers recorded in PHDs with receipts at in ODs (million Riel)

Institutions	2003		2004	
	PHD database	OD database	PHD database	OD database
PAP OD	8,110	8,019	7,303	7,105
Contracting OD*	953	803	2,260	5,590*
ADD OD	9,398	8,936	8,276	6,900
Non- ADD	1,320	1,093	1,069	926
<b>TOTAL</b>	<b>19,780</b>	<b>18,852</b>	<b>18,908</b>	<b>20,522</b>
<i>Excluding Contracting*</i>	<i>18,827</i>	<i>18,048</i>	<i>16,648</i>	<i>14,931</i>
<b>GAP (1-OD /PHD)in %</b>		<b>4.7%</b>		<b>10.3%</b>

\* Note that OD level receipts in contracting ODs included central government PAP transfers.

Interviews with the managers and financial management staff at different levels as well as checks of records provided information about ways to conceal leakage. Recording full amounts was very common. Public procurement with inflated prices was also common, as was overreporting. For example, in one OD where a contractor had been engaged to provide food to local hospital at fixed cost per patient day (Riel 1,000 to 2,500 depending on patient category), for one month in 2005 1,780 days in total were reported for accounting purposes whereas the actual number of patient days in this hospitals was 986. Estimated leakage of funds between Riel 794,000 and Riel 1,588,000 for this one month alone in one institution. In another case, the PETS team found blank invoices in health departments and facilities that could be used to record bogus expenditures.

**(c) Ineffective checks and balances to mitigate the risk of leakage**

There is a lack of consistency for the norms, rules, and regulations for financial management; different regulations set by different authorities can create confusion and are often contradictory. For example, the PAP guidelines allows PHDs to procure/purchase goods and services up to thresholds, that were different to the new Prakas centralizing procurement to the Procurement Unit. As discussed previously, the audits based on documents – true or false – are likely not to reveal leakages and it was difficult to monitor inspectors from multiple institutions enforcing a variety of regulations. Even when irregularities were found, they were often corrected or ignored in return for a share of funds as health officials wanted to have acceptable reports, which would not jeopardise their position. As discussed previously, controls and audits implied real costs to local health officials and that had to be recovered through leakages.

Given that there are no official budgets for health facilities and no information about budget entitlement or actual disbursements, the social accountability mechanisms such as Health Center Management Committees and Village Health Groups are unable to provide effective oversight and feedback about adequacy and timeliness of public financing of health services.

**5.1.8 Coping with disbursement delays and cash shortages**

Different coping mechanisms were used at different levels. Information about these mechanisms was obtained through qualitative interviews. Several of these mechanisms increased the risk for leakages to recover the costs.

**(a) PHD level**

When limited funds were provided by provincial treasury, the PHDs tended to prioritize operation of PHD office and transferred limited amounts to the OD level. PHDs also cut back on activities, and some activities were more affected e.g. mission fees. These missions either did not happen or the staff had to cover the costs themselves and be paid later.

If resources were delayed, PHD officials also borrowed funds from money lender with high interest rate to be paid back after funds were received from provincial treasury. To cope with delays in procuring supplies (e.g. fuel), PHD officials borrowed from suppliers for urgent use and suppliers reduced the quantity by around 5 percent for compensation in advance supplies. To recover various costs involved, the PHDs had to take a cut of resource transfers to the OD level or through leakage mechanisms discussed previously.

**(b) OD level**

Similar to PHD level, when limited funds were available, ODs kept larger proportions to cover their own costs and transferred limited amounts to health facility level that resulted delays in paying for various costs at health facility level. Some ODs also requested a share of user fee revenues from health facilities to cover OD expenditures.

**(c) Health facility level**

The main coping mechanism at the health facility level was using user fee revenue to substitute for delayed funds from treasury. For example, health officials reported that mission fees had been paid out of user fee revenue. That sometimes led to delayed distribution of the incentive portion of user fee revenue to the staff. If no resources were available, health facilities reduced outreach activities.

PETS looked for evidence of increasing user fees as coping mechanism to temporary resource shortages. Correlations between the timing of national budget resource flows and user fees were studied. The observed weak negative correlations between the timing of monthly shares of total annual cash disbursements at the health centre level from the budget chapters 10 ( $r = 0.253$ ), 11 ( $r = -0.136$ ) and 13 ( $r = -0.219$ ) and cash revenue from user fees may indicate that more emphasis was put on collecting user fees during temporary resource shortages.

**(c) National programs**

The following mechanisms were described in the interviews with the staff from the NCMCH and NCHADS. These coping mechanisms were more relevant for NCMCH as they rely more on government funds for recurrent operational costs.

- Supervision activities were implemented as planned but staff had to cover costs with their own funds and get reimbursed when the center received money from the MOH. It usually took six to twelve months to recover the funds. Often NGO's would support staff that were going to the provinces to undertake supervision activities.
- Training or workshops were not organized before the center had funds in-hand.
- NCMCHs borrowed from the user fee revenues of the national referral hospital to implement its other activities. The centre was supposed to return the user fees after having received funds from the government. It was not clear how this was monitored in terms of accounting.

***5.2 Management issues for drugs and medical supplies that were received in kind***

Most of the drugs and medical consumables used in the government health facilities were from the Central Medical Store financed from the central health budget and donor funds. At the province level, only a small portion of drugs and medical consumables was procured with the provincial health budget resources. The CMS distributed drugs and consumables directly to ODs and provided PHDs with the records of distribution. PHDs also receive certain drugs and consumables directly from the CMS for programs that were under the control of PHD such as Mother and Child Health program.

ODs stored the received drugs and supplies and further distributed them to the health facilities according to requests. Health facilities were the end users of drugs and medical consumables. PETS studied the management issues of drugs and medical consumable at OD and health facility level.



### 5.2.1 OD level drug and supplies management

From the quantitative data obtained from the CMS and OD records, there was a gap in the value of drugs and medical consumables received from the CMS and the value distributed to health facilities. In 2003, only 83 percent of drugs received were distributed to health facility level. The gap declined to 7 percent in 2004. From the qualitative survey, PETS determined that significant amounts of expired drugs were destroyed in 2003, and significantly less in 2004. The main drug management issues reported by the OD and health facility level health officials were both over- and under-stocking of drugs or that some drugs were received near their expiration date. There were reported cases where drugs managers at the OD level distributed over-stocked drugs and near expired drugs to health facilities in order to avoid destroying these drugs in order to avoid inspections and audits. In this way the burden was shifted to health facilities that endeavoured to make best use of these drugs but at times the drugs were not appropriate to the needs of the health facility.

### 5.2.2 Health facility level drug and supplies management

PETS analyzed the effectiveness of the use of drugs and medical consumables based on information recorded in the registration book in health centers in a sample of 187 health centers. PETS calculated the cost of drugs and medical consumables (DCPP) per patient based on a sample of records. The following formula was used:

$DCPP = Q1P1 + Q2P2 + \dots + QnPn$  where Q1, Q2, Q3 .. Qn was quantity of drug used for each patient in the sample; P1, P2, P3 ...Pn was price of specific drugs and medical consumables used for the particular according to the price information from the CMS records.

PETS also estimated the total cost of drugs and supplies dispensed for the provision of basic health services (BS). The basic health service was defined as the sum of (1) general outpatient visits; (2) antenatal consultation, (3) postnatal consultation, and (5) birth spacing. Based on the estimates of basic health service contacts per health facility, the PETS estimated the total cost of drugs dispensed by a health centre in the years 2003 and 2004. The results are presented in the Table 5-9.

**Table 5-9.** Estimates of drugs and medical consumables used at health center level

Type of OD	DCPP 03	DCPP 04	BS 03	BS 04	Est. DU 03	Est. DU 04
PAP OD	2,457	2,269	10,984	10,211	26,984,088	23,168,108
Old Contracting OD	1,977	1,916	10,741	12,383	21,230,828	23,721,064
New Contracting OD	3,933	2,970	6,863	7,664	26,992,512	22,765,887
ADD OD	2,748	2,147	7,855	8,907	21,586,011	19,121,098
Non- ADD	2,341	1,900	6,487	7,619	15,189,289	14,477,162
<b>Total</b>	<b>2,603</b>	<b>2,186</b>	<b>8,903</b>	<b>9,522</b>	<b>23,179,657</b>	<b>20,818,135</b>

DCPP - average drugs cost per patient; BS - average basic health service contacts per health center; Est. DU - estimated drugs used



PETS estimated that in the sample health centers the average drug and medical consumable expenditure was 23 million Riel in 2003 and 21 million in 2004 per health center. As the number of basic health services provided rose from 8,900 to 9,500 patient contacts per health center from 2003 to 2004, the drug cost per patient fell from 2,600 Riel to 2,200 Riel in 2003 and 2004 respectively.

The PETS also estimated the gap between drugs and medical consumables received from OD and dispensed in 2003 and 2004 was 22 percent in 2003 and 38% in 2004. This is significant and demands further examination, as presumably the drugs have either leaked, or been carried over to another year in health center stocks. Health centers in contracting OD appeared to be more efficient in managing drugs than non-contracting ODs (see Table 5-10).

**Table 5-10.** Average value of drugs and consumables received and dispensed at health center level

Type of OD	DRE 03	DRE 04	Est. DU 03	Est. DU 04	GAP 03	%	GAP 04	%
PAP OD	34,484,015	40,015,712	26,984,088	23,168,108	7,499,927	22%	16,847,603	42%
Old Contracting OD	23,118,802	27,508,487	21,230,828	23,721,064	1,887,973	8%	3,787,423	14%
New Contracting OD	30,940,746	26,015,408	26,992,512	22,765,887	3,948,234	13%	3,249,521	12%
ADD OD	30,495,900	36,422,492	21,586,011	19,121,098	8,909,889	29%	17,301,394	48%
Non- ADD	22,267,066	22,651,881	15,189,289	14,477,162	7,077,777	32%	8,174,719	36%
<b>Total</b>	<b>29,833,765</b>	<b>33,640,589</b>	<b>23,179,657</b>	<b>20,818,135</b>	<b>6,654,108</b>	<b>22%</b>	<b>12,822,454</b>	<b>38%</b>

Source: PETS health centre database (sample of 187), OD drug distribution reports. DRE – drug value received by HC; est DU – estimated drug use by HC.

PETS did not estimate cost of drugs per inpatient day in referral hospitals because it was more complicated and would have required a more specialized study.

### ***5.3 Management of donor resources at health service level***

As discussed earlier in this report, PETS was able to track only part of the donor resources that were recorded at the PHD level. Donors follow a post-audit system. The PHD accountants approve the expenditure requested by the programs officers. Payments are made mainly through a private Bank, ACLEDA. Respondents reported that ACLEDA made payments without delays or leakage. Donor funds' expenditures were very limited at the OD and health facility level and there was no direct cash transfer to OD, except for some ODs receiving UNFPA funds. One should note though that although donor funds expenditure was executed the PHD level, they may have been used for eligible activities implemented by OD and health facility staff. Donor expenditures are audited by an external independent auditing firm at the end of the fiscal year.

### ***5.4 Management of user fee revenues and expenditures***

As discussed earlier in the report, user fees were collected and retained at the health facility level. According to MOH regulations, 99% of the user fee revenue is used for operational expense by the health facility (at the time of the PETS the allocation was 50% for non-wage operational expenditures and 49% for staff incentives, in 2006 it was 60%

and 39% respectively), and 1% is transferred to provincial treasuries as budget revenue. User fees for each category was set at the health facility level by user fee committees. Health officials from various levels gave their perceptions about user fee management:

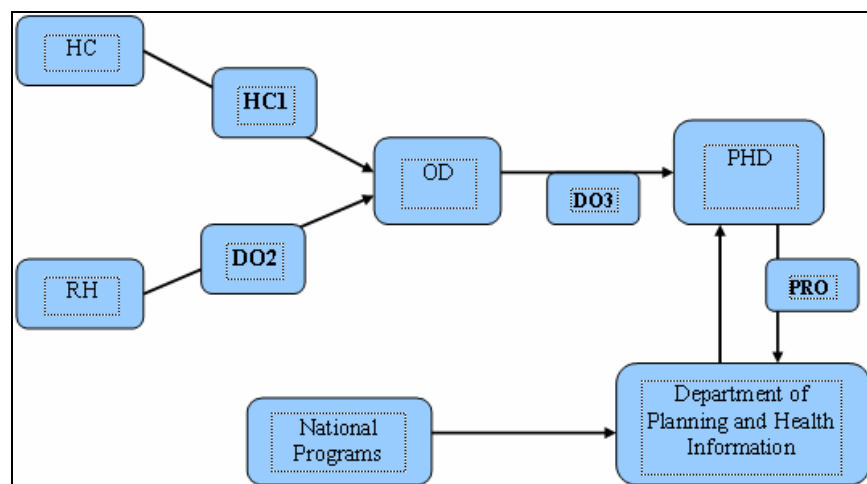
- user fee revenue was the only reliable funding source to cover operational costs;
- user fees were low compared to the actual cost of service provided by the health center; low cost may create perceptions among some patients that service was of poor quality and it was entitled for the poor thus discouraging utilization by better off patients;
- fixed user fee allocation formula was too restrictive and did not allow for additional benefits to the staff (as discussed above, allocation formula has since changed);
- granting exemptions was not effective because it was predominantly based on personal judgements of staff and their interpretation of the policy; also as exemptions were not funded, loss of user fee revenue provided an adverse incentive in disallowing exemptions;
- some staff in health facilities were concerned about the transparency of user fee expenditure decisions by the user fee sub-committee.

## 6. UTILIZATION OF HEALTH SERVICES

This chapter will discuss utilization of health services as one of the outputs of public expenditure on health. Discussion will begin by reviewing the issues related to available data on utilization and then proceed with the analysis of inputs and outputs at the health facility level. The key utilization parameters at the health centre level are (i) number of outpatients visits; (ii) antenatal and postnatal care indicators; (iii) obstetric care (deliveries); (iv) birth spacing, and (v) vaccination and outreach activities. At the referral hospital level, the key utilization parameters are: (i) hospital discharges; (ii) number of patient days; (iii) number of beds. These data allow calculating (iv) bed occupancy ratio that is one of the key indicators of hospital efficiency. This ratio would be compared among operational districts under different public expenditure management models (PAP, ADD, Non-ADD, and contracting OD).

These key health services would be studied on the correlation with inputs (expenditure and drugs). Number of outpatient visits per staff at the health center level and number of inpatient days per staff at the referral hospital. In Cambodia, the number of staff is a proxy for public expenditure (salaries), so in turn staff/utilization ratios would also be proxies for effectiveness of public expenditure. The chapter will also explore links between disbursement delays and service indicators. The chapter will also estimate the user fee per outpatient and user fee per patient bed. Levels of analysis are provincial, OD and health facility levels.

For the analysis, PETS used data from the national Health Information System. PETS collected data from the four related statistical forms from a sample of PHDs, OD and health facilities. At the health facility level, the data came from the HIS health facility forms HC1 (health center) and DO2 (referral hospital). At the OD level, the data was collected from the forms DO3 (aggregation of data from HCs and RH). At the PHD level, the DO3s get aggregated into form called PRO. Figure 6-1 summarizes the health information system used by the PETS.

**Figure 6-1.** Health Information System

Overall, the PETS concluded that HIS had clearly structured data and good record keeping practices (in particular when compared with public expenditure data). However, there were limitations to the HIS data that should be noted. Interviews with responsible health officials in technical bureaus at the PHD and OD level raised the issue of possible over-reporting and lack of systematic spot checks at health facility level. Estimates of over reporting were up to 25 percent. To cope with this reliability issue, some national programs (e.g. CENAT) have set up their own systems. Secondly, there was no standardised statistical software to estimate and consolidate data from one health system level to another leading to inconsistent and incomparable results between ODs and PHDs and across the country.

The final discussion in this chapter will be about the effectiveness of health centers as fixed service delivery points in serving near and remote catchment populations.

### ***6.1 Health services utilization aggregated at PHD level***

The data for analysis came from HIS (PRO) collected from the sample of provinces. Health services outputs were classified into three main groups: (i) basic health services provided mainly by the health center (MPA); (ii) services provided by health center staff through outreach activities; (iii) inpatient services provided by referral hospital. To allow for simple comparison between provinces the output was calculated per capita or per 1,000 population.

**Table 6-1.** Health services utilization per capita per province

Province	2003						2004					
	OPD	ANC	PNC	BSP	BHS	ODH	OPD	ANC	PNC	BSP	BHS	ODH
Kampong Cham	0.37	0.04	0.02	0.08	0.52	18	0.44	0.05	0.02	0.08	0.59	22
Kampong Speu	0.37	0.04	0.01	0.13	0.55	15	0.42	0.04	0.02	0.13	0.61	15
Kompong Thom	0.48	0.03	0.01	0.19	0.71	13	0.50	0.03	0.01	0.18	0.73	14
Kampot	0.23	0.03	0.01	0.17	0.45	16	0.27	0.04	0.01	0.20	0.52	19
Kep	0.29	0.01	0.00	0.05	0.34	43	0.24	0.01	0.00	0.07	0.32	11
Kratie	0.40	0.03	0.01	0.08	0.51	20	0.40	0.02	0.01	0.12	0.56	20
Takeo	0.45	0.05	0.01	0.13	0.63	40	0.52	0.06	0.01	0.20	0.79	53
Battambang	0.50	0.05	0.01	0.11	0.67	40	0.48	0.06	0.01	0.12	0.67	34
Bantey Meanchey	0.44	0.04	0.01	0.13	0.62	27	0.50	0.05	0.01	0.14	0.70	27
Prey Veng	0.42	0.05	0.01	0.10	0.57	20	0.50	0.05	0.01	0.11	0.66	32
Pursat	0.41	0.07	0.02	0.07	0.58	23	0.50	0.08	0.02	0.09	0.68	27
Phnom Penh	0.26	0.03	0.00	0.01	0.30	69	0.34	0.04	0.00	0.02	0.39	78
Mondulakiri	0.78	0.02	0.00	0.07	0.88	20	0.64	0.02	0.00	0.04	0.71	23
Rattanakiri	0.65	0.03	0.00	-	0.68	55	0.44	0.02	0.00	0.04	0.49	31
Stung Treng	0.42	0.04	0.00	0.09	0.56	23	0.39	0.05	0.01	0.10	0.55	29
Siem Reap	0.49	0.06	0.00	0.08	0.64	21	0.51	0.05	0.00	0.10	0.67	22
Svay Rieng	0.40	0.07	0.01	0.19	0.66	14	0.55	0.06	0.01	0.14	0.76	17
<b>All provinces</b>	<b>0.41</b>	<b>0.04</b>	<b>0.01</b>	<b>0.10</b>	<b>0.56</b>	<b>28</b>	<b>0.46</b>	<b>0.05</b>	<b>0.01</b>	<b>0.12</b>	<b>0.63</b>	<b>31</b>
<i>PAP Province</i>	<i>0.42</i>	<i>0.05</i>	<i>0.01</i>	<i>0.10</i>	<i>0.58</i>	<i>19</i>	<i>0.48</i>	<i>0.05</i>	<i>0.01</i>	<i>0.10</i>	<i>0.64</i>	<i>24</i>
<i>Non-PAP province</i>	<i>0.39</i>	<i>0.04</i>	<i>0.01</i>	<i>0.11</i>	<i>0.55</i>	<i>35</i>	<i>0.44</i>	<i>0.05</i>	<i>0.01</i>	<i>0.12</i>	<i>0.62</i>	<i>38</i>

Source: PETS PHD database. OPD: number of outpatient consultation per capita; ANC: Ante-Natal Care per capita; PNC: Post Natal Care per capita; BSP: Birth Spacing Service per capita; BHS: Basic health service (including OPD, ANC, PNC, BSP); ODH: Number of health facility deliveries by 10,000 inhabitants.

Utilization of basic health services per capita increased from 0.56 in 2003 to 0.63 in 2004. Outpatient curative visits and birth spacing services accounted for the most of the increase. The PAP provinces had slightly higher rate than non PAP provinces. The highest rate was in Modulkiri and Kompong Thom (in 2003) and the lowest rate was in Phnom Penh. Deliveries in health facility increased from 35 per 10,000 inhabitants in 2003 to 38 in 2004. The rate of PAP province was less than non PAP province. The highest rate was in Phnom Penh and the lowest rate was in Kompong Thom. See

Table 6-1.

Any relationship between utilization per capita with budget expenditures per capita?

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Table 6-2 summarises outputs of outreach activities by province. Four main key outreach indicators were studied: (i) number of village outreach visits per 1,000 population; (ii) number of children under 1 year of age getting full vaccination; (iii) number of children under 1 year of age receiving vitamin A; and (iv) number of children between 12-48 months receiving Vitamin A.

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**Table 6-2.** Summary of outreach activities by province (per 1,000 population)

Province	2003				2004			
	ND1000	AV1000	VA 12	VA-12-48	ND1000	AV1000	VA 12	VA-12-48
Kampong Cham	14	19	2	17	15	21	10	71
Kampong Speu	21	4	26	218	22	12	21	136
Kompong Thom	13	15	17	124	13	17	24	204
Kampot	15	16	17	111	14	19	27	99
Kep	7	1	-	-	8	13	25	184
Kratie	11	9	17	111	13	10	13	91
Takeo	15	16	18	149	15	18	23	162
Battambang	13	22	23	159	13	21	24	167
Bantey Meanchey	12	16	15	84	12	18	17	124
Prey Veng	13	15	26	210	13	17	13	113
Pursat	15	23	14	98	14	21	24	181
Phnom Penh	9	27	17	75	7	17	13	62
Modulkiri	12	4	-	-	13	7	7	53
Ratanakiri	20	19	90	219	24	18	20	57
Stung Treng	19	20	23	216	30	22	17	195
Siem Reap	-	27	31	185	-	28	28	243
Svay Rieng	13	17	10	73	15	18	23	159
<b>All provinces</b>	<b>14</b>	<b>16</b>	<b>23</b>	<b>137</b>	<b>15</b>	<b>18</b>	<b>19</b>	<b>135</b>
<i>PAP Province</i>	<i>14</i>	<i>22</i>	<i>17</i>	<i>119</i>	<i>16</i>	<i>21</i>	<i>19</i>	<i>159</i>
<i>Non-PAP province</i>	<i>14</i>	<i>13</i>	<i>27</i>	<i>148</i>	<i>15</i>	<i>16</i>	<i>19</i>	<i>122</i>

ND1000: Number of days of outreach; AV1000: full vaccination of children under age of 1 year; VA\_12: Number of children under age of one year receiving vitamin A; VA-12-48: Number of children age 12-48 months received vitamin A.

There was little difference in outreach activities between 2003 and 2004. Three out of four indicators have slightly increased. There was no discernible difference between PAP and non-PAP provinces except for vaccination coverage. One should note though that in several provinces outreach activities were also supported by NGOs and UNICEF.

Table 6-3 summarizes the four main indicators for inpatient health service by province: (i) inpatient admissions per 1,000 inhabitants; (ii) inpatient days per 1,000 inhabitants; (iii) average length of stay; and, (iv) hospital mortality. These indicators have indicated the performance of the hospital.

Need to correlate with per capita RH hospital spending (cash and drugs) in PETS provinces!

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**Table 6-3.** Summary of inpatient health service by province (per 1,000 population)

Province	2003				2004			
	ADM	ID	ALOS	HM	ADM	ID	ALOS	HM
Kampong Cham	15	87	5.68	0.02	16	94	5.95	0.02
Kampong Speu	10	56	5.60	0.02	10	58	5.91	0.02
Kompong Thom	17	123	7.08	0.01	17	113	6.82	0.01
Kampot	12	65	5.44	0.02	14	72	5.18	0.01
Kep	22	92	4.53	0.00	10	44	4.67	-
Kratie	23	161	6.92	0.03	21	140	6.66	0.03
Takeo	17	115	7.00	0.02	21	129	6.10	0.02
Battambang	17	94	5.59	0.03	16	93	5.70	0.03
Bantey Meanchey	19	130	7.08	0.03	18	127	7.19	0.03
Prey Veng	11	61	5.49	0.01	13	74	5.53	0.00
Pursat	15	92	6.13	0.04	17	107	6.39	0.04
Phnom Penh	11	50	4.49	0.00	12	57	4.64	0.00
Mondulhiri	25	106	4.21	0.02	28	116	4.07	0.01
Rattanakiri	36	164	4.62	0.07	29	164	5.65	0.01
Stung Treng	28	155	5.56	0.02	26	166	6.36	0.02
Siem Reap	15	129	8.65	0.03	15	124	8.25	0.03
Svay Rieng	13	103	7.70	0.02	18	129	7.12	0.02
<b>All provinces</b>	<b>15</b>	<b>93</b>	<b>6.08</b>	<b>0.02</b>	<b>16</b>	<b>98</b>	<b>6.03</b>	<b>0.01</b>
<i>PAP Province</i>	<i>15</i>	<i>94</i>	<i>6.08</i>	<i>0.02</i>	<i>15</i>	<i>99</i>	<i>6.03</i>	<i>0.01</i>
<i>Non-PAP province</i>	<i>15</i>	<i>92</i>	<i>6.08</i>	<i>0.02</i>	<i>16</i>	<i>97</i>	<i>6.03</i>	<i>0.01</i>

ADM: hospital admissions per 1,000 population; ID: Average number of inpatient days per 1,000 population; ALOS: Average length of stay in hospital per patient; HM hospital mortality

Utilization of inpatient services in PAP provinces were slightly higher than non-PAP provinces. Statistical significance was not calculated due to small sample size.

## 6.2 Health services utilization aggregated at OD level

The source of data was DO3 forms from sample of 30 ODs. The summary of health outputs at OD level is similar to PHD – basic health services, outreach activity, and inpatient utilization. These outputs are compared between different types of budget financing scheme – PAP, Contracting, ADD, and non-ADD. Contracting ODs were classified in to two groups – newly contracting ODs (started in 2004) and old contracting ODs that were in place already in 2003. The data are summarized in the

Table 6-4, Table 6-5 and Table 6-6.

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**Table 6-4.** Summary of basic health service utilization per OD

Type of OD	Average Basic Health Service per Year			Per capita Health Basic services		
	2003	2004	% change	2003	2004	% change
PAP OD	94,281	105,763	11%	0.52	0.57	9%
Old Contracting OD	133,823	165,600	19%	0.92	1.03	10%
New Contracting OD	58,084	67,033	13%	0.36	0.57	36%
ADD	108,162	118,617	9%	0.60	0.64	6%
Non- ADD	97,443	102,104	5%	0.52	0.55	6%
<b>Total</b>	<b>101,836</b>	<b>113,020</b>	<b>10%</b>	<b>0.58</b>	<b>0.65</b>	<b>11%</b>

The average basic health service utilization was 101,836 and 113,020 consultations per year per OD in 2003 and 2004 respectively. The highest output was in old contracting ODs: 133,823 and 165,600 in 2003 and 2004 respectively. The highest increases from year to year were in the contracting ODs. One should note that the newly contracting ODs were implemented in poorer and remote regions with low baseline utilization rates and full transfer to contractor's authority for the new contracting ODs took place only in late 2004 or even in 2005 explaining the low performance in 2003 and slower rate of increase in 2004. Average basic health service utilization per capita was 0.58 consultations per year in 2003, increasing by 11 per cent to 0.65 consultations per year. The highest basic health service per capita was in old contracting OD (0.9 in 2003 and 1.03 in 2004) whereas the lowest one in 2003 was the newly contracting OD with the same explanation as above. How come that the referenced new contracting increase was per OD 13% and per capita 36% - the population change was for the same OD, did the population change that much?

The outreach activity outputs are represented by four main indicators (all expressed per 1,000 population): (i) number of outreach days; (ii) number of children less than one year receiving full vaccination; (iii) number of children less than one year receiving Vitamin A; (iv) number of children receiving Vitamin A. There was no significant difference in outreach activities between 2004 with 2003. But what appears to be consistent is better performance in contracting districts. Table 6-5.

**Table 6-5.** Outreach activities by different OD financing modality (per 1,000 population)

Type of OD	2003				2004			
	ND1000	AV1000	VA 12	VA 12 48	ND1000	AV1000	VA 12	VA 12 48
PAP OD	16	20	15	101	17	20	22	162
Old Contracting OD	37	24	20	189	24	23	17	163
New Contracting OD	5	18	21	151	23	18	22	111
ADD	16	15	22	145	14	17	19	126
Non- ADD	10	13	26	229	10	14	18	144
<b>Total</b>	<b>17</b>	<b>18</b>	<b>20</b>	<b>146</b>	<b>17</b>	<b>19</b>	<b>20</b>	<b>141</b>

ND1000: Number of days of outreach; AV1000: full vaccination of children under age of 1 year; VA\_12: Number of children under age of one year receiving vitamin A; VA-12-48: Number of children age 12-48 months received vitamin A

For inpatient health services, four selected indicators were analyzed: (i) bed occupancy rate; (ii) inpatient admissions per 1,000 population per year; (iii) inpatient day per 1,000 population per year; (iv) average length of stay in hospital. Table 6-6.

**Table 6-6.** Inpatient health services by type of financing OD

Type of OD	Bed Occupancy rate		Inpatient per 1000		Inpatient day per 1000		ALOS	
	2003	2004	2003	2004	2003	2004	2003	2004
PAP OD	60%	63%	17	18	139	143	8.17	7.77
Old Contracting OD	106%	101%	38	25	128	118	4.91	4.72
New Contracting OD	44%	60%	5	26	46	110	8.85	6.23
ADD	57%	54%	17	15	112	103	6.99	6.57
Non- ADD	53%	56%	10	11	58	62	6.26	6.43
<b>Total</b>	<b>63%</b>	<b>64%</b>	<b>18</b>	<b>18</b>	<b>112</b>	<b>114</b>	<b>7.20</b>	<b>6.62</b>

There is no discernible differences in inpatient care performance per funding modality except in established contracting ODs. In these ODs the bed occupancy rates are significantly higher, the productivity of hospital bed significantly better and population's utilization of inpatient care significantly higher than in other ODs. This suggests that it is not only the modality of budget disbursement (contracting is funded through PAP) affects the performance but also other managerial arrangements such as performance orientation and improved management plus additional resources funded by donors through contracting arrangements.

### ***6.3 Staff absenteeism and health services utilization at health facility level***

This section will discuss: (i) availability (absenteeism) of staff from the health facility at the time of PETS survey; (ii) health services utilization at the facility level; and, (iii) effectiveness of health centers as fixed point health services delivery to the catchment population.

#### **6.3.1 Absenteeism of staff in health facilities**

The absenteeism was recorded at the health facility level during the first hour of PETS team visit. As a rule, the visits took place during morning hours.

Table 6-7 and Table 6-8 summarize staff absenteeism by health facility (health center and referral hospital), by region (urban, rural, and remote<sup>12</sup>), by type of health financing (PAP, ADD, Non-ADD, Contracting OD) and by staff qualification.

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<sup>12</sup> Remote facilities are in low density areas – Rattanakiri, Mondulkiri and Stung Treng provinces.

**Table 6-7.** Percentage of absent staff by location and by health facility

<b>Location</b>	<b>Referral hospital</b>	<b>Health Center</b>	<b>All</b>
Urban	30%	16%	26%
Rural	24%	29%	28%
Remote	-	32%	32%
<b>All</b>	<b>29%</b>	<b>26%</b>	<b>27%</b>

The overall absenteeism rate was 27 percent with the highest rate in remote areas and the lowest in urban (

Table 6-7). The main reason given by the staff in health facilities was the outreach activities. This explanation would fit well to explain the higher absenteeism in remote areas but would not explain the higher absenteeism in referral hospitals compared to health centers. Referral hospitals were not engaged in outreach activities to the extent of health centers.

**Table 6-8.** Percentage of absent staff by type of OD and by type of health facility

Location	Referral hospital	Health Center	All
PAP	30%	26%	28%
Old contracting	14%	20%	18%
Newly contracting	7%	25%	17%
ADD	34%	27%	30%
Non-ADD	22%	25%	25%
<b>All</b>	<b>29%</b>	<b>26%</b>	<b>27%</b>

The lowest absenteeism was in the health facilities in contracting districts (Table 6-8). This is most likely explained by strong management by the contractor as well as with additional incentives provided by donors through contracting mechanism.

**Table 6-9.** Percentage of absent staff by qualification and by type of health facility

Qualification	Referral hospital	Health Center	All
Medical Doctor	38%	13%	35%
Medical Assistant	44%	33%	40%
Secondary Nurse	24%	22%	23%
Primary Nurse	23%	29%	27%
Secondary midwife	22%	25%	24%
Primary midwife	23%	20%	21%
Other	23%	26%	24%
Do not know <sup>13</sup>	95%	59%	73%
<b>All</b>	<b>29%</b>	<b>26%</b>	<b>27%</b>

The absenteeism rate was higher among highly qualified staff such as medical doctors and medical assistants. Absence of this staff is likely to impair health facility's ability to provide adequate services as they are integral for providing higher level health services to the population and supervising lower level staff. From other studies and common knowledge, significant number of missing staff was engaged in private practice off site because of low incentives from civil service pay. Medical doctors and assistants have better opportunities to earn private income than lower level health professionals fitting well the higher absenteeism rates among these groups.

<sup>13</sup> Respondent did not know the qualifications of particular missing staff.

### 6.3.2 Health service utilization by types of health facility

The health service utilization data was extracted from the HIS forms of HC1 (health center level) and DO1 (referral hospital level).

#### (a) Health center: basic health service

Health centers provided to their catchment population basic outpatient health services defined in the Minimum Package of Activities. Standard catchment area was 10,000 population according to the health coverage plan. The services were provided from the health centre (fixed service delivery point) and through outreach activities. Table 6-10 below summarizes utilization of health center services according to type of OD financing management scheme.

**Table 6-10.** Summary of monthly basic health service per health center by type of budget management mechanism

	2003					2004				
	OPD	ANC	PNC	BSP	ODH	OPD	ANC	PNC	BSP	ODH
PAP (excl. contracting)	556	78	173	108	6	640	84	15	12	6
Old Contracting	687	71	20	117	4	804	75	30	123	8
New Contracting	433	29	12	98	1	504	41	11	83	2
ADD	439	60	11	141	1	526	63	15	138	1
Non-ADD	343	46	8	136	2	413	47	8	168	1
All	493	62	59	124	3	583	67	16	128	4

OPD: number of outpatient consultation; ANC: Ante-Natal Care; PNC: Post Natal Care; BSP: Birth Spacing Service; ODH: Number of health facility deliveries.

The best performance for several basic health service outputs was in the health centers in the established contracting ODs both in 2003 and 2004 whereas the lowest was in the health centers in districts without budget management innovations. One notable exception to this observation is the birth spacing services that may be due to direct support from donor supported NGOs that were not captured in PETS. It is difficult to attribute different levels of performance to health financing mechanism only. The significantly higher performance in contracting districts could be linked to managerial extras (strong performance orientation and better capacity) as well as additional incentives provided by contractors to staff.



**Table 6-11.** Summary of monthly basic health service per health center by location

	2003					2004				
	OPD	ANC	PNC	BS	ODH	OPD	ANC	PNC	BS	ODH
Urban	662	122	13	79	9	800	132	17	84	9
Rural	451	48	78	144	1	537	52	17	146	2
Remote	393	2	3	56	1	349	24	3	61	1
<b>All</b>	<b>493</b>	<b>62</b>	<b>59</b>	<b>124</b>	<b>3</b>	<b>583</b>	<b>67</b>	<b>16</b>	<b>128</b>	<b>4</b>

OPD: number of outpatient consultation; ANC: Ante-Natal Care; PNC: Post Natal Care; BSP: Birth Spacing Service; ODH: Number of health facility deliveries.

Table 6-11 summarizes five key health service indicators by location of the health center. As could be expected, utilization of health centre services was highest in more densely populated areas and lowest at remote health centers. Overall, there was a 18% increase in essential health service delivery in the sampled health centers from 2003 to 2004. **Can we link any of this performance to public expenditure?**

**(b) Inpatient health services at referral hospital level**

According to health coverage plan ODs typically cover a population of 100,000. In general there was one referral hospital in each OD. In a few ODs there is no referral hospital. In the sample of 30 ODs reviewed by PETS, there were 29 referral hospitals. Table 6-12 provides overview of the key indicators of inpatient service by type of financing OD. Note that these indicators are different from what was obtained from the OD consolidated database level (Table 6-6). **This is because ... ?**

**Table 6-12.** Summary inpatient health service by type of financing OD

	Bed Occupancy rate		Inpatients per month		Inpatient days per month		ALOS	
	2003	2004	2003	2004	2003	2004	2003	2004
PAP OD	53%	58%	227	250	1,775	1,946	7.83	7.79
Old Contracting OD	95%	96%	277	295	1,464	1,487	5.28	5.03
New Contracting OD	27%	50%	78	118	417	676	5.35	5.71
ADD	48%	51%	195	199	1,447	1,500	7.43	7.55
Non- ADD	57%	68%	96	103	529	631	5.51	6.15
<b>Total</b>	<b>53%</b>	<b>58%</b>	<b>193</b>	<b>205</b>	<b>1,335</b>	<b>1,418</b>	<b>6.93</b>	<b>6.91</b>

As already noted on several occasions before, the established contracting ODs post the best performance. It is also interesting to note the observed improvement in performance in the newly contracted ODs (that were not contracted in 2003 but were in 2004) where bed occupancy rates doubled between 2003 and 2004.

Table 6-13 summarizes key indicators of inpatient care by location. Referral hospitals in Phnom Penh or provincial town were classified as urban ODs in the sample.

**Table 6-13.** Summary referral inpatient health service by location

	Bed Occupancy rate		Inpatients per month		Inpatient day per month		ALOS	
	2003	2004	2003	2004	2003	2004	2003	2004

Urban	47%	50%	252	253	1,691	1,762	6.72	6.98
Rural	65%	74%	141	167	1,026	1,138	7.26	6.83
<b>Total</b>	<b>53%</b>	<b>58%</b>	<b>193</b>	<b>205</b>	<b>1,335</b>	<b>1,418</b>	<b>6.93</b>	<b>6.91</b>

Rural hospitals had higher bed occupancy rates but fewer patients and longer stays than urban hospitals. One should note that all contracting ODs were located in rural areas and impact the aggregate rural indicators.

### 6.3.3 Who and from where were the patients who accessed health facilities

PETS reviewed the clientele of the the health services based on registration documents in the sample of health facilities. Two questions were asked: (i) clients to the health facility in terms of gender and age; and (ii) where they came from.

#### (a) Who were coming to health facility?

Table 6-14 and Table 6-15 provide an overview on the gender breakdown of health facility visits. The government health facilities served more women than men. The gender bias was more pronounced at the health centre level and urban setting. Further analysis by age cohort revealed that health services utilization was balanced in early ages, gender bias emerged for the reproductive age cohort of 15-45, and then bias declined for older age groups but still remained tilted towards women. This trend likely reflected the public health policy priorities on reproductive health. Can we also have a table on utilization by age cohort (women seem to be priority, are children as well?)

**Table 6-14.** Utilization of health facilities by gender

Location	Health center		Referral hospital	
	Male	Female	Male	Female
Urban	26%	74%	39%	61%
Rural	32%	68%	47%	53%
Remote	33%	67%	-	-
<b>All</b>	<b>30%</b>	<b>70%</b>	<b>42%</b>	<b>58%</b>

**Table 6-15.** Utilization of health facilities by age cohort and gender

Age Cohort	Health center		Referral hospital	
	Male	Female	Male	Female
0-5 years	51%	49%	54%	46%
5-16 years	48%	52%	54%	46%
16-30 years	19%	81%	38%	62%
30-45 years	22%	78%	38%	62%
More than 45	39%	61%	41%	59%
<b>All</b>	<b>30%</b>	<b>70%</b>	<b>42%</b>	<b>58%</b>

**(b) Where were clients coming from?**

PETS linked client profiles recorded in the patient registration book in the health centers with the distance and population of the client's residence village to analyze to what extent health centers are effective in serving their catchment populations. Table 6-16 summarizes the PETS findings in the sample of 187 health centers.

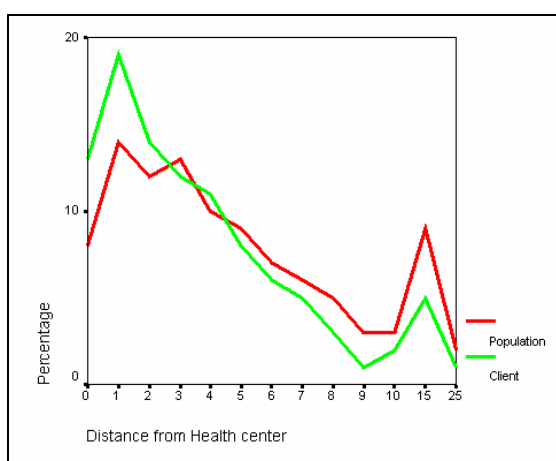
**Table 6-16.** Visits to health centre by distance from patient's residence

Distance of clients' village from HC	Frequency	Percent	Valid Percent	Cumulative Percent
0 - 0.5 km	10,679	9.0	13.1	13.1
0.5 - 1.5 Km	15,398	13.0	18.9	32.1
1.5 - 2.5 Km	11,184	9.4	13.7	45.8
2.5 - 3.5 Km	9,975	8.4	12.3	58.1
3.5 - 4.5 Km	8,751	7.4	10.8	68.8
4.5 - 5.5 Km	6,396	5.4	7.9	76.7
5.5 - 6.5 Km	4,511	3.8	5.5	82.2
6.5 - 7.5 Km	3,996	3.4	4.9	87.2
7.5 - 8.5 Km	2,517	2.1	3.1	90.2
8.5 - 9.5 Km	1,148	1.0	1.4	91.7
9.5 - 10.5 Km	1,936	1.6	2.4	94.0
10.5 - 20 Km	3,887	3.3	4.8	98.8
20 - 50 Km	660	.6	.8	99.6
More than 50 km	302	.3	.4	100.0
<b>Total</b>	<b>81,340</b>	<b>68.5</b>	<b>100.0</b>	
<i>Missing data</i>	<i>37,482</i>	<i>31.5</i>		

Note that 31.5 percent of patient records in the sample did not have village of residence. The reasons given by the health staff were that the patient may have lived outside coverage area or simply the patient profile was not recorded in full. Based on the 69 percent of the visits, the average distance from the health center to village of patient was 4.16 km. 69 percent health center clients came from within the 4 km radius, 82 percent came from less than 6.5 kms from the health center. Only 6 percent of the clients were from more than 10.5 km from the health center.

The Figure 6-2, Figure 6-3, Figure 6-4 and Figure 6-5 compare the share of patients in health centers with the share of respective population by distance of residence from the health centre. The relative share of patients was higher from nearer populations, the gap was the highest for the radius of 4.5 km where a cumulative 69% of patients came from 57% of population. As one would expect, the differences were smaller for urban health centers and higher for the remote health centers with sparser population. In all cases, distance around 4 kms is the cut-off point where the health centers became more difficult to access. For the remote health centers, the access becomes particularly difficult for populations residing more than 10 kms from the health centre. This should have implication on planning for outreach activities to ensure coverage of population with essential health services.

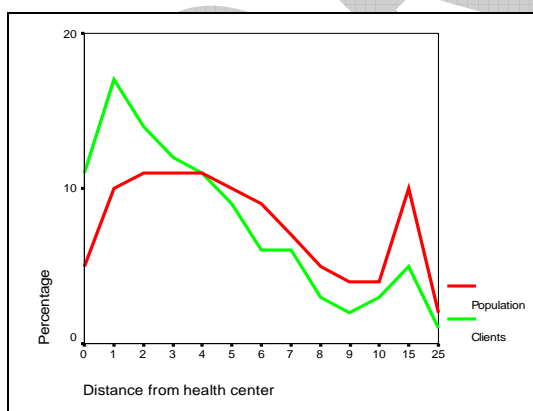
**Figure 6-2.** Share of patients and population by distance from the health center.



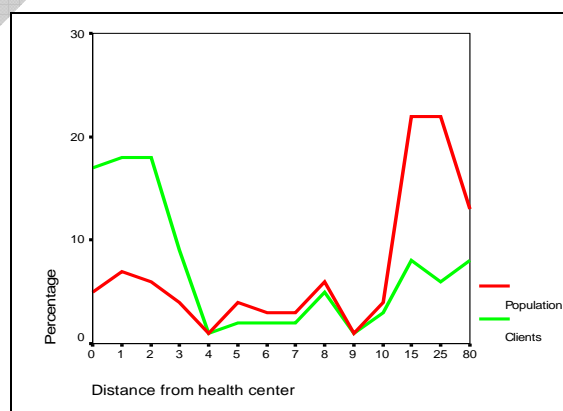
**Figure 6-3.** Share of patients and population by distance from the urban health center.



**Figure 6-4.** Share of patients and population by distance from the rural health center



**Figure 6-5.** Share of patients and population by distance from the remote health center

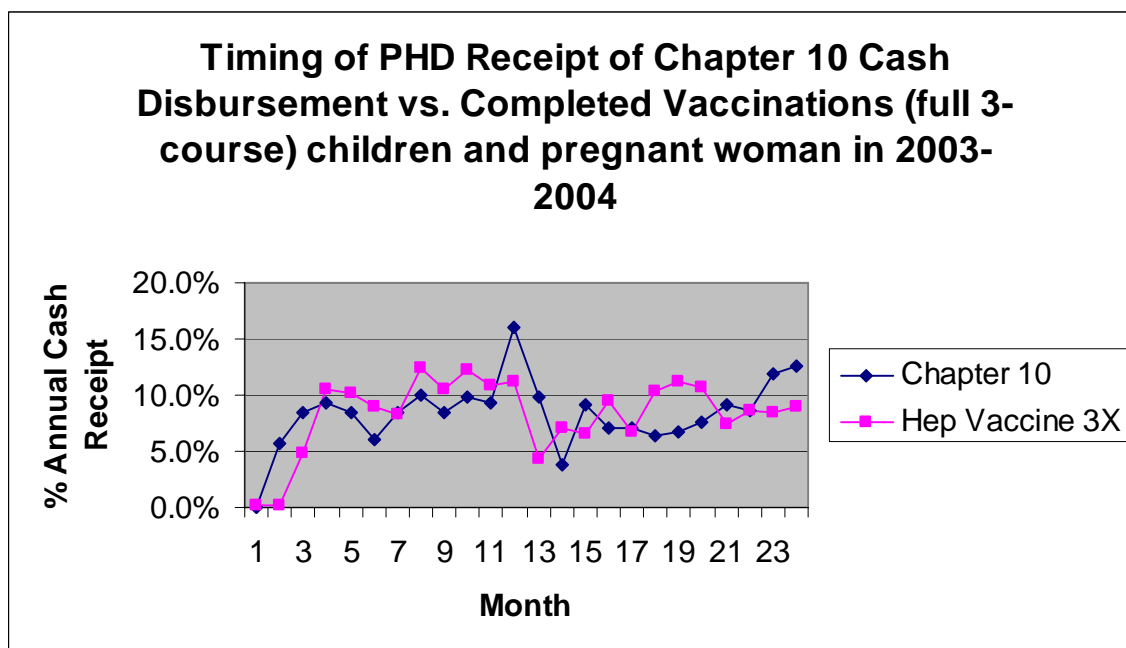


### 6.3.3 Impact of budget disbursement delays on delivery of services

Budget disbursement delays were discussed in the Chapter 5.1.4 Disbursement delays (page 74) Coefficients of correlations were calculated between the timing of cash disbursement of Chapter, 10, 11, 13 and 31 and the timing of outpatient and women's health indicators, in-patient statistics, vaccinations of pregnant, non-pregnant and

children and other services of PHD such as total non-malaria tests at the PHD aggregate level. Moderate to strongly positive statistically significant correlations were reported.

**Figure 6-6.** Relationship between budget disbursement and completed hepatitis vaccination.



At the PHD aggregate level, the timing of Chapter 10 cash disbursement was moderately positively correlated with the timing of post natal care ( $r=0.613$ ), obstetric delivery by health facility including health center, referral hospital and national hospital ( $r=0.574$ ), 3-course hepatitis vaccination of children and pregnant woman ( $r=0.519$ ) (Figure 6-6) and tetanus vaccination TT3 of non pregnant woman ( $r=0.596$ ). The timing of Chapter 11 cash disbursement was moderately positively correlated with the timing of birth spacing ( $r=0.609$ ), 3-course hepatitis vaccination of children and pregnant woman ( $r=0.673$ ) and total number of non-malaria laboratory tests (0.554). The timing of Chapter 13 cash disbursement was moderately positively correlated with the timing of tetanus vaccination TT3 of non pregnant woman ( $r=0.501$ ). The timing of Chapter 31 cash disbursement was moderately positively associated with the timing of post natal care ( $r=0.524$ ) and strongly positively associated with inpatient referral ( $r=0.764$ ) and tetanus vaccination TT3 of non pregnant woman ( $r=0.863$ ). The above correlations do not necessarily suggest that variations in the timing of government cash disbursement of Chapter 10, 11, 13 and 31 caused changes in outputs, but it does indicate an association between the variables. However, the interviews with health officials suggested that budget delays and shortfalls led to cutbacks in outreach activities.

## 7. CONCLUSIONS AND RECOMMENDATIONS

Public expenditure in the health sector face several limitations, some of which are generic to public finance management in Cambodia, while some are health sector specific. Under the Public Finance Management reform program several issues are being addressed that will also benefit the health sector. These include more realistic planning as well as , enhanced capacity to collect revenues and cash management, coupled with an emphasis on streamlining management procedures and improving the timeliness of budget disbursements. The Public Finance Management reform program is part of the Joint Monitoring Indicator framework agreed by the Royal Government of Cambodia and development partners for monitoring the implementation of the National Strategic Development Plan. Specific conclusions and recommendations related to the health sector are below.

**Parallel budgeting processes need to be linked and streamlined.** Duplicate processes are applied annual planning and budget formulation process in the health sector. Activity based Annual Operational Planning process is directly linked to the priorities defined in the National Health Sector Strategic Plan but this planning appears to have had little impact on budget norms and budget formulation directed by the Ministry of Economics and Finance. The program based budgeting initiative introduced by the MOEF would allow better link public health priorities to the public finance allocation. However, program budgeting also needs to make sure that it covers overall management and administration of health sector as well as operation of essential health services that may not necessarily fit under the disease/health priority based programs.

**Health service providers (health centers and referral hospitals) need transparent budgets.** PETS revealed that there were no budgets for health services below provincial level. This made it impossible to compare actual expenditures with budgets at health facility level. This also makes it impossible to apply any grass root level accountability mechanisms for budget execution from communities. It would also make it impossible to effectively plan and manage budgets by OD and health facility managers. It also makes it impossible to have an informed policy debate on improved financing of health services provided by health centers and referral hospitals. The proposed program budgeting initiative in the health sector includes a ‘Health Services’ program that could be used for the budgets of health facilities. For example, the program budgeting structure in the education already sector includes sub-programs for operational budgets for schools.

**Innovative public finance management modalities need link with performance and strengthened institutional capacity in order to be effective.** PETS found that PAP, ADD and contracting ODs did receive more funding than districts with regular Budget for Chapter 11. The same applies to the referral hospitals and health centers in in respective districts. But there appeared to be no benefit of receiving the funds faster, delays of receiving funds under Chapter 13 that included the PAP and ADD funding were actually longer than under Chapter 11. However in term of service outputs, no consistent differences between ODs with innovative budget disbursement mechanisms vs tradition ODs were found. The PETS observed however, that the contracting districts posted significantly better performance in service delivery outputs presumably due to improved

management, strong performance orientation and/or additional performance incentives to staff.

**Policy debate and decisions are needed for appropriate level and sources of financing for operation of essential health services.** PETS found that only 35 and 32 percent of public expenditures on health was actually spent on financing salary and non-salary operational expenditures of health centers and referral hospitals in 2003 and 2004 respectively. This translated into actual US\$ equivalent of 1.23 and 1.20 per capita public expenditures on essential health services. When donor funds and user fee revenues were included, the actual per capita expenditures amounted to US\$ equivalent of 1.60 and 1.73. This is up to 2-3 times less than USD 3-6 per capita cost of contracting for achieving reasonable access to essential primary health care for the population. The experience with contracting cost could serve as a proxy for funding needs for essential health services. Urgent debate is needed about the appropriate funding of essential health services to the population in health centers and referral hospitals and possible sources and channels of such funding.

**User fee revenues need to be integrated into budgeting and budget execution monitoring process.** User fees are playing more significant role in financing additional incentives for staff and non-salary operational costs of health facilities. Equity funds and nascent community based health insurance and social health insurance schemes are increasingly paying the fees on behalf of their members. Although regulations exist about the use of these additional revenues in health facilities, the PETS revealed that accountability was very weak. The user fees need to be integrated in the health services budgeting and monitoring processes.

**Financial management capacity building is sorely needed.** PETS revealed that most of the financial management staff at the all levels in the provinces do not have financial management or accounting qualifications. Accounting records under the provincial level were of very poor quality. Part of the reason for discontinuing innovative budget disbursement mechanisms in the health sector for schemes such as PAP was the lack of capacity at lower levels to properly account for advances received. The health sector needs to develop and implement a comprehensive capacity building program for improving the skills of staff in financial management systems. In the short term, this would require short term training in book-keeping, basic principles in accounting and document handling accompanied with on-job coaching and supervision. In the longer term, the financial management positions need to be filled with appropriately qualified staff in place of health professionals. Without addressing the capacity issue, none of the proposed steps for improving health services budgeting and budget monitoring can be implemented.

**Reducing risk of leakages requires comprehensive approach.** Several factors contribute towards the enabling environment for public expenditure occurring in the health sector and need to be addressed to reduce the risk for leakages. Better overall revenue planning and cash management in the Treasury system should reduce cash shortages to avoid creating a market for facilitation fees to be charged to line departments making claim on limited funds. Having more transparent budgets for health facilities would also allow more effective community accountability and better informed lower level managers who would be able to successfully demand their planned share of funds.

Reducing the share of cash transaction and instead channel more funds through the banking system would also improve the transparency of funding movements.. Reducing bureaucratic red tape and streamlining expenditure approval processes would also help to reduce both delays in budget disbursement and the opportunity to charge facilitation fees. Aligning the expenditure decision making authority more with the accountability for service results would allow for more transparent and responsible prioritization of spending. Audit and review mechanisms need to be streamlined and include questions about efficiency and effectiveness of public accounts by making sure that that public procurement provides good value by examining the relationship of financial inputs to health service and outputs – in conjunction with a robust compliance and audit framework that is able to enforce sanctions and penalties for fraud would greatly improve the effectiveness checks and balances.

**Urgent measures are needed to improve incentives for health services staff.** PETS estimated that only 28% and 27% of actual expenditures on health services (including user fee income) was spent on staff cost in 2003 and 2004 respectively. This is a reverse proportion of common international practice. This is not sufficient incentive for staff to work for the government health services and at least partly explains high absenteeism rates among health staff, particularly highly qualified medical doctors and medical assistants. Low salaries also lead to potentially inefficient use of mission fees and daily allowances for training which are diverted to pay for facilitation fees to supplement the income of civil servants who are delegated to authorize expenditures at the provincial and operational district level. Experience with contracting schemes in health sector, and labor market survey conclusions for incentives for Ministry of Health staff, the Merit Based Pay Initiative in the Ministry of Economy and Finance, as well as Priority Mission Groups - all indicate that the incentive packages would need to be increased up to 4-5 times to ensure both commitment and increased performance of staff.. Reforming staff incentives in the health sector need to be included in discussions around the appropriate level of financing for essential health services, potential sources and means of funding as well as the debate regarding level of autonomy in human resource decision-making for health managers at provincial, OD and health facility levels.

**Policy discussions and debate is needed on how to best reach outlying populations with essential primary health care.** Health centers were effective as fixed point service providers for population living within four kilometers from the health center. Distance of more than 10 kms proved to be particularly difficult for the population to access the health center. A proper balance between fixed point delivery and outreach activities needs to be found to ensure adequate coverage of catchment population with essential primary health care. Serving outlying populations need to be also supported with appropriate financing modalities. This in particular applies to the currently ongoing discussion on eligible use of budget funds to support health center outreach activities.

**More transparent policy is needed for managing the interface between vertical disease specific national programs and horizontal health service delivery by health centers and referral hospitals.** Currently this interface is blurred. The PETS could not find evidence of national programs contributing towards public expenditures at health facility level unless they ran their own health facilities (e.g. a referral hospital for maternal and child health care in Phnom Penh by NCMCH). However, national



programs may be providing direct incentives to selected staff and require direct accountability in terms of reporting. If such payments occur, are not accounted at the health service delivery level and they are also not subject to management accountability to the health facility or OD managers. As a first step, the national programs should clearly describe in their national policy documents their interface with the health service delivery level (health centers and referral hospitals) and identify what, if any, funding is provided for health services staff in their budgets and expenditure reporting. In the medium and longer term, the respective roles of vertical national programs and health service delivery organizations needs to be clarified. Along with the strengthening of horizontal service delivery, the national programs should predominantly focus on their key roles in their respective focal points: policy and technical guideline development; designing and implementing large population based public health campaigns; monitoring; training; and supervision/monitoring/evaluation of the effectiveness of health system performance and evaluation.

**Policy discussions are needed to determine the most effective and cost-effective ways to follow-up on PETS results and experience in public expenditure tracking in the health sector.** Conducting PETS was a complex, time consuming and costly exercise. Debate is now needed what elements of the PETS could be streamlined into routine budget management and monitoring mechanisms. Smaller scale and specific follow-up studies may be feasible to monitor progress in selected areas. *Further options to be discussed during the review process.*

## **ANNEX 1. Question Guide for Semi-structured Interviews for Qualitative Survey**

### **I. Resource Flow**

1. Please tell us the names of donors (government and other donors; providing in-kind or in-cash support) to your programs
2. What are the activities supported by each of these donors?
3. Please tell us in detail on the flow of funds from each donor? Probe: from the very top to the lowest level, e.g. health center level
4. Have you had any problem in receiving funds from each of these donors? Probe: the delay of funds, the amount of funds received is not according to the amount requested, informal deduction of the funds received (quantify?). The interviewers try to ask and record one donor at a time until all donors are covered.
5. Have you had any problem in providing funds to lower levels? This question is asked only if the institution is responsible for providing funds to lower levels. Probe: the capacity of the lower level in handling the funds, funds management problems at the lower level ...mismanagement of the funds, ...
6. The interviewer reviews four sets of documents on four requests for funds (two requests of the government funds and two requests of the non-government funds) by the PHD to their higher level. The purposes of the review are to have information on the number and name of fund gatekeepers applying to the requests, and how long it takes at each gatekeeper.

### **II. Resource Allocation**

7. How does your facility/center/OD/PHD prepare the annual budget? Probe: you have instruction to follow, or you make it up by your own way, or somebody else prepares it for you.
8. Do you think that your facility have a fair share of the total national budget in your OD or in your province? If yes, why; if not, why not.
9. If there is a cut in your proposed budget proposal (national budget) what would you (PHD or OD or the national program) do? How do you re-budget your budget? What are the most important items in your budget.
10. You are responsible for transferring further to the lower level; in the case there is limited of funds received and a delay in funds received, how you decide to give this limited amount of funds to different recipients (e.g. if you are provincial treasury

whether to give the funds to the supplier or to the PHD. If you are the PHD whether you give the funds to PHD bureau or to the OD. If you are OD, whether to give the funds to referral hospital, OD bureau or health centers). You may give to all of them, but may be in different amount ...

11. In each provincial treasury, PHD, OD, the interviewers will review four documents on four batches of funds received and record how the received funds were allocated or transferred to different places/level.
12. For the national program, how do you allocate your resources to different projects and to different level?

### **III. Transparency and Accountability**

13. For PHD and OD, how you procure your supplies (drugs, stationeries, medical supplies, gasoline, and kitchen supplies)? Probe for information on the procurement process and whether it is done according to the guidelines or not.
14. Do you think that the current procurement practice brings you a competitive price and good quality products? Please tell us examples to illustrate your comments? E.g. higher price than the market price, how much higher in term of percentage.
15. For HC and RH staff, ask the question 14 again. Probe whether they are happy with the goods procured, and why and why not. Ask on specific products, such as gasoline and drugs (use user fees to purchase drug). If there is any lost to this process, e.g. unofficial cut in the amount of good supplies (try to quantify in percentage of rate).
16. Ask the director of the facility and then selected staff of the facility on how the RH and HC use the user fees, particularly the 50% for the operation cost of the facility. Look, whether the RH and HC have proper records on the use of user fees. Ask the respondents whether they are happy with the current practice of the use of user fees, why and why not, how could it be improved.
17. Ask each of the national programs, PHD to HC, how they keep their financial records, whether the records are easily accessible when needed.
18. Department of Budget and Finance and MOEF; how do the procurement of drugs and medical supplies take place? In all the cases, ask whether the current practice has any problems, try to ask the respondents so that the interviewers have full information on the problems, and have information on how the problems should be addressed.
19. Ask NCHADS on how does NCHADS procure drugs and medical supplies using non-government source, such as GF? How does NCHADS keep and distribute those drugs and medical supplies, whether the current practice has any problems, why and how we should address the problems.

**IV. Coping Mechanism:**

20. How have you coped with the delay of funds? Probe: get/borrow the money from somewhere, paying interest, and how it is recorded in the books, or are goods purchased on credit but with a higher price?
21. What are the role of user fees in this regards, to what extent do the user fees help relieve the problems?
22. How do you address the issue of informal deduction of the funds received, e.g. after giving part of the received funds to those people? Probe: you have reduced funds, how you record this in your books, how you adjust the expense, or what are the consequences? ...
23. How does the delay and formal/informal deduction of funds affect you activities? Which activities are more likely to be affected?

## ANNEX 2. Per Capita Calculations and Population Methodology

**Table 1. Cambodian Provincial Population in 2003 and 2004**

Province	2003	2004
Banteay Meanchey	669,961	675,463
Battambang	918,173	948,706
Kampong Cham	1,718,264	1,746,612
Kampong Speu	675,932	690,963
Kampong Thom	616,370	624,846
Kampot	565,481	575,013
Kep Ville	33,625	34,065
Kratie	280,521	285,251
Mondulkiri	43,067	47,391
Phnom Penh City	1,006,955	1,002,692
Prey Veng	1,050,743	1,065,550
Pursat	378,572	385,301
Rattanakiri	114,075	124,403
Siem Reap	762,816	776,978
Steung Treng	92,274	92,870
Svay Rieng	498,378	529,531
Takeo	862,342	881,940

*Source: SEILA Commune Database (CDB), Ministry of Planning*

**Table 2. Cambodian OD Population Estimates in 2003 and 2004**

Province	Name of OD	Population Data			
		HCP	% of OD sum	Seila 03	Seila 04
Kandal	PHD	1,068,648		1,161,443	1,185,791
	(OD sum)	1,183,500			
	OD Takhmao	193,073	16.3	189,475	193,447
	OD Saang	140,064	11.8	137,454	140,335
	OD Koh Thom	163,022	13.8	159,984	163,338
	OD Kean Svay	235,157	19.9	230,774	235,612
	OD Ksach Kandal	193,073	16.3	189,475	193,447
	OD Ang Snuol	87,848	7.4	86,211	88,018
	OD Ponhea Leu	94,398	8.0	92,639	94,581
	OD Muk Kam Poul	76,865	6.5	75,432	77,014
Kampong Cham	PHD	1,539,312		1,718,264	1,746,612
	(OD sum)	1,542,057			
	OD Kampong Siem	265,590	17.2	295,938	300,821
	OD Prey Chhor-kangmeas	171,873	11.1	191,512	194,672
	OD Cheung Prey-Batheay	168,638	10.9	187,908	191,008
	OD Chamkar Leu	149,882	9.7	167,009	169,764
	OD Tbang Khmum	175,641	11.4	195,711	198,940
	OD Ponhea Krek Dam Be	168,255	10.9	187,481	190,574
	OD O Reang Ov-Koh Sotin	87,982	5.7	98,035	99,653
	OD Memut	108,705	7.0	121,126	123,125
	OD Srey Santo- Kong Meas	139,114	9.0	155,010	157,568
	OD Kroch Chhmar-Steung Trang	106,377	6.9	118,532	120,488
Kampong Chhnang	PHD	418,489		436,743	444,475
	(OD sum)	418,489			
	OD KG Chhnang	279,460	66.8	291,650	296,813
	OD KG Tralach	139,029	33.2	145,093	147,662
Kampong Speu	PHD	574,597		675,932	690,963
	(OD sum)	574,597			
	OD KG Speu	266,488	46.4	313,485	320,457
	OD Oudong	98,731	17.2	116,143	118,726
Kampong Thom	OD Kong Pisey	209,378	36.4	246,304	251,781
	PHD	618,473		616,370	624,846
	(OD sum)	568,473			
	OD Kampong Thom	237,100	41.7	257,077	260,612
	OD Stong	116,542	20.5	126,361	128,099
Kampot	OD Baray-Santuk	214,831	37.8	232,932	236,135
	PHD	529,655		565,481	575,013
	(OD sum)	529,655			
	OD Kampot	122,330	23.1	130,604	132,806
	OD Chhouk	161,766	30.5	172,708	175,619
	OD Kangpong Trach	140,667	26.6	150,182	152,713

## Annex 2

Province	Name of OD	Population Data			
		HCP	% of OD sum	Seila 03	Seila 04
Kep Ville	OD Angkor Chey	104,892	19.8	111,987	113,875
	PHD	31,526		33,625	34,065
	(OD sum)	31,526			
Koh Kong	OD Kep	31,526	100.0	33,625	34,065
	PHD	127,521		126,595	130,562
	(OD sum)	127,521			
Kratie	OD Smach Mean Chey	55,172	43.3	54,771	56,488
	OD Sre Ambel	72,349	56.7	71,824	74,074
	PHD	248,312		280,521	285,251
Takeo	(OD sum)	248,312			
	OD Kratie	137,243	55.3	155,045	157,659
	OD Chhlong	111,069	44.7	125,476	127,592
Battambang	PHD	854,727		862,342	881,940
	(OD sum)	854,727			
	OD Don Keo	189,569	22.2	191,258	195,605
Bantay Meanchey	OD Kirivong	212,081	24.8	213,970	218,833
	OD Bati	179,807	21.0	181,409	185,532
	OD Ang Roka	116,295	13.6	117,331	119,998
Oudor Meanchey	OD Prey Kabass	156,975	18.4	158,374	161,973
	PHD	843,990		918,173	948,706
	(OD sum)	832,165			
Pailin Ville	OD Battambang	273,043	32.8	301,263	311,281
	OD Sangke	161,384	19.4	178,064	183,985
	OD Thmor Koul	188,667	22.7	208,167	215,089
Prey Veng	OD Mong Russey	159,173	19.1	175,624	181,464
	OD Sampov Loun	49,898	6.0	55,055	56,886
	PHD	650,812		669,961	675,463
Pailin Ville	(OD sum)	650,812			
	OD Mongkul Bory	235,181	36.1	242,101	244,089
	OD Or Chrov	183,398	28.2	188,794	190,345
Prey Veng	OD Thmor Pourk	109,585	16.8	112,809	113,736
	OD Preah Net Preah	122,648	18.8	126,257	127,294
	PHD	126,015		136,358	144,371
Prey Veng	(OD sum)	126,015			
	OD Samroung	126,015	100.0	136,358	144,371
Prey Veng	PHD	41,958		54,723	54,723
	(OD sum)	41,958			
	OD Pilin	41,958	100.0	54,723	54,723
Prey Veng	PHD	1,004,343		1,050,743	1,065,550
	(OD sum)	1,004,343			
	OD Prey Veng	194,491	19.4	203,476	206,344
Prey Veng	OD Neak Loeung	167,481	16.7	175,219	177,688
	OD Peareang	179,371	17.9	187,658	190,302
	OD Kampong Trabek	124,919	12.4	130,690	132,532
Prey Veng	OD Preah Sdech	105,734	10.5	110,619	112,178
	OD Kam Chey Mear	114,739	11.4	120,040	121,731
	OD Mesang	117,608	11.7	123,041	124,775

Province	Name of OD	Population Data			
		HCP	% of OD sum	Seila 03	Seila 04
Preah Vihear	PHD	130,902		137,002	141,749
	(OD sum)	130,902			
	OD Preah Vihear	130,902	100.0	137,002	141,749
Pursat	PHD	369,421		378,572	385,301
	(OD sum)	369,421			
	OD Sampov Meas	248,652	67.3	254,811	259,341
	OD Bakan	120,769	32.7	123,761	125,960
Sihanouk Ville	PHD	147,543		164,364	173,904
	(OD sum)	147,543			
	OD Sihanouk	147,543	100.0	164,364	173,904
Municipality PP	PHD	969,105		1,006,955	1,002,692
	(OD sum)	969,113			
	OD Kandal	275,294	28.4	286,044	284,833
	OD Chheung	225,775	23.3	234,591	233,598
	OD Lech	265,118	27.4	275,470	274,304
	OD Tbaong	202,926	20.9	210,850	209,957
Mundul Kiri	PHD	37,914		43,067	47,391
	(OD sum)	37,914			
	OD Sen Monorum	37,914	100.0	43,067	47,391
Rattanak Kiri	PHD	98,824		114,075	124,403
	(OD sum)	98,822			
	OD Rattanak Kiri	98,822	100.0	114,075	124,403
Stung Treng	PHD	80,208		92,274	92,870
	(OD sum)	80,208			
	OD Stung Treng	80,208	100.0	92,274	92,870
Siem Reap	PHD	749,474		762,816	776,978
	(OD sum)	749,474			
	OD Siem Reap	422,959	56.4	430,488	438,481
	OD Soth Nikum	227,696	30.4	231,749	236,052
	OD Kralanh	98,819	13.2	100,578	102,445
Svay Rieng	PHD	478,230		498,378	529,531
	(OD sum)	478,230			
	OD Svay Rieng	267,580	56.0	278,853	296,284
	OD Romeas Hek	117,992	24.7	122,963	130,649
	OD Chi Phu	92,658	19.4	96,562	102,598



### **ANNEX 3. References**

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