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The Kingdom of Cambodia Health System Review

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Preface

The Health Systems in Transition (HiT) profiles are country-based reports that provide a detailed description of a health system and of reform and policy initiatives in progress or under development in a specific country. Each profile is produced by country experts in collaboration with an international editor. In order to facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a profile.

A HiT seeks to provide relevant information to support policy-makers and analysis in the development of health systems. This can be used:

- to learn in detail about different approaches to the organization, financing and delivery of health services and the role of the main actors in health systems;
- to describe the institutional framework, process, content and implementation of health-care reform programmes;
- to highlight challenges and areas that require more in-depth analysis;
- to provide a tool for the dissemination of information on health systems and the exchange of experiences between policy-makers and analysts in different countries implementing reform strategies; and
- to assist other researchers in more in-depth comparative health policy analysis.

Compiling the profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health system and the impact of reforms. Because of the lack of a uniform data source, quantitative data on health services in Cambodia are based on a number of sources – the World Health Organization, United Nations Children’s Fund, The World Bank, Asian Development Bank, Cambodia National Institute of Statistics, Cambodia Health Information System website, and other relevant sources considered applicable to Cambodia’s context.

The HiT profiles can be used to inform policy-makers about the experiences in other countries that may be relevant to their own national situation. They can also be used to inform comparative analyses of health systems. This series is an ongoing initiative and material is updated at regular intervals. In-between the complete renewals of a HiT, the APO has put in place a mechanism to update sections of the published HiTs, which are called the “Living HiTs” series. This approach of regularly updating a country’s HiT ensures its continued relevance to the member countries of the region.

Comments and suggestions for the further development and improvement of the HiTseries are most welcome and can be sent to apobservatory@wpro.who.int. HiT profiles and HiT summaries for Asia Pacific countries are available on the Observatory’s website at http://www.wpro.who.int/asia_pacific_observatory/en/.

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Peer Reviewers on behalf of the Asia Pacific Observatory on Health Systems and Policies:

The Cambodia HiT study was reviewed by: Dr Timothy Johnston, Senior Health Specialist at the World Bank Human Development Unit; Professor Judith Healy, Australian National University; and Associate Professor Peter Hill from the School of Public Health at the University of Queensland.

List of abbreviations

ADB	Asian Development Bank
AFD	Agence Française de Développement
AFTA	Association of Southeast Asian Nations Free Trade Area
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal care
AOP	Annual Operational Plan
ARCE	artemisinin resistance containment and elimination
ARI	acute respiratory infection
ART	Antiretroviral Treatment
ASEAN	Association of Southeast Asian Nations
AusAID	Australian Agency for International Development (note: now DFAT)
BCG	Bovine Calmette-Guérin (tuberculosis vaccine)
BSP	Budget Strategic Plan
BTC	Belgian Technical Cooperation
c.	<i>circa</i> , about
CamEWARS	Cambodia Early Outbreak Warning and Response System
CEDHP	Centre for Educational Development for Health Professionals
CBHI	Community-Based Health Insurance
CDC	Centre for Disease Control and Prevention
CDHS	Cambodia Demographic Health Survey
cf.	compare
CMDG	Cambodia Millennium Development Goals
CMS	Central Medical Store
CPA	Complementary Package of Activities
C-section	caesarean section
CSES	Cambodia Socio-economic Survey
CSI	Client Satisfaction Index
CT	computed tomography

DALE	Disability Adjusted Life Expectancy
DFAT	Australian Government Department of Foreign Affairs and Trade
DFID	Department for International Development (UK)
DHF	Dengue (Haemorrhagic) Fever
DMFT	decayed, missing, filled teeth
DOTS	Directly Observed Treatment Short Course
DP	Dual Practice
DPT	diphtheria, pertussis and tetanus (vaccine)
EC	European Commission
ECG	Electrocardiogram
EmONC	Emergency Obstetric and Newborn Care
EPI	Expanded Program on Immunization
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
Fig.	Figure
FUNCINPEC	Front Uni National pour un Cambodge Indépendant, Neutre, Pacifique, et Coopératif (Royalist party)
GAVI	Global Alliance for Vaccines and Immunisation (note: now Gavi, The Vaccine Alliance)
GBD	global burden of disease
GDP	gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
HALE	Healthy Live Expectancy
HC	Health Centre
HEF	Health Equity Fund
HEFPA	Health Equity and Financial Protection in Asia
HepB	Hepatitis B
Hib	<i>Haemophilus influenzae</i> serotype b
HIP	Health Insurance Project
HIS	Health Information System
HISSP	Health Information System Strategic Plan
HiT	Health Systems in Transition
HIV	Human Immune-deficiency Virus
HMIS	Health Management Information System

HMN	Health Metrics Network
HR	Human Resources
HSP	Health Strategic Plan
HSSP	Health Sector Support Program
ICT	information and communications technology
ILI	Influenza like Illness
IMR	Infant Mortality Ratio
IPC	Institut Pasteur du Cambodge
IPD	Inpatient Department
ITN	Insecticide Treated Bed Nets
JAPR	Joint Annual Performance Review
JICA	Japan International Cooperation Agency
l.b.	live births
MCH	maternal and child health
MCV	measles-containing vaccine
MDG	Millennium Development Goal
MEF	Ministry of Economy and Finance
MMR	Maternal Mortality Ratio
MoEYS	Ministry of Education, Youth and Sports
MOH	Ministry of Health
MOLVT	Ministry of Labour and Vocational Training
MOP	Ministry of Planning
MoPoTsyo	Patient Information Centre
MOSVY	Ministry of Social Affairs, Veterans and Youth Rehabilitation
MPA	Minimum Package of Activities
MRI	magnetic resonance imaging
na	not available (data)
NCD	noncommunicable disease
NCHP	National Centre for Health Promotion
NGO	nongovernmental organization
NHIS	National Health Information System
NIS	National Institute of Statistics
NMCHC	National Maternal and Child Health Center
NH	National Hospital
NP-SNDD	National Program for Sub-National Democratic Development

NSSF	National Social Security Fund
NSSFC	National Social Security Fund for Civil Servants
OD	Operational District
ODA	Official Development Assistance
OOP	Out of Pocket (expenditure)
OPD	Outpatient Department
OSH	Occupational Safety and Health
P4H	Providing for Health
PAB	protected at birth
PBB	project-based budget, programme-based budget
PBF	Performance-based financing
PET	positron emission tomography
PHC	primary health care
PHD	Provincial Health Department
PLHA	People living with HIV/AIDS
PMRS	Patient Management and Registration System
Pol	Polio (vaccine)
PPP	purchasing power parity; public–private partnership
PRK	People’s Republic of Kampuchea
RACHA	Reproductive and Child Health Alliance
RDQA	Routine Data Quality Assessment
RGC	Royal Government of Cambodia
RH	Referral Hospital
RHAC	Reproductive Health Association Cambodia
RTC	Regional Training Centre
SDG	Service Delivery Grant
SHI	Social Health Insurance
SOA	Special Operating Agency
STEPS	STEPwise approach to Surveillance
STI	sexually transmitted infection
SUBO	subsidy scheme(s)
SWAp	Sector-Wide Approach
SWiM	Sector-Wide Management
TB	tuberculosis
TBA	Traditional Birth Attendant

THE	Total Health Expenditure
TSMC	Technical School for Medical Care
U-5	under five (years of age)
U-5MR	Under-five Mortality Rate
UHC	universal health coverage
UHS	University of Health Sciences
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNTAC	United Nations Transitional Authority in Cambodia
USA	United States of America
USAID	United States Agency for International Development
VAT	value-added tax
VCCT	Voluntary Confidential Counselling and Testing
VHI	Voluntary Health Insurance
VIA	Visual inspection with acetic acid
VHSG	Village Health Support Groups
WB	World Bank
WDI	World Development Indicators
WHO	World Health Organization
YLL	Years of Life Lost

Abstract

Cambodia is about to become a lower middle-income country. Significant gains have also been made in the rebuilding of the health system through an extended process of health reform beginning in the 1990s. Health status has substantially improved since 1993. Mortality rates significantly dropped and life expectancy at birth was 62.5 years in 2010, a 1.6-fold increase from 1980. Cambodia is on track to achieve the Millennium Development Goal targets.

Since the beginning of the reform, the Ministry of Health (MOH) has increasingly assumed the leading role in health-system planning and development, in partnership with the development agencies. The MOH is solely responsible for the organization and delivery of government health services, through 24 MOH Provincial Health Departments, 81 health Operational Districts each with a Referral Hospital delivering a Complementary Package of Activities, and a number of Health Centres providing a Minimum Package of Activities.

Reforms in health service management and administration are being implemented. A first step is the conversion of almost one third of all health Operation Districts to the status of Special Operating Agencies, which enjoy a greater degree of autonomy in human resource and financial management and receive additional funds through a direct Service Delivery Grant. The conversion is to provide greater management autonomy, increased staff incentives and more efficient service delivery.

The Cambodian health market has a wide variety of health-care providers. The emphasis placed on economic growth has not been fully reflected in government support to the development of the social sectors, including health care. One consequence has been the rapid growth of a disparate and loosely regulated but extensive sector of private health-care providers. While the public sector is dominant in the promotion and prevention activities for essential reproductive, maternal, neonatal and child care health, and major communicable diseases control, the private practitioners remain particularly frequented for curative care. According to the 2010 Cambodian Demographic and Health Survey., only 29% of unwell or injured patients sought care first in the public sector, while 57% sought care for their last episode at private providers.

While government funding for health care has increased significantly, it remains at only 1.4% of GDP. Official development assistance is stable at 15–20% of total health expenditure. The out-of-pocket payments provided 61% of the total health expenditure. National data indicate that the overwhelming proportion of out-of-pocket expenditure is paid to private providers. A number of demand-side financing schemes provide social health protection, including Health Equity Funds, voucher schemes, voluntary community-based health insurance and (to a small extent) private health insurance.

An ongoing process of national health reform began in the 1990s. Reform has been guided by a long-term process of national health planning. The most recent is the Health Strategic Plan for 2008–2015. Development partners have helped collectively to shape health policy-making, in support of MOH objectives outlined in the Health Strategic Plans. Recent health reforms have focused on strengthening the MOH's capacity to manage health-service delivery. Providing access for the poor is at the heart of health reforms.

The longer-term health system aim is to move towards universal coverage. There are a number of challenges remaining.

Achieving the goal of universal coverage requires improved collection and use of health care data and a long-term view. The improvements in government commitment to health need to be maintained. The heavy reliance on out-of-pocket spending must decline. The adoption and effective implementation of the draft Health Financing Policy is the first important step.

Donor support is essential, but greater alignment of donor programmes to the national priorities is needed. This is also important when the period of piloting and experimentation, particularly in the supply of services and health financing area, is over.

Health-system policy needs now to return to strengthening the supply side. Improving the quality of care is now the most pressing need in health-system strengthening. In the public sector this requires attention to funding, management processes and the remuneration of public-sector workers. For the private sector, it poses the immediate necessity for extended regulation, accreditation and enforcement.

Executive Summary

Cambodia is no longer a country emerging from conflict. The extended period of relative political stability in the wake of the 1998 election has provided a basis for significant and consistent economic growth. With gross domestic product (GDP) currently growing at more than 7% per annum, Cambodia is about to cross the line between low-income and lower middle-income status. Since the 1980s, the government has pursued a national policy based on strengthening the economy, and under these conditions the health of the population has improved significantly.

Significant gains have also been made in the rebuilding of the health system through an extended process of health reform beginning in the 1990s. Nonetheless, the emphasis placed on economic growth has not been fully reflected in government support to the development of the social sectors, including health care. One consequence has been the rapid growth of a disparate and loosely regulated but extensive sector of private health-care providers which now deliver the majority of curative health services.

The long process of health reform in Cambodia has lessons to offer other developing countries. The national health system was rebuilt anew following the destruction wrought by the Khmer Rouge regime of the 1970s and a decade of international isolation. A number of innovative interventions have been implemented – some successfully, others less so – on both supply and demand sides. Scaling up of successful programmes is now on the agenda. While there have been tremendous improvements in health-system performance, reflected in substantial health gains, in comparison with other countries in the region, there is still much room for improvement. The remaining challenges include the low quality of health services (public and private), and persistent health inequities.

Health system context

A period of demographic and health transition has begun. Located on the Indo-China Peninsula, with a growing population of approximately 14 million people, Cambodia has a young but ageing population, with a

third currently under 15 years of age. Falling fertility rates and increasing life expectancy mean the population structure is slowly ageing. More than 90% are of Khmer ethnicity, with minorities including Chinese, Vietnamese, Cham and highland people. The national literacy rate remains relatively low, with illiteracy concentrated mostly in poor, rural and remote populations. Buddhism is the national religion. A process of urbanization is under way, and the population of the capital, Phnom Penh, has more than doubled since 1980.

Economically, Cambodia is about to become a lower middle-income country. GDP per capita reached US\$ 944 in 2012 (lower middle-income status is achieved at a level of US\$ 1035). GDP has grown at an average of 7% per annum since 1995 (World Bank, 2014a). Within a dual-currency economy the United States dollar and the national currency, the Reil, both circulate freely, leaving the country open to foreign pressures.

Economic growth has been accompanied by a significant reduction in national poverty rates. The proportion of people living below the national poverty line fell from 50% in 2004 to 20% in 2011. However, the gains have not been equitably distributed. While incomes in urban areas have grown rapidly, life in rural areas remains largely based on subsistence rice production. The Gini-index increased from 38.3 in 1994 to 44.4 in 2007 and returned to 36.0 in 2009 (World Bank, 2014a).

Constitutional democracy has been established. Not long after independence was gained from France in 1953 secret United States of America bombing of the eastern provinces occurred during the United States' war in Viet Nam to hit supply lines for the Vietcong. A United States-supported coup d'état in 1970 brought down the government of King Norodom Sihanouk and installed an unstable republican regime, which was ousted by the Khmer Rouge. Between 1975 and 1979, cities were abandoned, the economy destroyed, intellectuals killed and the traditional elements of Cambodian life destroyed, resulting in the deaths of 1.7 million people or 21% of the population. International isolation continued until 1989 following the fall of the Khmer Rouge. United Nations-sponsored national elections in 1993 opened the country to international cooperation, producing a flood of development agencies and nongovernmental organizations (NGOs) into Cambodia. Multiparty national elections have followed in 1998, 2003, 2008 and 2013.

Health status has substantially improved since 1993. Mortality rates significantly dropped and life expectancy at birth was 62.5 years in 2010,

a 1.6-fold increase from 1980. Noncommunicable diseases (NCDs) are rising and are now estimated to account for an equal number of deaths as infectious diseases. Inequities in health outcomes, such as urban–rural or by socioeconomic status, however, persist and health outcomes are not yet as good as in other countries of the region.

Organization and governance

The Ministry of Health (MOH) is the leading force in health-system planning and development. Following the 1993 national elections, the government depended largely on official development assistance provided by a wide range of multi- and bilateral donors and channelled mainly through a plethora of international NGOs. Since the start of major structural and organizational reform in the mid-1990s, the MOH has increasingly assumed the leading role in health-system development, in partnership with the development agencies, organizing policy implementation through its three General Directorates for Health (Health, Administration and Finance, and Inspection).

The MOH is solely responsible for the organization and delivery of government health services. The Directorate General for Health oversees health service delivery through 24 MOH Provincial Health Departments (PHDs) comprising 81 health Operational Districts (ODs), distributed according to population. Each PHD operates a provincial hospital and governs ODs. Each OD covers 100 000–200 000 people with a Referral Hospital delivering a Complementary Package of Activities (CPA), mainly secondary care, and a number of Health Centres. Health Centres cover 10 000–20 000 people and provide a Minimum Package of Activities (MPA), consisting mainly of preventive and basic curative services. Less formal Health Posts are located in remote areas.

Reforms in health service management and administration are being implemented. Administration of the public health system in Cambodia is centralized at the level of the national MOH. Autonomy in management decisions for health-service administrators within the public health system is gaining more policy attention. A first step towards greater autonomy for local health managers is the conversion of almost one third of all Operating Districts (ODs) to the status of Special Operating Agencies (SOAs), which enjoy a greater degree of flexibility in human resource and financial management and receive additional funds through a direct Service Delivery Grant.

The Cambodian health market has a wide variety of health-care providers. Qualified providers include public health facilities, pharmacies, private hospitals, and medical professionals rendering services from their own or at patients' homes. Two thirds of public health staff also work privately. NGO-run health facilities and charitable hospitals also provide services. Qualified private providers and pharmacies are most prevalent in urban areas. Non-medical health providers include vendors selling drugs from shops or markets, traditional birth attendants, drug peddlers and traditional healers.

Private providers dominate curative health-care delivery but remain insufficiently regulated. The law covering private practitioners mandates that the MOH accredit all medical operations, and the MOH provides a licensing system for medical practitioners and pharmacists. Despite considerable improvements, the regulation of private providers, in particular private for-profit health-care providers, remains a major challenge and deserves more policy attention. While the public sector is dominant in the promotion and prevention activities for essential reproductive, maternal, neonatal and child health care, and major communicable diseases control, private practitioners remain particularly frequented for curative care. In rural areas, only 15% of primary care consultations occur in the public sector, and private non-medical (unqualified) providers account for half of all health-care providers.

There is considerable scope for reinforcing the regulatory mandate of the MOH. Four laws cover the health sector: (i) the 1996 Law on the Management of Pharmaceuticals; (ii) the 1997 Law on Abortion; (iii) the 2000 Law on Management of Private Medical, Paramedical and Medical Aid Services; and (iv) the 2002 Law on Prevention and Control of HIV/AIDS.

Health financing

Reforms in health financing have been at the centre of efforts to rebuild the country's health system. The national budget for health has almost doubled in real terms since 2007 (to US\$ 199 million in 2012). (MOH, 2014c). Foreign donors finance about 50% of government health spending through grants and loans. Total health expenditure (THE) has increased with economic growth, reaching US\$ 1033 million in 2012 and remaining at more than 7% of GDP; patient out-of-pocket (OOP) payments accounted for 60% of THE.

Without a significant reduction in OOP health expenditure, universal health coverage will not be achieved. The Ministry of Health is committed to moving towards universal health coverage. Government funding provides the main health infrastructure and staff and delivers subsidized care across a standard package of preventive, primary and curative care. Revenues at government facilities are supplemented by nominal user charges introduced in 1996, with funded exemptions provided widely to the poor. A number of demand-side financing schemes provide social health protection, including Health Equity Funds (HEFs), voucher schemes, voluntary community-based health insurance (CBHI) and (to a small extent) private health insurance.

Private providers consume most health-care expenditures. National data indicate that the overwhelming proportion of OOP expenditure is paid to private providers. While health spending as a proportion of income and catastrophic expenditures have both declined, OOP payments for health care are the largest part of household non-food expenditures and are among the highest in the region. The burden is especially great for poor households. Large inequalities exist in the incidence of OOP expenditures across the population.

Government health services are financed from general revenues, supported by donor funding. A third of tax revenues are from Value Added Tax and there are no earmarked health taxes. Development aid accounted for approximately 20% of THE in 2012 and budget expenditure 20%. External funding for health was US\$ 209 million (US\$ 14 per capita). Donor harmonization and alignment has improved but remains a pressing issue.

Improvement is needed in efficiency in government expenditures. While national data on the disaggregation of government expenditure on health are limited, the 2011 World Bank Public Expenditure Review reported that expenditures on drugs and medical supplies were substantially higher than international average prices; more than half the total health budget is spent on procurement, and 63% on non-programme activities. Efficiencies in the distribution of budget funding to lower levels of the health service require further improvement.

There is no compulsory health insurance or social health insurance coverage. The government's National Social Security Fund provides work injury benefits to private-sector employees; and the National Social Security Fund for Civil Servants has yet to commence providing health

benefits. There is a small voluntary health insurance market comprising private for-profit insurance companies and not-for-profit CBHI schemes, which serve rural communities and urban workers, though coverage is low. Both of these target non-poor formal- and informal-sector workers who can afford to pay premiums. Subsidized HEFs for the poor provide coverage and financial protection for a quarter of the national population.

A variety of provider-payment mechanisms is used to compensate health-care professionals for services provided. Strategic purchasing of health services is very limited. The principal methods are line-item budgeting for the normal delivery of government health services and fee-for-service in the private sector. The different health-financing schemes use various payment mechanisms, including performance based incentives for staff as well as capitation and case-based payments to facilities.

Physical and human resources

Government health services provide national coverage of infrastructure and staff. Physical infrastructure has been provided under the Health coverage plan, which determines the number, location and size of health facilities by catchment population and geographical access. Public health facilities include: Health Centres, which provide basic services through the MPA; provincial and district Referral Hospitals, which provide a CPA at three levels (CPA-1, CPA-2, CPA-3) based on number and composition of staff, number of beds, standard drug kit and standard medical equipment, and clinical activities; and National Hospitals, which provide higher-level tertiary care.

Private providers outnumber government facilities but are mostly small scale. The private sector offers a diverse range of health-care facilities providing a specified range of curative services. The public health network comprises more than 1400 health facilities, organized within health ODs. The public health workforce was rebuilt essentially anew from 1980 and now comprises 20 000 professionals (predominantly nurses and midwives). There is a rapidly growing though loosely regulated private sector with more than 5500 licensed providers, which deliver a large proportion of health services (mainly curative care).

The supply of hospital beds remains relatively low and ICT is limited. Overall, the country has a ratio of 0.71 hospital beds per 1000 population, with considerable variation across provinces. This ratio is similar to the

Lao People's Democratic Republic (0.7), but lower than Thailand (2.1) and Viet Nam (3.1). Availability of state-of-the-art diagnostic medical equipment, such as magnetic resonance imaging (MRI) or computed tomography (CT) scanners, is still very limited and maintenance is an issue; such facilities are most commonly available in the private sector. In 2010, a new web-based National Health Information System database was developed for direct entry by public facilities; the system is limited in remote areas by lack of electricity and equipment, and collecting data from private providers is a major challenge.

The MOH sees a need to increase the public health workforce to 32 000 by 2020. Public health staff are recruited through an annual civil service examination. The MOH employs a relatively small number of civil servants (about 20 000). There have been strategic recruitment efforts to address both the shortage and the skill-mix of government health staff, particularly in maternal health, with a significant increase in the number of midwives and a more modest increase in nurses since 2005. Nurses and midwives together comprise 68% of the public health workforce (comparable to neighbouring countries), reflecting a focus on rural and primary care services. Medical doctors are concentrated mainly at central and provincial health facilities, national hospitals and charitable hospitals.

A number of infrastructure and workforce challenges remain. Among the key issues are the maintenance of a viable rural health workforce with more equal urban–rural distribution, the development of medical and nursing specialities, and widespread dual practice by government staff. Emerging challenges are posed by increasing economic growth and urbanization, including demographic and epidemiological transitions.

Provision of care

Cambodia has a mixed health system comprising numerous service providers and with various funding sources. Only 29% of unwell or injured patients sought care first in the public sector, while 57% sought care for their last episode at private providers, according to the 2010 Cambodian Demographic and Health Survey. Private practitioners and clinics are particularly frequented for curative care, whereas health promotion and prevention activities (such as essential reproductive, maternal, neonatal and child health, tuberculosis, malaria and HIV/AIDS control) are the domain of the public sector. The low utilization of the public health facilities for curative care remains a concern.

Public health services are available through a national network of Health Centres and Referral Hospitals, which follows the district health model promoted by the World Health Organization; in principle, primary care services are available within two hours walk from home for the whole population. The quality of public health care is often limited by the poor condition of facilities, low staff numbers and lack of staff motivation:

- **Health Centres** are designed as the first point of contact and as gatekeepers to higher levels of care; they provide maternal, neonatal and child health services, including immunization, nutritional education, screening for breast and cervical cancer, safe abortion; treatment and prevention of communicable diseases; treatment and prevention of NCDs and injuries; and through outreach activities.
- District **Referral Hospitals** provide outpatient care as well as inpatient treatment for referred cases, complicated tuberculosis cases, medical, surgical and obstetrical emergency cases, some surgery, maternal and child health services, provision of X-ray, ultrasound and laboratory services, and rehabilitation services. However, many patients go straight to hospitals, bypassing the health centres.
- **Provincial and National Hospitals** provide the highest-level CPA package; National Hospitals include both general hospitals and specialist hospitals for paediatrics, maternal and child health, and tuberculosis. Medical specialities, such as haematology and oncology, are still at early stages of development.

Coordination with private providers is a challenge for government planners and policy-makers. The growing but loosely regulated private medical sector is the point of first contact for the majority of the sick and injured population. Most private providers are small practices, drug shops or single-person practitioners. Private pharmacists are a common, frequently accessed, yet inadequate source of self-medication for most people. Most private providers with formal training are simultaneously public employees (dual practice). Secondary and tertiary services are provided mainly by public hospitals and some private clinics and hospitals. Access to private hospital care is greatest in urban areas. The registration of all private medical and paramedical facilities was made compulsory under a law adopted in late 2000, though the resources available for effectively monitoring are limited.

The public health system provides a spectrum of services. Due to the development of quality care initiatives and reduction of financial barriers to access services, utilization of public health facilities is slowly increasing.

Health Centre, Referral Hospital and National Centre services cover the following.

- **Health promotion**, including services directed at reproductive, maternal, neonatal and child health, malaria, tuberculosis, HIV/AIDS and the activities of the National Centre for Health Promotion.
- **Health prevention**, including family planning, antenatal care and postnatal care, birthing care, the Expanded Program on Immunization managed by the National Immunization Program, HIV counselling and testing services.
- **Communicable disease** services such as diagnostic and treatment for malaria, tuberculosis, HIV/AIDS and common childhood illnesses are mainly provided by Health Centres and Referral Hospitals.
- **Noncommunicable disease** services are at an early stage of development: prevention and control activities are managed by the MOH Department of Preventive Medicine in collaboration with PHDs and ODs.
- **Rehabilitation and mental health services** are at an early stage of development. The Ministry of Social Affairs, Veterans and Youth Rehabilitation is currently managing 12 physical rehabilitation centres in Cambodia.

There are no enforced referrals which constraint patients' choice of providers. But patients are recommended to follow the referral and counter referral system between the community, Health Centres and Referral Hospitals. However, the referral system rarely works as intended and most patients seek multiple sources of health care. Critically ill or injured patients usually bypass primary health care facilities and seek care directly at public or private hospitals without referral. For lesser illness, most rely first on home remedies (especially in rural areas) or self-prescribed medication from local pharmacies or drug sellers; people commonly choose to consult private providers ahead of public facilities; if the patient's condition deteriorates, private providers generally refer them to a government hospital.

Major health reforms

An ongoing process of national health reform began in the 1990s.

Reforms began with the extension of the physical infrastructure, continued through innovations in health financing and access to services, and now incorporate district health-sector management and administration. Building on a strong record in health planning and policy

making over many decades, the MOH now sees moving towards universal health coverage as the framework for the continuation of the health reform process.

Development partners have helped collectively to shape health policy-making. The openness of the Cambodian Government to international cooperation has had a significant impact on the development of the public health system. This partnership between development agencies and the government, through the MOH, has provided the opportunity for trialling a range of innovative health reforms. A Sector-Wide Management (SWiM) approach brought together MOH and development partners to address health-system barriers in support of MOH objectives outlined in the Health Strategic Plans for 2003–2007 and 2008–2015.

Reform has been guided by a long-term process of national health planning. This process culminated in the adoption of two consecutive Health Strategic Plans for 2003–2007 and 2008–2015. The goals of the first Plan for quality improvement and institutional development were largely achieved. The second Plan is pursuing targets related to five of the six WHO health-system building blocks (service delivery, financing, human resources, system governance and information systems) by focusing on six priority areas: service delivery, behavioural change, quality improvement, human resource development, health financing and institutional development.

The key planning activities have included:

- 1995 – Implementation of the Health Coverage Plan.
- 1996 – Implementation of the Health Financing Charter approving nominal user fees.
- 1996 – Commencement of the Basic Health Services Project (funded primarily by the Asian Development Bank) to reconstruct district health facilities.
- 1999 – Piloting of external contracting in service delivery through international NGOs.
- 2000 – Implementation of the SWiM framework.
- 2000 – Initiation of the first pilot projects using HEFs.
- 2002 – Updating of the 1995 Health Coverage Plan.
- 2003 – Adoption of the *Health Strategic Plan 2003–2007* and the first Health Sector Support Program 2003–2007.

- 2006 – Adoption of the *National strategic development plan 2006–2010*; adoption of the Policy on Service Delivery in the health sector; adoption of the National Strategy for Reproductive and Sexual Health 2006–2010.
- 2007 – Joint Annual Performance Review to assess the Health Strategic Plan and Health Sector Support Program.
- 2007 – Introduction of the Midwife Incentive Scheme for facility-based deliveries.
- 2008 – Adoption of Special Operating Agencies Implementation Guidelines and conversion of some ODs to SOA status.
- 2008 – Adoption of Health Equity Fund Guidelines to formally institutionalize HEFs with MOH authority over the contracted HEF network.
- 2008 – Adoption of the Organic Law for decentralization and deconcentration of government administration.
- 2008 – Implementation of the second *Health strategic plan 2008–2015*.
- 2009 – Implementation of the second Health Sector Support Program 2008–2015 to support the second Health Strategic Plan.
- 2010 – Adoption of the Fast Track Roadmap for reducing Maternal and Newborn Mortality Initiative.
- 2011 – Mid-Term Review of the *Health strategic plan 2008–2015*.
- 2013 – Drafting of the national Health Financing Policy.

Providing access for the poor is at the heart of health reforms. Health Equity Funds (HEF) have proved to be an effective mechanism for providing access to health services and financial protection for the poor, as well as a regular source of supplementary income for public health facilities. Now approaching national coverage, the MOH and donor partners are working together to create a uniform model and a central administration of the district-based HEFs within the MOH.

Recent health reforms have focused on strengthening the MOH’s capacity to manage health-service delivery. The major areas of reform in the public health system, in support of the government’s broader Public Administrative Reform, have focused on expanding the coverage of basic health services, providing improved financial access to quality health services in the public sector, and improving the efficiency and effectiveness of health-service management at district level. Since 2009, the internal contracting of government health services between units within the MOH has been piloted through the conversion of a number of health ODs and Provincial Hospitals

into SOAs to provide greater management autonomy, increased staff incentives and more efficient service delivery.

The longer-term aim is to move towards universal coverage. The Strategic Framework for Health Financing 2008-2015 aims to improve health system financing and facilitate a universal risk pooling and prepayment mechanism necessary for achieving universal health coverage. The draft Health Financing Policy proposes a process of harmonizing benefit packages, provider-payment mechanisms, claim processing mechanisms, information management systems and disease classification systems to address immediate concerns about the fragmentation of the existing health financing arrangements and risk pools. In addition, the Policy proposed the establishment of a National Social Health Protection Fund to administer the informal-sector social protection schemes, including HEFs, CBHI and maternal health voucher schemes.

Health system performance

The health system is on track to achieve its broad objectives and Millennium Development Goal targets. Health status has substantially improved. Life expectancy at birth increased from 64.6 years in 2000 to 71.4 in 2012 (World Bank, 2014a); the maternal mortality ratio decreased from 437 deaths per 100 000 live births in 2000 to 206 in 2010; infant and under-five mortality rates decreased respectively from 95 to 45 and from 124 to 54 deaths per 1000 live births between 2000 and 2010.

Health outcomes still exhibit urban–rural and rich–poor differentials and are poor in comparison with global and regional averages. Maternal and child health outcomes vary according to socioeconomic status and geographic location: the fertility rate for women in the poorest quintile is more than double that of the richest quintile; children in the poorest quintile have a three-fold greater risk of death before their fifth birthday than those in the richest quintile; stunting is more than twice as common among children in the poorest quintile than in the richest.

Equity in health financing and access to services has improved. Access to services has improved partly from targeting public resources on the provision of primary health care services in rural areas (especially reproductive health care) and from the expansion of social protection schemes. Socioeconomic survey data reveal an increase in the proportion of unwell individuals seeking care from medical providers, with a greater increase among the lowest two income quintiles; a rise in the use of

reproductive, maternal and child health services; an increasing capacity-to-pay and a decline in catastrophic health expenditure across all income quintiles; and, in particular, lower levels of OOP spending, catastrophic expenditure, and health-related indebtedness among HEF beneficiaries.

A significant improvement in coverage of health services has not been matched by improved quality of service delivery. Improvements have been made in service coverage, especially in the delivery of maternal and child health care following the implementation of the Fast Track Initiative Roadmap for Reducing Maternal and Newborn Mortality, providing increased coverage of skilled birth attendance and other safe motherhood services. However, quality of care remains a major concern in both public and private sector. Client dissatisfaction is evident in several areas, including attentiveness of health-facility staff, availability of staff at night, cleanliness of facilities, and communication on illness diagnosis and prevention.

While government funding for health care has increased significantly, it remains at only 1.4% of GDP. Greater efficiencies in the allocation and use of health funding are needed. The disbursement rate of MOH budget expenditures has improved, reaching 90% of budgeted allocations expended annually. The national bed occupancy rate increased to 82% by 2011, while the average length of stay remained stable at 5–6 days (cf. 2002). However, more than 70% of the health budget is managed centrally (allocated principally to salaries and the procurement of drugs and medical supplies), there is a preference for vertical programmes over health-system strengthening and an emphasis on the provision of tertiary services; and district health care is underfunded. The decentralization of resources to service-delivery level is gradually improving, with an increasing share of budget disbursed through Health Centres and Referral Hospitals. Shortcomings in government administration, in the procurement and pricing of pharmaceuticals and supplies, the low level of staff salaries, and inadequate regulation in the public and private sectors are all sources of technical inefficiency.

Challenges for the future

Achieving the goal of universal coverage requires increased research allocation and a long-term view. At approximately 7% of GDP in 2012, the level of THE remains high. Government has raised its commitment to health which needs to be maintained. The heavy reliance on OOP spending must decline. The pathway to universal coverage requires the

consolidation, under government control, of the social health-protection schemes for the informal sector – built on the firm foundation of the HEFs – and commencing operations through the two National Social Security Funds. The adoption and effective implementation of the draft Health Financing Policy is the first important step.

Donor support is essential, but greater alignment of donor programmes to national priorities is needed. Official development assistance is stable at 20% of THE, with increased alignment to national policy. While the MOH and development partners have worked closely together in strengthening the health system, development partners have at times followed their own agendas (albeit generally with the consent of the MOH), causing some sense of fragmentation. Further efforts to ensure full accountability in the use of this funding through the health budget should pave the way for a sector-wide approach to donor funding in support of MOH objectives.

The period of piloting and experimentation is over. Development partners together with the MOH have initiated a large number of pilots and experimental interventions in different aspects of health-system strengthening, particularly in the supply of services and health financing. Some have been successful, others much less so. Pilot projects in external contracting using nongovernmental providers were terminated in favour of internal contracting processes within the MOH. A number of pilot CBHI schemes were initiated though without the anticipated benefits in coverage. Voucher schemes have been effective, but often duplicate other social protection mechanisms. The time has come to end the period of experimentation and to scale up those interventions that have proved to be successful, particularly the HEFs.

Health-system policy needs now to return to strengthening the supply side. The successful expansion of the health infrastructure, relatively low levels of utilization, and the rapid increase in the number of private providers all focus attention on the limitations of public health-service delivery, in particular the persistently low quality of care. In the health reform cycle, this shortcoming returns planners' attention to a concern with strengthening the supply side. The health reform process is dynamic and requires a balance between supply and demand initiatives over time. Improving the quality of care is now the most pressing imperative in health-system strengthening. In the public sector this requires attention to funding, management processes and the remuneration of public-sector workers. For the private sector, it poses the immediate need for extended regulation, accreditation and enforcement.

1 Introduction

Chapter summary

Cambodia is a country of approximately 14 million people located in the Indo-China Peninsula; its economy is agricultural and 80% of the inhabitants live in rural areas; however, garment production and tourism have contributed substantially to recent economic growth. The country and its population experienced civil war and genocide in the 1970s, which destroyed most of the infrastructure and skilled human resources.

The health status of Cambodians has substantially improved since the 1980s, reflected in a steady reduction of infant and maternal mortality rates and an increase in life expectancy at birth. However, population health is still relatively low in comparison with other developing countries, and the health system is facing a double burden of communicable and noncommunicable diseases. In addition, persisting inequities in health outcomes by socioeconomic status and geographical location remain a challenge.

Major health challenges, particularly in rural areas, include inadequate access to safe drinking water, lack of improved sanitation facilities, and lack of qualified physicians and midwives. Consequences of this are widespread diarrhoeal disease, persistently high neonatal mortality, and a high maternal mortality rate. The urban population, on the other hand, is experiencing increasing injuries and deaths due to traffic accidents, and increasing incidence of noncommunicable diseases.

1.1 Geography and sociodemography

Cambodia is located in South-East Asia, bordered by the Lao People's Democratic Republic, Thailand and Viet Nam (see Figure 1). The country has a total area of 181 035 square kilometres and is divided administratively into 24 provinces and municipalities, 183 districts, 1609 communes, and 13 406 villages (MOP, 2010). Most of the terrain is lowland surrounding the Mekong–Tonle Sap river system; most available land is used for rice production. Cambodia has a tropical climate with an

average monthly mean temperature of 25–27 °C. The annual monsoon season is characterized by heavy rainfall from May to October.

Figure 1.1 Map of Cambodia



Source: United Nations Cartographic Section (<http://www.un.org/Depts/Cartographic/map/profile/cambodia.pdf>)

Significant changes have occurred in population indicators since the mid-1980s (Table 1.1). According to World Bank (2014a) data, total population and population density more than doubled: from 6.6 million to 14.9 million and from 36.9 inhabitants per square kilometre to 84.2 between 1980 and 2012. Population density is less than in the neighbouring countries of Thailand and Viet Nam. The proportion of the population living in urban areas has doubled (20% in 2012 cf. 9.0% in 1980) – particularly in Phnom Penh (which was home to 55% of the urban population in 2012).

As a result of sustained economic growth and increasing urbanization, the age structure of the population is changing (Figure 1.2). While the population remains relatively young, with a large dependent population of children and adolescents, Cambodia is expected to transition to an

ageing population by 2050. Birth rates have almost halved since the baby boom of the 1980s (25.9 births per 1000 population in 2012 cf. 45.4/1000 in 1980) and the total fertility rate has halved to less than 3 per woman in 2012 (World Bank, 2014a). The proportion of young people in the total population is falling but remains high (31.2% under 15 years of age in 2012). Death rates have fallen from 30.5/1000 in 1980 to 6/1000 in 2012, and life expectancy at birth has increased from just 29.6 years at the fall of the Khmer Rouge to 71.4 in 2012. The proportion of people aged 65 or over almost doubled from 2.9% in 1980 to 5.3% in 2012 (Table 1.1).

Over 90% of the population belong to the Khmer ethnic group; minorities include Chinese, Vietnamese, Cham and Khmer Loeu (highland people). The prevailing religion is Buddhism, which is practised by approximately 95% of the population. The Khmer language, derived from Sanskrit and Pali, has its own unique script (with no accepted uniform transliteration into English or other languages). In total, 78% of adults (15 years of age and over) were literate in 2008, a substantial increase in comparison to 1998 when only two thirds of the adult population were literate. However, data from the Cambodia Demographic and Health Surveys (CDHS) 2000, 2005 and 2010 demonstrate continuing gender disparities, with illiteracy rates among women aged 15–49 years double those among men of the same age (NIS, 2001, 2011; NIPH, 2006).

There is significant internal migration from rural villages to the capital Phnom Penh. The majority of cross-border migration occurs into neighbouring Thailand (MOP, 2012). However, with increasing economic opportunities there has been a higher intake of migrants from neighbouring countries. A remaining, though little-documented and rarely recognized problem is the widespread social trauma and consequential health difficulties caused by the Khmer Rouge period, mainly affecting the those over 30 years of age.

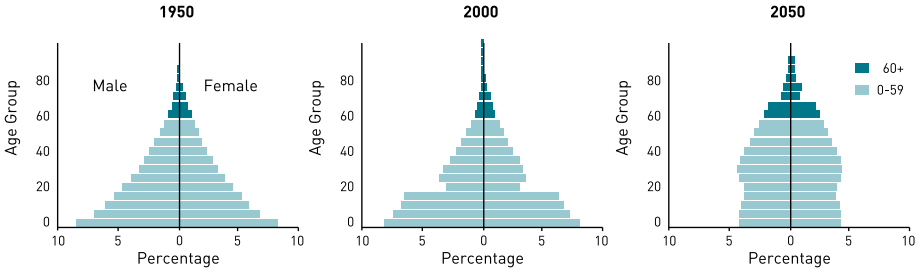
Table 1.1 Trends in population/demographic indicators, Cambodia, 1980–2012

Indicator	1980	1990	1995	2000	2005	2010	2011	2012
Total population (million) ^a	6.6	9.5	11.2	12.4	13.4	14.1	14.6	14.8
Population, female (% of total) ^a	53.8	52.4	51.9	51.5	51.2	51.1	51.2	51.2
Population ages 0–14 (% of total) ^a	39.0	43.8	47.5	42.4	38.9	34.5	31.4	31.2
Population ages 15–64 (% of total) ^a	58.1	53.4	49.7	53.6	56.5	60.0	63.4	63.5
Population ages 65 and above (% of total) ^b	2.9	2.8	2.8	3.6	4.6	6.0	5.1	5.3
Population ages 80 and above (% of total) ^b	na	na	na	0.4	0.7	0.8	na	na
Population growth (average annual) ^a	0.0	3.5	2.8	1.8	1.2	1.1	1.7	1.8
Population density (people per km ²) ^a	36.9	54.0	63.3	70.5	75.7	80.1	82.7	84.2
Fertility rate, total (births per woman) ^a	5.9	5.7	4.9	4.0	3.4	3.0	2.9	2.9
Birth rate, crude (per 1000 people) ^a	45.4	43.6	35.2	27.7	25.6	24.2	26.1	25.9
Death rate, crude (per 1000 people) ^a	30.5	12.1	10.9	9.6	8.6	8.0	6.1	6.0
Age dependency (% pop. 0–14,65+/15–64) ⁵	72.1	87.4	101.4	80.5	65.8	55.5	57.7	57.4
Life expectancy at birth, total (years) ^a	29.6	54.8	57.8	61.9	67.0	70.6	71.4	71.4
Urban Population (% of total) ^a	9.0	15.5	17.3	17.5	18.6	19.8	20.0	20.2
Average household size ^b	na	na	na	5.4	5.0	4.7	na	na
Female headed households (% of total) ^b	na	na	na	25.4	23.5	27.1	na	na
Literacy rate 15+ (%) ^b	na	na	na	67.3 ^d	77.6	73.9 ^e	na	na
No schooling 15–49: male (% of males) ^c	na	na	na	19.2	13.3	10.9	na	na
No schooling 15–49: female (% of females) ^c	na	na	na	34.2	25.0	21.4	na	na

Note: d for 2008; e for 2009.

Sources: a World Development Indicators (World Bank, 2014a); b General Population Census (NIS, 2009); c CDHS (NIS, 2001, 2011; NIPH, 2006).

Figure 1.2 Population pyramids for 1950, 2000, and forecast for 2050, Cambodia



Source: United Nations (2001).

1.2 Economic context

Cambodia is a low-income country with an estimated gross domestic product (GDP) per capita of US\$ 955 in 2012 (World Bank, 2014a). The economy passed through a period of transition from the centralized command economy of the 1980s to an open market economy, beginning in the early 1990s with the privatization of state-owned enterprises and the extension of private property rights. Increasing political stability following the end of domestic conflict in 1997 paved the way for a period of strong economic growth. Strong economic performance has been maintained since the 1990s as the macroeconomic indicators listed in Table 1.2 illustrate. Annual growth in GDP averaged 7.7% from 1995 to 2012 (or 5.6% GDP per capita) and peaked at 13.3% in 2005. From 2011, annual growth has been above 7% in each year (actual and projected) (World Bank, 2014a; ADB, 2013).

Both the United States dollar and the national currency, the Riel, are legal tender and circulate in parallel, with the United States dollar providing a large share of the money supply, which limits the ability of the National Bank of Cambodia to control monetary policy. However, the official exchange rate has been particularly stable over time at about 4000 riels per dollar. Cambodia is a signatory to the Association of Southeast Asian Nations Free Trade Area (Hill & Menon, 2013).

Agriculture, mainly rice production, remains the main economic activity, followed by fisheries, timber and livestock. Since the 1990s manufacturing activity has increased sharply at about 15% per year, dominated by garment production, which is mainly for export and accounts for more than half of the increase (Hill & Menon, 2013). Tourism is the second main source of foreign exchange revenue.

While incomes in the capital Phnom Penh (the country's only major city) have grown rapidly, life in rural areas is largely based on subsistence rice production. The labour force participation rate was 74% of the total population aged 15–64 years in 2012, with an estimated employment-to-population rate (of those 15 years old and up) of 81% (World Bank, 2014a). However, 80% of the population remains in rural areas working principally in subsistence agriculture and in the informal (self-employed) sector.

The benefits of economic growth have not been equally distributed, and income disparities are widening as resource extraction, tourism and garment production have all benefited urban and upper-income groups. The Gini index, a measure of overall inequality (0 = perfect equality, 100 = perfect inequality) worsened from 38.3 in 1994 to 44.4 in 2007, returning to 36.0 in 2009 (World Bank, 2014a). This is comparable with neighbouring Thailand, Lao PDR and Viet Nam. However, reports suggest the inequality is worsening – for example, the Cambodian Chamber of Commerce reported “inequality has grown over the last two decades” (Chamber of Commerce, 2013).

Table 1.2 Macroeconomic indicators, Cambodia for selected years

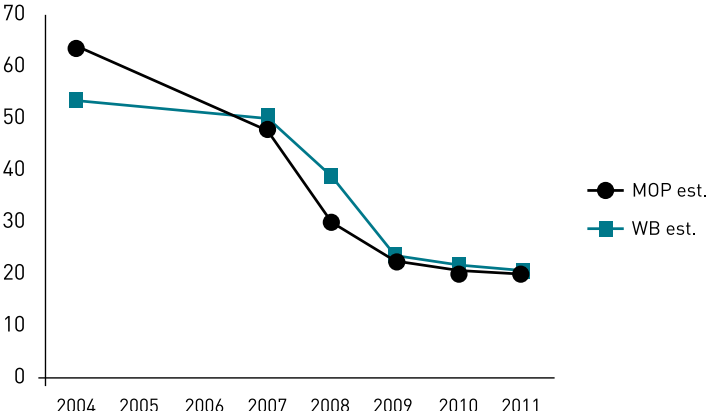
Indicator	1995	2000	2005	2010
GDP (current US\$, in million)	3441	3654	6293	11 242
GDP per capita (current US\$)	320	299	471	783
GDP growth (annual %)	6.4	8.8	13.3	6.0
GDP per capita growth (annual %)	3.1	6.4	11.5	4.3
Public expenditure (% of GDP)	NA	9.4 ^a	7.6	11.3
Cash surplus/deficit (% of GDP)	na	-3.4 [§]	0.0	-3.5
Tax revenue (% of GDP)	na	8.2 ^a	7.9	10.0
Labour force (total, millions)	4.7	5.7	6.9	8.1
Labour force participation rate, 15–64, total (%)	84	82	83	85
Employment-to-population ratio, 15+, total (%)	79	77	79	81
Poverty headcount ratio at national poverty line (% of population)	na	na	53.2 ^b	22.1
Gini-index (income/wealth inequality)	38.3 [§]	na	41.9 ^b	36.0 ^c
Official exchange rate (US\$ per 1000 riels)	2.5	3.8	4.1	4.2

na, not available; a for 2002; b for 2004; c for 2009; § for 1994;

Source: World Development Indicators (World Bank, 2014a).

By different estimates, the proportion of the population living below the national poverty line (which is calculated as 3871 riels per person per day or US\$ 0.95 at 2011 exchange rates) fell from approximately 50% in 2004 to about 20% in 2011. Ministry of Planning and World Bank poverty estimates are illustrated in Figure 1.3. Rural–urban differences are evident: the Ministry of Planning estimates that in 2009 the proportion of the population living below the poverty line was almost 13% in Phnom Penh and other urban areas and almost 25% in rural areas.

Figure 1.3 Percentage of population below the national poverty line, Cambodia, 2004–2011



est., estimate; MOP, Ministry of Planning; WB, World Bank.
Source: MOP (2013) and World Bank (2013a).

1.3 Political context

Cambodia has emerged from a history of colonialism, domestic conflict and foreign intervention only since 1993. The country remained in a state of internal conflict until the 1989 Paris Peace Agreements, and hostilities were finally resolved only in 1997 with the final defeat of remnants of the former Khmer Rouge regime (Lanjow et al., 1999; Gollogly, 2002).

A short period of development under King Norodom Sihanouk after independence from France in 1953 was interrupted in 1969 by the commencement of illegal United States carpet-bombing in the eastern provinces. The bombing was an attempt to stop the movement of supplies to the National Front for the Liberation of South Viet Nam (also known as the Viet Cong) and to destroy their alleged headquarters based in Cambodia (Shawcross, 1991). A United States-supported coup d'état in 1970 brought down the government, installed an unstable republican

regime and led subsequently to a bloody civil war which ended only when the Khmer Rouge seized power (Curtis, 1998).

Under the name of Democratic Kampuchea, during 1975–79 the Khmer Rouge destroyed the traditional elements of Cambodian life, money was abolished, the country's physical infrastructure was dismantled or destroyed, schools destroyed, and intellectuals exterminated. Phnom Penh and other towns were emptied and the urban population was put into forced labour in the countryside. While the country experienced an era of isolation from the outside world, an estimated 1.7 million people (21% of the country's population) died as the result of forced labour, starvation, lack of medical care and execution (Cambodian Genocide Program, 2014).

The Khmer Rouge regime was overthrown in late 1979 by dissident Cambodians supported by Vietnamese troops. For the next 10 years, Cambodia became the People's Republic of Kampuchea (PRK) led by a government. The United Nations refused to grant diplomatic recognition to the PRK regime and voted to maintain a coalition including the Khmer Rouge in the Cambodian seat of the General Assembly. Placed under an international embargo during the 1980s, Cambodia received support for reconstruction from only a few international and nongovernmental organizations, including initially the United Nations Children's Fund (UNICEF). During this period, foreign support came overwhelmingly from Viet Nam, the Soviet Union and Eastern Europe.

In 1992–93, the United Nations Transitional Authority in Cambodia (UNTAC) repatriated Cambodian refugees living on the Thai border and organized national elections including all four warring factions (the government, Khmer Rouge, royalists and republicans). The Khmer Rouge, however, refused to join the elections and continued fighting. The royalist party (FUNCINPEC) won the largest number of votes in this first national election while the Cambodian People's Party won subsequent national elections (held every five years) in 1998, 2003, 2008 and 2013.

Today, Cambodia is a constitutional monarchy with the King as head of state; it is ruled by the Prime Minister, who is the head of the Royal Government of Cambodia. The Prime Minister is appointed by the King on the advice and with the approval of the National Assembly. General elections are held regularly with the participation of numerous political parties. Administratively, Cambodia is divided into provinces and municipalities with political power centralized in the capital, Phnom Penh.

Provinces (*khet*) are subdivided into districts (*srok*), and the districts into communes (*khum*). Municipalities (*krong*) are subdivided into *khan*s, which are composed of *sangkat*. Each *sangkat* is composed of villages. Provincial and municipal governors are appointed by the government. Local councils at *sangkat* level have been formed through general elections in 2002, 2007 and 2012, and they in turn appoint *khan* governors. Cambodia has embarked on a longer-term process of political and administrative decentralization (MOI, 2008a).

While there has been an exponential growth in the number of local nongovernmental organizations (NGOs) since 1993, community organization is not strong, particularly in rural areas, where a large proportion of the population is attached to social and political networks loyal to the government (Berlan & Shiffman, 2012). The local NGOs deliver a wide range of services in the social and economic sectors, and civil society is playing an increasingly active role in pursuing community interests.

After 1993, multilateral and bilateral donor agencies and international NGOs played a major role in reconstruction through the implementation of numerous economic, infrastructural and social programmes. With economic growth, political stability and increasing access to resources, the government has taken much greater responsibility for national policy and development tasks, and has recognized the need for local administrative reforms to increase accountability and citizen participation.

A number of interventions have served to strengthen subnational democratic development, including the introduction of a basic intergovernmental fiscal transfer system, direct election of *sangkat* councils in 2002 and 2007, the passage of the Law on Administrative Management of the Capital, Provinces, Municipalities, Districts and *Khan* (the Organic Law) in 2008, and the indirect election of district and provincial councils in 2009. While progress has been made in political decentralization, the process is still at an early stage. The National Program for Sub-National Democratic Development (NP-SNDD) was adopted in 2010 to improve governance functions (Asia Foundation & World Bank, 2013) building on earlier reforms including the creation of Village Health Support Groups and Health Centre Management Committees (see section 2.9.4). However, initiatives to strengthen citizen empowerment deserve further attention.

Cambodia has made tremendous progress in rebuilding its infrastructure and human resources and in establishing peace and stability, a market economy, and multi-party democracy. Nonetheless, challenges remain in strengthening government administration. Developing strong governance procedures are major challenges facing Cambodia as it moves further along the path of sustained development and poverty reduction (World Bank, 2013b).

1.4 Health status

The health status of Cambodians has been steadily improving since the 1980s, but remains relatively poor when compared to other countries in the region. Today, health status is characterized by falling but still high rates of infant and maternal mortality, increased but still low life expectancy, undernutrition, and a double disease burden with prevalent communicable diseases and emerging noncommunicable diseases. There are significant inequalities in health status by socioeconomic status and between urban and rural populations.

1.4.1 Life expectancy and adult mortality

Average life expectancy at birth was 71.4 years in 2012 (74.2 years for females and 68.8 years for males), compared to only 29.6 years in 1980 (Table 1.3), and mortality rates for both females and males have declined significantly from 1990 levels and continue to fall. There are, however, no estimates available on life expectancy and adult mortality by socioeconomic or ethnic group, level of education, or across regions.

Table 1.3 Life expectancy and mortality rates, Cambodia, 1980–2012

Indicator	1980	1990	1995	2000	2005	2010	2011	2012
Life expectancy at birth, total	29.6	54.8	57.8	61.9	67.0	70.6	71.1	71.4
Life expectancy at birth, female	32.5	57.4	60.6	64.5	69.7	73.4	73.8	74.2
Life expectancy at birth, male	26.8	52.2	55.1	59.3	64.5	68.0	68.4	68.8
Adult mortality rate, male (per 1000 adult males)	na	380.0	330.6	283.6	240.9	216.5	213.8	211.1
Adult mortality rate, female (per 1000 adult females)	na	306.1	260.5	222.7	188.7	164.1	160.5	156.8
Infant mortality rate (per 1000 live births)	119.1	85.0	87.6	81.6	51.9	37.3	35.5	33.9
Under-5 mortality rate (per 1000 live births)		116.4	121.4	110.5	63.4	43.8	41.6	39.7

Source: World Development Indicators (World Bank, 2014a).

1.4.2 Main causes of death

The epidemiological transition from communicable diseases to noncommunicable diseases (NCDs) was already evident during the first decade of this century, with communicable diseases falling from 61% to 46% of reported mortality and NCDs (particularly cardiovascular disease) rising from 34% to 47% (Table 1.4). The NCD burden disproportionately affects males; according to data from the World Health Organization (WHO), during 2008 the proportion of NCD deaths in males under the 60 years of age was 56.2% compared to 34.8% for women (WHO, 2011a). Increasing life expectancy and a fall in child mortality rates after 2000 reflect the health transition.

Table 1.4 Mortality from communicable and noncommunicable diseases, Cambodia, 2002 and 2008

Cause of death	% of total deaths, all ages	
	2002 ^a	2008 ^b
Communicable diseases	61	46
Injuries	5	7
Noncommunicable diseases: total	34	47
• Cardiovascular disease	14	21
• Cancers	6	7
• Respiratory diseases	3	5
• Diabetes	2	3
• Other NCDs	9	11
Total	100	100

Source: a WHO (2006); b WHO (2011b).

Rates of mortality from both NCDs and injuries continue to rise; the population is ageing, alcohol consumption is growing, and a high proportion of the male population abuses tobacco. Mortality data for 2010 illustrate the emerging burden of traffic accidents, high blood pressure, heart disease and liver cancer (many of which were not recorded in earlier years) (WHO, 2011a). Ministry of Health (MOH) statistics reported by the WHO Regional Office for the Western Pacific (WHO, 2011b) indicate that acute respiratory infection remains the leading cause of reported deaths; the 10 leading causes of reported deaths are listed in Table 1.5. However, these data were collected at public health facilities only and are therefore not representative of the whole country (they do not capture records from private clinics or deaths at home). While the data is incomplete, it is known that the incidence of deaths due to road traffic accidents rose dramatically in the after 1996, especially in urban areas, in parallel with the increasing number of vehicles. Males and motorcycle

riders accounted for 80% and 67%, respectively, of all road traffic fatalities in 2010.

Among children under five years of age, WHO statistics indicate that premature birth, pneumonia and birth asphyxia were the leading causes of death in 2010 (Table 1.6). There has been a significant decline in diarrhoeal diseases, and – due to high vaccination coverage and the implementation of measles elimination campaigns by MOH – measles is no longer a major cause of death.

Table 1.5 Main causes of reported death per 100 000 population, Cambodia, 1996–2010

Reported cause of death	1996	2000	2005	2010
Acute respiratory infections	8.50	3.43	6.25	8.05
Traffic accident	na	3.43	2.15	3.51
High blood pressure	na	na	na	3.32
AIDS	na	na	na	1.99
Tuberculosis	3.40	1.4	2.39	1.85
Heart disease	na	na	na	1.82
Meningitis	1.80	0.83	1.25	1.39
DHF	1.0	0.53	1.45	0.30
Tetanus: neonatal / other	0.20 / na	0.15 / 0.12	na / 0.21	na / 0.23
Liver cancer	na	na	0.15	0.12

DHF, dengue fever; na, not available.

Source: WHO (2011b).

Table 1.6 Distribution of causes of death (%) among children aged <5 years, Cambodia, 2000–2010

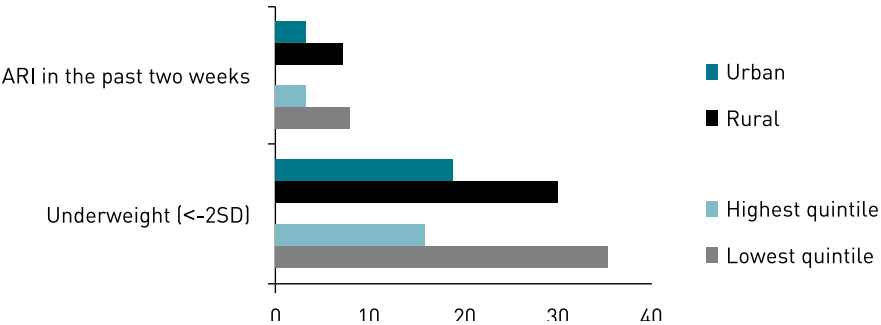
Cause of death	2000	2005	2010
Prematurity	15	19	22
Pneumonia	19	20	16
Birth asphyxia	10	10	11
Diarrhoea	13	11	8
Injuries	4	6	7
Neonatal sepsis	7	6	6
Congenital anomalies	3	5	6
Malaria	2	1	2
HIV/AIDS	3	2	1
Measles	8	1	0

Source: WHO (2013b).

According to the Global Burden of Diseases, Injuries, and Risk Factors Study, the top ranking causes of years of life lost (YLLs) due to premature death in Cambodia in 2010 were lower respiratory tract infections, ischaemic heart disease and cerebrovascular disease, followed by preterm birth complications, congenital anomalies, road injuries, tuberculosis, diarrhoeal diseases, neonatal encephalopathy and malaria (GBD, 2010). WHO estimated that in 2002 healthy life expectancy (HALE) at birth was 47.5 years (45.6 for males and 49.5 for females) in Cambodia¹. This was similar to Lao PDR (47.0), but significantly lower than Thailand (60.1) and Viet Nam (61.3) (WHO, 2004). It is likely that landmine injuries along with malaria, tuberculosis and malnutrition were the causes of the relatively low HALE.

The inequitable distribution of disease between rural and urban populations and by socioeconomic groups persists. In 2010, the proportion of children under five with moderate to severe malnutrition (weight for age below -2 standard deviations) or with acute respiratory infection (ARI) was more than twice as high in rural areas (compared to urban) and in the lowest wealth quintile (compared to the highest quintile) (Figure 1.4).

Figure 1.4 Percentage of children under 5 with ARI and malnutrition, Cambodia, 2010



ARI - Acute Respiratory Infection
 Source: CDHS 2010 (NIS, 2011).

1.4.3 Morbidity and factors affecting health status

The burden of communicable disease remains, with ARI and diarrhoeal disease still the leading causes for public-sector hospital admissions

¹ Healthy life expectancy (HALE) (also known as disability adjusted life expectancy or DALE) is an indicator that summarizes the average number of years that a person can expect to live in full health by taking into account years lived in less than full health due to disease and/or injury.

(WHO, 2011b). Among the most prevalent communicable diseases, the main factors affecting health status can be summarized as follows.

Unsafe drinking water and the lack of sanitation facilities are major risk factors for diarrhoeal disease, especially among children. In 2010, some 64% of households received drinking water from an improved source, a two-fold increase from 1990; access to an improved water source was significantly higher in urban (87% of households) than in rural areas (58%) (WHO et al., 2013). While only 31% of households used an improved toilet facility by 2010, this was a three-fold increase from 1990 (thus reducing the threat and incidence of cholera); access to an improved toilet facility was far higher in urban (73% of households) than in rural areas (20%) (WHO & UNICEF, 2013). The lack of improved toilet facilities has also been associated with child malnutrition (World Bank, 2013a).

Tuberculosis incidence and prevalence declined significantly – by 25% and 48%, respectively – between 1990 and 2010. This fall can be attributed to the introduction of directly observed treatment short course (DOTS) from 1994, with almost 100% coverage and high rates of successful treatment (Wong et al., 2013). These efforts were further complemented in 2005 by active case-finding strategies, such as outreach activities conducted by the National Centre for Tuberculosis and Leprosy Control (Mao et al., 2012).

Malaria remains endemic in many rural areas with more than 3 million people at risk. The number of reported cases at public health facilities declined rapidly from 11.0 per 1000 population in 2000 to 3.1/1000 in 2012. Malaria mortality rates declined from 608 reported deaths in 2000 to 45 in 2012 (NMC, 2013). Morbidity and mortality from malaria remain high compared to other countries in the region. Responding to multidrug resistance along the Cambodia–Thailand border – especially for artemisinin derivatives, *Plasmodium falciparum* – the ARCE (artemisinin resistance containment and elimination) programme established by WHO and the ministries of health of Thailand and Cambodia, and other partners in 2009 implements a programme including intensive screening, vector control tools and village malaria workers (WHO, 2011c). In 2013, WHO established a new regional hub in Phnom Penh to coordinate measures in the region (WHO, 2013c).

Dengue fever mostly affects infants and children aged four to six years living in urban areas. While outbreaks were observed every three to four years from 1980 to 2001, this cyclical pattern is now becoming less pronounced (Huy et al., 2010). Although the incidence of dengue fever is slowly increasing, the case fatality rate has decreased dramatically, from 15% in 1980 to 0.3% in 2010, due to improved care and greater public awareness (NCPHEMC, 2011).

HIV/AIDS emerged as a major public health problem in the 1990s, with sexual transmission as the main route of infection. The early implementation of prevention activities aimed at commercial sexworkers, injecting drug users, and men who have sex with men – including awareness of safer sex and condom-use campaigns – combined with universal access to HIV testing, antiretroviral treatment, and prophylaxis to reduce mother-to-child transmission have lowered the HIV prevalence rate from 2.4% in 1998 to 0.8% in 2010 (NCHAD, 2011).

Avian influenza H5N1 infection in humans is a major threat in Cambodia with 49 cases reported since 2005, of which only 15 cases survived (MOH, 2014a).

A nationwide survey among adults aged 25–64 years in 2010 indicated that 2.9% had **diabetes** – the prevalence was twice as high in urban areas (5.6% cf. 2.3% rural); 11.2% had **high blood pressure**, with a higher prevalence in men (12.8% cf. 9.6% women) and in urban areas (16% cf. 10% rural) (MOH, University of Health Sciences & WHO, 2010).

Changing lifestyles and the emergence of NCDs are reflected in a number of areas.

Accidents and injuries are becoming more prevalent, with almost 2% of the population being injured in 2010. Two thirds of accidental deaths are caused by road accidents and the remainder by falls, animal bites, violence and gunshots (NIS, 2011). Motorbike riders represented 66% of all road accident fatalities in 2011; wearing of a helmet has been compulsory since 2007, but only for the driver and not passengers (who may be included from 2014) (OECD & ITF, 2013).

Overnutrition is a major risk factor for NCDs. In 2010, a nationwide survey of adults aged 25–64 years found that the proportions of those overweight and obese were 15.4% and 1.9%, respectively; prevalence

among women was double that of men and increased with age. The results showed that 76% of respondents exercised a lot, and were physically active for an average of six hours per day (MOH, 2010).

Alcohol consumption is a major concern in both urban and rural areas, with almost two thirds of the 2010 survey respondents consuming alcohol regularly. More than half had drunk alcohol in the previous 30 days; men were 2.4 times more likely than women to have consumed alcohol and 10 times more likely to be heavy episodic drinkers (MOH, 2010).

Tobacco abuse is another risk factor of concern. A nationwide survey of adults 18 years and older in 2010–11 found that about four-in-10 men and four-in-100 women smoked. Overall, the number of smokers (about 1.3 million) remained unchanged compared to 2005–06. Some 13.8% of women and 0.8% of men chewed tobacco; the number of tobacco chewers (about 0.5 million) remained constant between surveys. The abuse of tobacco increased with age and was more prevalent in rural areas (NIS & WHO, 2011).

1.4.4 Maternal, child and adolescent health

Maternal and child health have improved since 2000. The maternal mortality ratio and under-5 mortality rate have fallen significantly (to 250/100 000 live births in 2010, and 39.7/1000 live births in 2012 – see Tables 1.3 and 1.7). The infant and under-five mortality rates have fallen by more than half compared to 2000. Neonatal and postneonatal mortality rates (children between 28 and 364 days of life) have declined. These gains are partly the result of a concerted campaign launched in 2010 by the MOH as a 5-year plan to increase the availability and utilization of access to emergency obstetric and newborn care, particularly among the poor and vulnerable (MOH, 2009a).

Table 1.7 Maternal, child and adolescent health indicators, Cambodia, selected years, 1980–2012

Indicator	1990	1995	2000	2005	2010	2011	2012
Maternal health							
Teenage mother (% women aged 15–19) ^a	na	na	8.2	7.8	8.2	na	na
Adolescent fertility rate (births per 1000 women aged 15–19) ^a	75.3	56.8	49.1	47.6	45.4	44.9	44.3
Abortion rate, past 5 years (per 100 women) ^b	na	na	5.0	7.9	5.4	na	na
Maternal mortality ratio (per 100 000 l.b.) ^c	830	750	510	340	250	na	na
Child health							
ARI, past 2 weeks, U-5 children (%) ^b	na	na	19.8	8.5	6.4	na	na
Diarrhoea, past 2 weeks, U-5 children (%) ^b	na	na	18.9	19.5	14.9	na	na
Measles (cases) ^d	3473	2038	12 237	264	1156	na	na
Pertussis (cases) ^d	1690	na	2068	462	372	na	na
Tetanus ^d							
• neonatal cases	n.a	8	295	68	19	na	na
• total cases	219	430	295	68	na	na	na
Neonatal mortality rate (per 1000 l.b.) ^a	37.0	37.9	35.9	25.4	19.7	19.0	18.4
Postneonatal mortality rate (per 1000 l.b.) ^b	na	na	58	37	18	na	na
Factors influencing health status							
Malnutrition ^{a,b}	na						
• Stunting/height for age (% of U-5 children)	na	58.6 ^e	49.2	43.7	40.9	na	na
• Wasting/weight for height (% of U-5 children)	na	13.4 ^e	16.9	8.3	10.8	na	na
• Underweight/weight for age (% of U-5 children)	na	42.6 ^e	39.5	28.4	29.0	na	na
Immunization coverage (%), by age 12 months ^d							
BCG	52	69	81	87	94	na	na
DPT3	38	39	59	82	92	94 ^a	95 ^a
Pol3	38	39	62	82	92	Na	Na
MCV	34	62	65	79	93	93 ^a	93 ^a
PAB	11	45	58	81	91	na	na
Skilled attendant at delivery (%) ^b	na	na	32	44	71	na	na

BCG, tuberculosis vaccine; DPT, diphtheria–pertussis–tetanus vaccine; l.b., live births MCV, measles-containing vaccine; PAB, protected at birth, ; Pol, poliomyelitis.

Source: a World Bank (2014a); b CDHS 2000, 2005 and 2010 (NIS, 2001, 2011; NIPH 2006); c Trends in maternal mortality 1990–2010 (WHO et al., 2012); d WHO vaccine-preventable diseases: monitoring system (WHO, 2013b).

Note: e Data for 1996.

CDHS data indicate that childhood mortality is substantially lower in urban than in rural areas, and has declined markedly due to better education of mothers, increasing wealth of households or both. In the past, the high neonatal mortality rate was due mainly to perinatal conditions, such as neonatal infections, birth asphyxia, prematurity, congenital abnormalities and low birth weight, which were most likely the result of a lack of qualified midwives, home deliveries, and lack of appropriate child delivery facilities in rural and remote areas (NIS, 2004). Conditions are slowly improving.

It is possible that recent initiatives including a higher rate of facility deliveries and incentives paid to midwives for live deliveries (along with general economic and social development) have acted to reduce the extreme maternal mortality ratios of previous decades; maternal mortality nonetheless remains excessively high. By 2010, some 71% of deliveries were attended by skilled health personnel (compared to 32% in 2000 and 44% in 2005) (NIS, 2001, 2011; NIPH, 2006). Adolescent health indicators have remained unchanged since 2000, with the adolescent pregnancy rate remaining at 8% and the abortion rate above 5%.

Despite improvements, a number of childhood diseases remain a concern.

- **Acute respiratory illness** declined from 20% to approximately 6% of children under 5 during 2000–2010; diarrhoea remained widespread, affecting about 15% of children under 5 in the two weeks prior to the national survey (NIS, 2011).
- **Dengue fever** is seasonal and endemic, and mainly affects children living in urban areas. Incidence rates vary by year and have been as high as 2.8/1000 population (2007). Improved case management and timely treatment have helped to reduce the case-fatality rate from over 4% in 1995 to 0.3% in 2010 (Huy et al., 2010; NCP EMC, 2011).
- **Malnutrition** has been recognized as a major risk factor for child morbidity and mortality. The nutritional status of children has improved significantly since the 1980s. Childhood stunting, wasting and underweight have all declined although they remain significant (NIS, 2011).

The national Expanded Program on Immunization (EPI) plays a crucial role in preventing child morbidity and mortality from tuberculosis, poliomyelitis, diphtheria, pertussis, tetanus and measles. In 2010, over 90% of children under one year of age received at least one dose of tuberculosis vaccine (BCG), at least three doses of diphtheria, pertussis and tetanus vaccine (DPT3), at least three doses of poliomyelitis vaccine (Pol3) and at least one dose of measles vaccine (MCV). Vaccine coverage had more than doubled since 1990. In 2010 the proportion of all children protected at birth (PAB) was 91% (compared to 11% in 1990) (WHO, 2013b). As a consequence, diphtheria, neonatal tetanus, measles and pertussis occur less frequently and poliomyelitis has been eradicated. Vaccine coverage was higher in urban than in rural areas, and increased substantially with the educational level of the mother and with household wealth (NIS & WHO, 2011).

Little is known about dental health in Cambodia. The first national oral health survey in 1991 found an average of 1.6 decayed, missing, filled teeth (DMFT) per person among 12-year-old children. A survey of 12-year-old primary schoolchildren in Phnom Penh in early 2002 found 2.3 DMFT per person. The MOH is addressing dental health concerns by increased training of dentists and dental nurses as well as through the Oral Health Preventive School Program, including daily tooth brushing, weekly fluoride mouth rinsing and oral health education (Teng et al., 2004).

Health status in Cambodia is steadily improving, with people living longer and healthier lives. Both economic development and ageing of the population are leading to a shift of morbidity and mortality away from communicable diseases to NCDs and injuries. Major health challenges in rural areas include inadequate supply of safe drinking water, lack of improved sanitation facilities, and lack of qualified midwives and physicians, all of which lead to prevalent diarrhoeal disease, persistently high neonatal mortality, and relatively high maternal mortality. The urban population, on the other hand, is facing an increasing rate of injuries and deaths due to traffic accidents, and increasing NCDs and deaths due to unhealthy lifestyles.

2 Organization and Governance

Chapter summary

The Ministry of Health (MOH) is solely responsible for the provision of public health services, delivered through the MOH according to the district health system model. The system has grown and been strengthened significantly since the 1990s, when external aid was the major source of health financing and services were mostly provided by nongovernmental organizations following the extended period of civil war and the Khmer Rouge regime.

Public health administration is centralized, with responsibilities for service delivery assigned to MOH officials at provincial and district levels. Building on earlier planning activities, the first comprehensive Health Strategic Plan was implemented in 2002–2007. The current *Health strategic plan 2008–2015* is implemented with the aid of Annual Operational Plans at all levels. Improving access to services and social protection are among the stated aims of the Health Strategic Plan.

In general, the MOH both finances public health care and delivers services without a third-party purchasing agency. The draft Health Financing Policy proposes a move to a National Social Health Protection Fund, incorporating several existing demand-side financing schemes (especially Health Equity Funds) to cover the poor and informal sectors, to sit alongside two proposed national health insurance programmes for civil servants and private-sector employees. These social health protection schemes will initially contract only public providers for service delivery. While the private sector continues to dominate curative health care delivery, private providers remain insufficiently regulated.

2.1 Overview of the health system

Cambodia has a pluralistic health system in which the main health infrastructure and public health care are delivered through the Ministry of Health (MOH), while the disparate private sector provides most outpatient curative care. The MOH was institutionalized as the government's health ministry under Sub-Decree 67 ANKr.BK of the Government of

Cambodia, dated 22 October 1997. The Sub-Decree makes the MOH alone responsible for all aspects of health care, including the development of strategic plans and the delivery and evaluation of public health services in Cambodia.

The public health system is based on a district health system model with three levels of responsibility:

Central Ministry

- Develops policies, legislation and strategic plans,
- Responsible for resource mobilization and allocation,
- Responsible for monitoring, evaluation, research,
- Maintains the national Health Information System,
- Provides training, support to provinces and districts,
- Coordinates with other ministries and external aid.

Provincial level

- Administered by an MOH Provincial Health Department,
- Links the central Ministry with MOH health Operational Districts,
- Implement the Health Strategic Plan via Annual Operational Plans,
- Responsible for the equitable distribution and effective use of available resources,
- Supports the development of health Operational Districts.

Operational District level

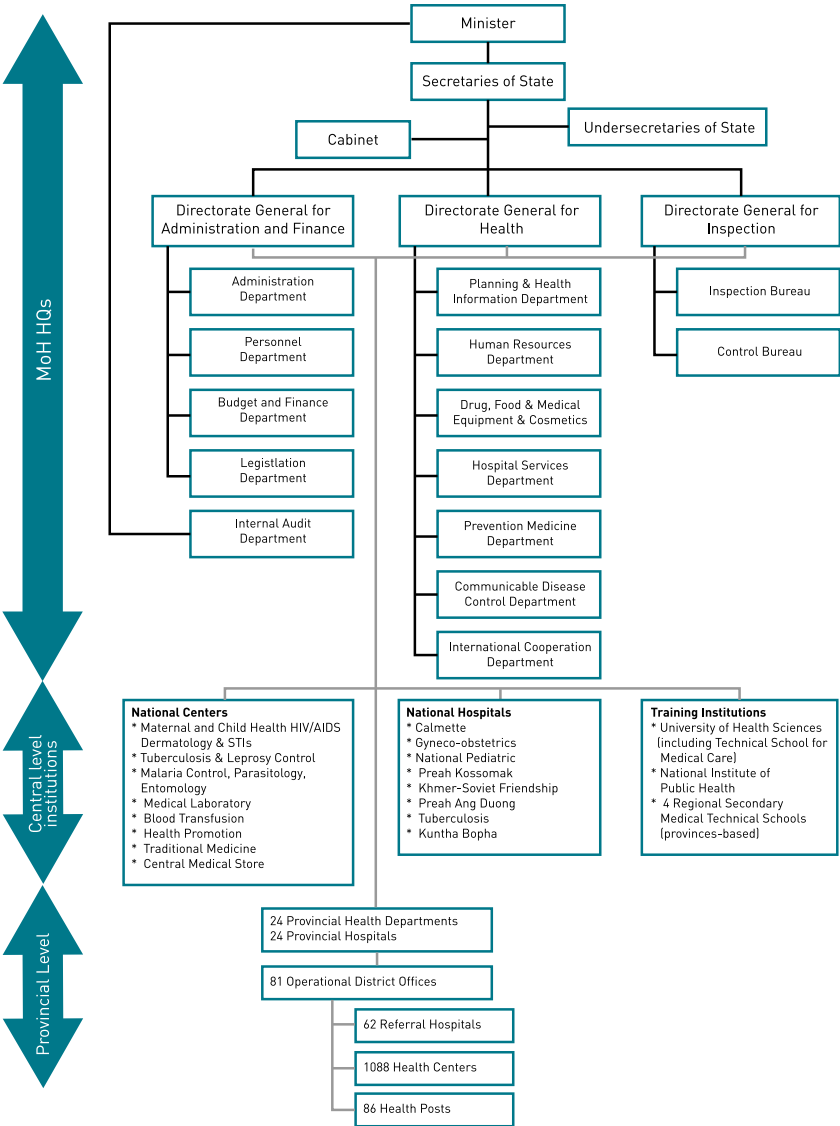
- Administered by an MOH Operational District Office,
- Responsible for effective, efficient and comprehensive health-service delivery,
- Interprets, disseminates and implements national policies and provincial health strategies.

2.2 Organization

The MOH, which alone is responsible for the delivery of government health services, administers health programmes at national, provincial and health Operational District (OD) levels. The central MOH has three General Directorates: Health, Administration and Finance, and Inspection (see Figure 2.1). These Directorates are responsible for ensuring that the government's health objectives – defined in the National Strategic Development Plan and the Cambodian Government's overall plan

for national development called the Rectangular Strategy (see below for further clarification) – are translated into policies, strategies and guidelines in order to reach their targets.

Figure 2.1 Organization of the Ministry of Health and affiliated institutions



Source: Ministry of Health

The role of the General Directorate for Health, which is the most comprehensive of the three, is the formulation and implementation of MOH policies through its eight departments (Planning and Health

Information; Human Resource Development; Preventive Medicine; Communicable Disease Control; Drug and Food; Medical Equipment and Cosmetics; Hospital Services; and International Cooperation) and to oversee the 24 Provincial Health Departments (PHDs) and their 81 ODs.

The affiliated institutes of the MOH include the University of Health Sciences (including Technical School for Medical Care), the National Institute of Public Health, four regional Secondary Technical Medical Schools, as well as specialized national centres (the National Center for HIV/AIDS, Dermatology and Sexual Transmitted Diseases; Tuberculosis and Leprosy Control; Maternal and Child Health; Traditional Medicine; Medical Laboratory; Blood Transfusion; Health Promotion; and Malariology, Parasitology and Entomology), and the Central Medical Store.

Provincial Health Departments operate a provincial hospital and cover from one to 10 Operational Districts (OD), which were formed on a geographic and population basis under the 1995 Health Coverage Plan (and do not coincide with the government's administrative districts) (see section 4.1.1). Each OD covers a population of 100 000–200 000 with at least one Referral Hospital and a number of Health Centres that each cover 10 000–20 000 people. Health Posts – which are located in remote areas, more than 15 km from the nearest Health Centre, and cover 2000–3000 people – are the lowest echelon in the public health system.

Within the framework of the 1995 Health Coverage Plan (see section 4.1.1, Box 4.1), the services delivered at government facilities are regulated under guidelines produced by the MOH that define a Minimum Package of Activities (MPA) for Health Centres and a Complementary Package of Activities (CPA) for Referral Hospitals (MOH, 2006, 2007b).

- The Minimum Package of Activities consists mainly of preventive and basic curative services, supplemented by specific activities for vertical programmes.
- The Complementary Package of Activities (CPA) are graded 1–3 on the basis of the number and composition of staff, number of beds, standard drug kit, standard medical equipment, and clinical activities:
 - o CPA-1 hospitals: the lowest hospital level, with 40–60 beds, provide basic obstetric care, but with no major surgery (no general anaesthesia) and no blood bank or blood deposit;
 - o CPA-2 hospitals: with 60–100 beds, provide CPA-1 services plus emergency care, major surgery and other specialized services such as blood transfusion;

- o CPA-3 hospitals: with 100–250 beds, are the highest hospital level, provide major surgery and more activities than CPA-2 including various specialized services; all eight National Hospitals located in Phnom Penh, and 21 of 24 provincial hospitals are CPA-3 hospitals.

While there are adequate numbers of referral hospitals and health centres to serve the population based on these arrangements, primary care delivery especially is understaffed and public health care providers generally work also in their own private practice. These issues are discussed further in Chapter 5.

2.3 Historical background

The national health system evolved unevenly following the end of French colonial rule and was destroyed completely by the 1970s Khmer Rouge regime. The number of hospitals increased from 16 to 69 and commune dispensaries from 103 to 587 following independence in 1953. From 1963 domestic production of a range of pharmaceuticals began, medical services were no longer provided free at the point of service, and many physicians began to operate privately (Ovesen & Trankell, 2010, pp. 79–82). Half of all hospitals had been closed by 1971 and medicines became scarce as a result of civil war and United States-led bombings at the time of the American war in Viet Nam. Of the 450 physicians remaining, 200 left the country and those staying were mostly unwilling to treat people unable to pay (Ovesen & Trankell, 2010, p. 90).

Whatever remained was destroyed by the 1975–79 Khmer Rouge regime. During these years, allopathic medicine, using doctors and pharmaceuticals imported from China, was available only to high ranking officials, military leaders and other cadres of the regime (Ovesen & Trankell, 2010, p. 87). Hospitals and Health Centres were destroyed or abandoned. The populace in general was treated with crude, unscientific substances and some traditional medicines, which were mass produced in tablets and administered by uneducated and unqualified so-called physicians who had received no more than a few months elementary so-called training (Ovesen & Trankell, 2010, p. 92; Vilim, 2010).

By the time the Khmer Rouge regime was overthrown, only 25 medical doctors had survived (Mam & Keys, 1995). Initially, emphasis in restoring the health system was placed on quantity: in 1980–1981, some 11 231

medical staff were recruited or trained and operated from 1225 health posts. By 1989 there were 1616 health posts (without a significant increase in health staff).

Facing a blockade by the United Nations, only very limited humanitarian assistance was available during the 1980s, and health aid came almost exclusively from Cuba, the Soviet Union and Eastern Europe (Ovesen & Trankell, 2010, p. 122; Vilim, 2010).

From the signing of the Paris Peace Agreements in 1989, the government depended largely on external aid to rebuild the health system, mainly channelled through nongovernmental organizations (NGOs). In 1988 there were 23 international NGOs and no local NGOs at all; by 1995 there were 164 and 160, respectively (Lanjouw, Macrae & Zwi, 1999). The assistance from donors and NGOs in this period has been described as “uncoordinated, unevenly distributed by specialization and geographical area and pulling in different directions” (Godfrey et al., 2002).

Despite adoption of the 1995 Health Coverage Plan, health-service delivery was, in practice, curtailed at the district level until a stable peace was established only in 1998. A year later, donor agencies with MOH support piloted the contracting of district health-service delivery, appointing nongovernmental organizations through a competitive bidding process to manage government services in five ODs, using two approaches with different degrees of management autonomy (see section 6.1.1). Following 30 months of operations, the MOH formulated a single model of contracting that constituted a mix of both approaches and which was implemented in 12 ODs during 2004–2008.

In 2002, the MOH published the first comprehensive five-year *Health Strategic Plan 2003–2007* (MOH, 2002a). The mission was to ensure equitable, quality health care for all the people of Cambodia through targeting of resources, especially towards the poor and areas in greatest need. Generally, the Plan was aligned with the National Development Plan, and this first Plan was followed by the introduction of a system of operational planning for implementation using annual plans that form three-year rolling plans (MOH, 2002b). A second strategic plan was adopted for 2008–2015; more recent developments are discussed in Chapter 6.

2.4 Decentralization and deconcentration

The administration of the public health system in Cambodia is centralized at the level of the national MOH, as with other government ministries, with responsibilities for implementation and service delivery assigned to MOH officials at provincial and district levels. To date, local autonomy is insufficiently articulated within this system.

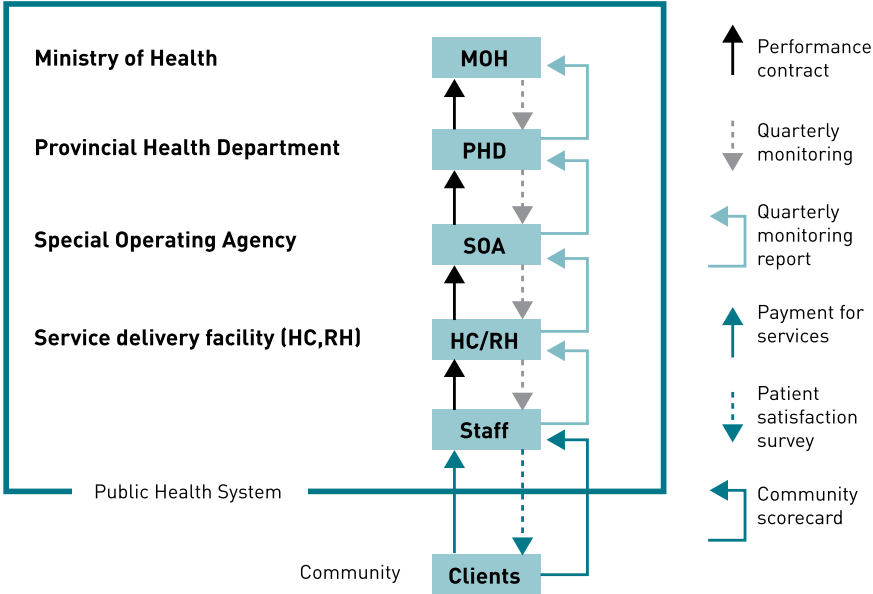
In 2001, the government initiated a process of political decentralization through two laws: the Law on the Administration and Management of Communes and the Law on Commune Elections. The first commune elections, open to all parties and candidates, were held nationally in 2002. In 2008 the Ministry of Interior enacted the Organic Law (on Administrative Management of the Capital, Provinces, Municipalities, Districts and Khans), which provided the administrative basis for decentralization and deconcentration. The law gives priority to decentralization of functions that have a direct impact on poverty and livelihood, including health and nutrition.

The process of decentralization and deconcentration has only begun, and many of the challenges are yet to be recognized. Decentralizing functions without a supporting budget is a constant risk, as in other countries in Asia, and the lack of adequate capacity at local level can leave districts without the ability to deliver services. In some cases, this provides an opportunity for the MOH to retain influence by purchasing services through social health protection schemes (see Box 6.2). In Cambodia, a potential move to demand-side financing as the means to fund local administration health providers may anticipate such a development, if not the need to move funds more effectively to peripheral services (see the Health Financing Policy, Chapter 6).

To operationalize the Organic Law, the National Program for Sub-National Democratic Development was developed for the period 2010–2019. The National Program was designed to create a culture of local accountable participation, improve public services and infrastructures, and promote social and economic development and poverty reduction. To avoid major disruptions to service delivery, the Organic Law has been implemented incrementally to enable capacity-building at the subnational level. The first phase aims to align line ministries' oversight; the second concerns the delegation of the management of funds to subnational administrations; the third phase relates to the full transfer of specific and mandatory functions.

Under the three-tier health system, the MOH activities are administratively decentralized (deconcentrated) but with considerable upward accountability to central level and limited decision-making discretion at provincial and district levels. A first step has been to convert almost one quarter of health ODs and Provincial Hospitals to the status of Special Operating Agency (SOA). SOA status was established as one part of the government’s 2006 *Policy on public service delivery* (Council for Administrative Reform, 2006) as a means for providing greater management autonomy to district health and hospital managers through internal contracting arrangements and community monitoring (see Figure 2.2 and Box 2.1). To date, 26 ODs and 10 Provincial Hospitals have been converted to SOA status.

Figure 2.2 Contracting arrangements for Special Operating Agencies



NB. Not all SOA districts have the community scorecard; the scorecard approach is being piloted and staff/facility payments are not influenced by the results of the scorecard.
 Source: Asia Pacific Observatory on Health Systems and Policies

One implication of the national decentralization process is a possible move away from the health OD model and a return to the management of public health-care delivery through the government’s official Administrative Districts. This would require a reconsideration of the Health coverage plan (MOH, 2002c), which has been largely achieved. The move would require the MOH to engage in a mapping exercise of functions and associated resources to prepare for the transfer of administrative

duties to the subnational level. This in turn would require devolution of the responsibility for health plans and budgets to health officials working at the Administrative District level (replacing the ODs), ensuring dissemination of health information to local authorities, and promoting community monitoring of health services.

Box 2.1 Key features of Special Operating Agencies

From 2009 a number of health Operational Districts (ODs) were designated by the Ministry of Health (MOH) as Special Operating Agencies (SOAs). Established as a form of deconcentration by government subdecree, SOAs are a new administrative form within the broader Cambodian public administration that provides district health managers with greater autonomy in decision-making and additional funding to be used at managers' discretion for staff incentives and operating costs. Within the government sector, the Ministry of Public Functions (formerly known as the Council of Administrative Reform) and the Ministry of Economy and Finance allow SOAs greater autonomy in return for stronger accountability for performance. The SOA remains an integral unit of the MOH and operates as a designated service-delivery unit.

The SOA arrangement uses an internal contracting approach within the MOH to define and monitor performance agreements (Fig. 2.2). The central MOH signs a performance contract with the Directorate of the Provincial Health Department, which in turn signs a service delivery agreement with the respective SOA (the OD office) and the Provincial Hospital. In some cases, health facilities sign performance agreements with the health staff.

The first 11 ODs were converted to SOA status in 2009. These ODs had experienced earlier forms of external contracting of service delivery through contracted nongovernmental organizations (NGOs), and some had pioneered a form of internal contracting under a project sponsored by Belgian Technical Cooperation (Khim&Annear, 2013). By 2014, some 26 ODs and 10 Provincial Hospitals were operating as SOAs.

.... continued on next page

Box 2.1 Key features of Special Operating Agencies (cont.)

The implementation of SOA arrangements has four objectives:

- To improve the quality and delivery of government health services in response to health needs
- To change the behaviour of health-sector staff to embrace the principles of motivation, loyalty, service and professionalism
- To promote prudent, effective and transparent performance-based management
- To develop sustainable service-delivery capacity within the available resources.

SOAs enjoy a greater degree of flexibility in budget allocation, supported by programme-based budgeting, and receive additional discretionary funds as a Service Delivery Grant, about 50% of which can be allocated as staff incentive payment (see Chapter 3). The objectives of the performance mechanism are:

- To promote prudent, effective and transparent performance-based management
- To develop sustainable service-delivery capacity within the available resources.

Basic principles for implementing internal contracting arrangements under the SOA include a clear definition of:

- The category, quality and price of delivered service
- The expected results and all required resources
- The organization and functions of the SOA
- The mechanism of monitoring, control and evaluation.

The contracts stipulate the roles and responsibilities of the concerned parties, performance target indicators and associated bonuses. Selected NGOs provide technical assistance to build SOA organizational capacity. Funded through the Health Sector Support Program 2008-2015, the SOA experiment has support from both government and donors. Additional funds through the Service Delivery Grants are paid 80% in advance, with 65% for staff incentives and the remainder for operating costs; the remaining 20% is designated as an SOA performance-based payment and is paid upon verification of services delivered.

2.5 Planning

The MOH has a strong record in planning and policy-making dating back to the 1980s. The MOH was one of the first ministries, working in collaboration with development partners, to set out a comprehensive sector strategic plan. The requirement for annual operational planning was first introduced in 1999 and subsequently became a mandate for health institutions at all levels. The MOH launched the first *Health Strategic Plan 2003–2007* (HSP1; MOH, 2002a) in collaboration with key stakeholders, including national and local authorities, national and international development partners and civil society organizations. Adoption of the second *Health strategic plan 2008–2015* (HSP2; MOH, 2008a) coincided with the finalization of the Cambodia Millennium Development Goals.

This planning activity has taken place through the Ministry of Health with support from donor partners in an environment of relatively low levels of public funding for health care and the lack of adequate, and adequately trained, staff, so implementation is sometimes constrained. Nonetheless, the planning process – which in fact has driven actual health reforms since the 1990s – has been critical to the achievements of major improvements in the health sector from the expansion of physical facilities to increased staffing and to the implementation of effective health financing interventions.

The first Health Strategic Plan (HSP1) set out 20 specific strategies, grouped into six key areas: service delivery, behaviour change, quality improvement, human resource development, health financing, and institutional development. These were associated with specific outcomes and key performance indicators. The second Health Strategic Plan (HSP2) builds on the experiences gained from the implementation of the HSP1 and has 15 elements attached to three main goals: to reduce newborn, child and maternal morbidity through increased reproductive health care, reduce morbidity and mortality of HIV/AIDS, malaria, tuberculosis and other communicable diseases, and reduce the burden of non-communicable diseases.

The implementation of the HSP challenges current capacities at various levels and requires further organizational development. Institutional strengthening across all levels (provincial, OD and health facility) is necessary to support key functions including strategic planning, operational planning, financial management, asset management, staff management, and management of service delivery (including quality management and contract management where appropriate).

The MOH operationalizes the HSP through Annual Operational Plans (AOPs), which have been prepared every year since 2005. The AOP process is an ambitious and labour-intensive one, incorporating top-down and bottom-up processes in which each OD (with input from Health Centres and Referral Hospitals), the Provincial Health Department, the national programme and the central MOH department prepares its activity plan and budget for the year. Each AOP is further broken down into quarterly action plans and finally monthly workplans. Monitoring of quarterly and monthly workplans is conducted through monthly and quarterly AOP review meetings at each level.

Previously, each AOP formed the first year of an MOH three-year rolling plan. Subsequently, the government introduced the Budget Strategic Plan (BSP) with a medium-term horizon that will incorporate the sector AOP. Together with the Public Investment Programme, this constitutes the principal strategy for medium- to long-term planning. These documents are drafted in alignment with the government's overarching economic policy agenda, the Rectangular Strategy, and the National Strategic Development Plan. However, the links between these national plans, the Medium Term Expenditure Framework and the annual budget remain weak: recurrent, capital and donor budgets are not fully integrated (e.g. external financing is not fully captured in the government budget and is not classified using the government's chart of accounts); and the BSP also does not include subnational levels.

At the sector level, the annual planning cycle begins with the Joint Annual Performance Review (JAPR), which consists of two discrete events: (i) the Pre-JAPR (typically conducted in January or February); and (ii) the annual National Health Congress (combined with the JAPR held in March). The Congress is a more formal event that includes participation from a wide range of stakeholders, including other government institutions, health development partners, health partners, civil society organizations, and provincial, district and commune officials. Sector priorities for the next year, as identified at the Pre-JAPR and sector targets are formally approved and adopted, and then disseminated to all stakeholders for guidance in preparation of their own AOPs.

In line with the JAPR–Congress process, each level in the MOH conducts its own annual review, and formulates its priorities for the following year, following guidance about national priorities from the central level. The MOH also conducts a mid-year review down to OD level in which the first half year's progress against targets is analysed and necessary changes made,

along with resource reallocation if required. Finally, late in the third quarter of the year, a Joint Annual Plan Appraisal workshop is conducted with central institutions and Provincial Health Departments, joined by health development partners, to appraise and finalize the next year's AOP.

A strength of the planning process is the ownership and leadership of the MOH, with strong support from development partners. A large proportion of development assistance is pooled in support of the HSP and jointly agreed priority programmes and interventions. This coordination of development assistance in line with national policies and strategies is a key aspect of the Cambodian approach to health planning and financing.

Both the Joint Annual Performance Review and the Joint Annual Plan Appraisal are recognized as mechanisms for improving the alignment of development partners' support for national health-sector priorities. In addition, an ongoing policy dialogue is conducted through the Technical Working Group for Health at the central level and parallel Provincial Technical Working Groups for Health. The aim of the provincial working groups is to strengthen coordination among the Provincial Health Department (PHD), its partners and other government sectors, with special emphasis on harmonization of activities, efficient use of resources, and monitoring and evaluation of provincial health plan implementation. The Working Group is fulfilling its mandate via a number of tasks (indicated in Box 2.2).

Box 2.2 Tasks of the Provincial Technical Working Group

- Ensure that all activities and resources available from health partners are included in Provincial Annual Operational Plans and that they participate in the provincial annual planning process.
- Mobilize additional resources to support the implementation of agreed Provincial AOPs.
- Mobilize additional resources in case of unplanned activities of high priority – e.g. emergency and disease outbreak response and control, disaster interventions.
- Ensure efficient use of resources.
- Monitor progress and achievements of Provincial AOP on quarterly and annual bases.
- Promote greater transparency among the PHD and its health partners by sharing information on planning and budgeting, and issue a financial report.

2.6 Intersectoral cooperation

The MOH cooperates with other line ministries in the implementation of government priorities through the Council of Ministers (equivalent of Cabinet) and the Council for Administrative Reform, and more directly with ministries that support health-related activities, particularly the Ministry of Economy and Finance.

Poverty reduction is a key objective of the *Health strategic plan 2008–2015* and is a driver for intersectoral planning. Article 72 of the Constitution states that: “The health of the people shall be guaranteed. The State shall give full consideration to disease prevention and medical treatment. Poor citizens shall receive free medical consultation in public hospitals, infirmaries and maternities.” This pro-poor focus is reiterated in the government’s Rectangular Strategy (for Growth, Employment, Equity and Efficiency), which was first released in 2004, updated in 2008 and 2013, and defines the Government’s long-term vision.

The HSP follows five working principles, the first of which relates to social health protection for vulnerable populations and promotes pro-poor approaches with the targeting of resources. Health Equity Funds are a prime example of the poverty-reduction strategy and are the foundation, currently, of the recently adopted National Social Protection Strategy for the Poor and Vulnerable (2011–2015). Designed to reduce financial barriers to access to health services, the Health Equity Fund initiative is led by the MOH and implemented in close collaboration with the Ministry of Planning, which is responsible for the nationwide identification of the poor (see section 3.3.1, Box 3.2). The Council for Agriculture and Rural Development provides overall coordination of social protection interventions for the poor and informal sector population.

The HSP also proposes cross-sectoral collaboration for eight environmental health priorities: water supply and quality; hygiene and sanitation; air quality; solid waste; toxic and hazardous substances; occupational health; climate and ecosystem changes; disasters and emergencies. The Plan also highlights issues related to zoonotic diseases and to the social determinants of health.

2.7 Health information management

2.7.1 Information systems

The MOH maintains a Health Management Information System (HMIS) with web-based reporting and access, launched in 2010. Fifty-five Referral Hospitals, 24 Provincial Hospitals, eight national and two NGO hospitals along with all the OD offices enter data directly via the Internet for immediate access by HMIS users. Not all Health Centres have access to electricity or to Internet connections. Health Centres without Internet access submit returns on paper and reporting rates are close to 100% – it is anticipated that all will be connected electronically in the foreseeable future. In addition, 163 private providers and NGO facilities currently provide data to the HMIS.

The key features of the HMIS are: its integration, providing one system for recording of routine health data; standardization in terms of the same set of forms applied across each level; simplicity of design, retaining the look from past years yet incorporating new information; reliability in terms of completeness and timeliness of data; and computerization for most, though not all, health facilities. HMIS components include monthly routine reports from Health Centres and Referral Hospitals. Each facility maintains a register from which patient data are aggregated, covering the following services: outpatient consultations, prenatal consultations, immunizations, birth spacing, deliveries, laboratory examinations, referrals and hospitalizations.

At subnational level, HMIS information is used for quarterly and annual reviews, SOA performance reviews, Provincial Technical Working Group meetings, District and Provincial Health Financing Steering Committee meetings, and for annual budgeting by facilities. For many key indicators, the data from the HMIS are reported to be within about 5% of the results from household surveys, suggesting that the validity and reliability data are both high. Continuing challenges relate to accurate population denominators, particularly at OD level and below, due to seasonal migration, both internal and cross-border. Closer collaboration with commune council authorities and higher levels promises to ensure greater accuracy of the data.

Table 2.1 Milestones in the development of the Health Management Information System

Year	Milestones	Remarks
1992	Established the first HIS Sub-Committee charged with developing a health information system	Information was critical to support the development of health-sector reforms; supported by UNICEF.
1993	First version of a functional HIS developed	
1994	Piloting of the new HIS in two provinces, Battambang and Pursat	Pilot was successful and decision taken to scale up to all provinces.
1995	Nationwide coverage of HIS	
1996	HIS required higher degree of complexity	Newly introduced Health Coverage Plan including establishment of health Operational Districts (as distinct from administrative districts), plus introduction of minimum and comprehensive package of activities (MPA/CPA) at health facilities.
2006	Comprehensive assessment of HIS	Health Metrics Network (HMN) assessment tools applied to HIS, which identified key concerns based on stakeholder perceptions. Technical and financial support provided by the HMN Project.
2008	Formulated and implemented HIS Strategic Plan 2008–2015	HIS was listed as one of the five key strategic areas of the second Health Strategic Plan (HSP 2008–2015).
2010	Testing of HIS upgrade to web-based Health Management Information System (HMIS)	Upgrade with technical support from USAID.
2010	Launched maternal death surveillance system	Supported by WHO and BTC.
2011	Web-based HMIS formally launched	Formal commencement followed a year of piloting and nation-wide testing.
2011	First Routine Data Quality Assessment conducted	Used WHO tools, technical support from WHO, and financial support from HMN.
2012	Developed Patient Management and Registration System (PMRS)	Tested.
2012	Second Routine Data Quality Assessment conducted	Consisted of a nationally representative sample of 110 Health Centres and Referral Hospitals, technical support from WHO and financial support from HMN (see text).

BTC = Belgian Technical Cooperation; HIS = Health Information System; HMIS = Health Management Information System; HMN = Health Metrics Network; HSP = Health Strategic Plan; WHO = World Health Organization.

Source: Asia Pacific Observatory on Health Systems and Policies

The major milestones in the development of the current, computerized HMIS are summarized in Table 2.1. The first Health Information System (HIS) was launched by the MOH in 1992, with technical and financial support from the United Nations Children’s Fund (UNICEF), and was phased in gradually, first in two provinces, from May 1994. Complete nationwide coverage was achieved by February 1995. The original reporting system was paper-based, but data were entered centrally into a Microsoft Access database from 2007, and included data on outpatient consultations, inpatient discharges, laboratory results for malaria, and illnesses. All data were disaggregated by patient location, age and sex. The system did not report on logistics, administration, finance or patient vital statistics.

A hallmark of the various revisions was the consultative and participatory approaches adopted that involved all key stakeholders; the HIS has been continually upgraded in line with the changing requirements for planning, service delivery, and monitoring and evaluation. In 1996 the HIS was revised to comply with the Health coverage plan. With the support of the World Health Organization (WHO) and the Health Metrics Network (HMN), a sector-wide assessment of the HIS was conducted in 2007. The assessment identified poor data management and lack of resources, including both human and material (computer hardware and software, access to the Internet service, etc.), as the key shortcomings. With the participation of the HIS Stakeholders Working Group (including both the Ministry of Interior, which was in charge of the civil registration system, and the Ministry of Planning’s National Institute of Statistics, which is the government’s lead agency for the implementation of the Basic Statistics Law), the MOH formulated the first ever Health Information System Strategic Plan (HISSP).

The HISSP was designed to coincide with the implementation of the *Health strategic plan 2008–2015* and covers five main HIS components (drawn from the HMN framework): (i) policy and resources; (ii) data management and use; (iii) health and disease records, including surveillance; (iv) census, civil registration and population-based surveys; and (v) health-service administration and support systems. With the implementation of the HISSP and with further support from USAID, increased attention and resources have been dedicated to building capacity, infrastructure improvements and introduction of new information and communications technologies.

2.7.2 Information technology

The use of information and communications technology (ICT) and other infrastructure and technologies remains limited but has strengthened in recent years with technical and financial support from international agencies. Data quality, which was previously a prime concern, has improved significantly. Cambodia has no health technology assessment.

The first Routine Data Quality Assessment was conducted in 2011 with support from WHO and HMN. Using tools developed by the HMN, the assessment found that data quality was satisfactory, especially at the national level. Minor discrepancies were found in provincial data. The report recommended the conducting of regular facility surveys to validate key indicators, and adjustment of population denominators based on data from the National Census and the most recent *Cambodia demographic and health survey 2010* (NIS, 2011).

Preliminary results from a second Data Quality Assessment conducted in December 2012 showed a very high rate of facility reporting (almost 100%), very high completeness of indicator reporting with almost no zero or missing values, generally very high consistency rates between source documents and monthly reported values with verification factors close to one, no extreme outliers (values outside three standard deviations from the mean) and only 3% moderate outliers (between two and three standard deviations from the mean). Key issues included poor utilization of tally sheets at facility level and poor correspondence of coverage rates between the HMIS and survey data at provincial level.

Since November 2011 a pilot Patient Management and Registration System has been tested at the Siem Reap Provincial Referral Hospital. The System stores patient records with demographic data, diagnosis, payment and other details. Clinical staff have access to this information for follow-up visits and case management. It is expected that the scheme will soon be expanded to cover other Referral Hospitals and lead to the institutionalization of electronic medical records. This will require the strengthening of networks, ICT infrastructure and maintenance, and more ICT staff.

2.8 Regulation

There is considerable scope for reinforcing the regulatory mandate of the MOH; the Department of Legislation, under the General Directorate for Administration and Finance, was established only in July 2012. At the top of the Cambodian legal hierarchy are laws, which are endorsed by *Royal Kram*. These are followed by subdecrees, which are government decisions endorsed by the Council of Ministers. A third tier is the *Prakas*, which constitutes a Ministerial decision.

There are four laws covering the health sector: (i) the 1996 Law on the Management of Pharmaceuticals, amended in 2007; (ii) the 1997 Law on Abortion; (iii) the 2000 Law on Management of Private Medical, Paramedical and Medical Aid Services; and (iv) the 2002 Law on Prevention and Control of HIV/AIDS. A range of subdecrees and *Prakas* regulate various aspects of the health system, generally outlining procedural issues rather than regulatory sanctions. However, much more needs to be elaborated, especially concerning quality of care, patient rights, and social health protection.

2.8.1 Regulation and governance of third-party payers

There is currently no national third-party purchasing agency for health care in Cambodia. Neither the National Social Security Fund for private sector employees nor the National Social Security Fund Civil Servants (operated by the Ministry of Labour and the Ministry of Social Affairs, respectively) have yet begun to purchase health services for enrolled members. Private insurance companies (including community-based health insurance schemes) are regulated under the provisions of national insurance laws administered by the Ministry of Economy and Finance. The most widespread third-party purchasers of health services are the Health Equity Funds. The draft Health Financing Policy now awaiting approval proposes a new National Social Health Protection Fund incorporating the Health Equity Funds and other demand-side financing schemes for the informal-sector population (see Chapter 3 for further information), alongside two proposed national health insurance programmes for civil servants and private-sector employees

2.8.2 Regulation and governance of providers

Licensing system exists for medical practitioners and pharmacists. However, despite considerable improvements, regulations of private providers, in particular private for-profit health-care providers remain a

major challenge and deserve more policy attention. A 2013 mapping of health providers in 160 rural villages found that non-medical providers accounted for half of all health providers (World Bank, 2013c). While private providers dominate curative health-care delivery, only 15% of primary care consultations occurred in the public sector.

Health practitioners are required to register by the law. The 2000 Law on Management of Private Medical, Paramedical and Medical Aid Services stipulates that the MOH shall accredit medical operations on the basis of the type of services they deliver and the qualifications of their personnel. Sub-Decree No. 61, 2003, on the Medical Code of Ethics and *Prakas* No. 034, 2011, on the Procedure and Conditions Set supplement the law with regulations defining the procedures required to open or close, change or relocate private services. Licensing of private health-care facilities by the MOH requires that the respective doctor or medical assistant register with the National Medical Council, which was established in 2000. Licences are subject to periodic renewal, the frequency of which depends on the type of facility. In theory, changes in location, staffing and opening hours require approval by the MOH.

Even so, the enforcement of licensing and registration procedures is less than complete, though only properly authorised practitioners are permitted to operate in the public sector. The role of the Medical Council is still limited, both in terms of representing health practitioners and in enforcing regulations, although the Medical Council and professional associations have developed codes of ethics for their members.

As the initial step towards establishing an accreditation system for health providers, the MOH developed the Master Plan for Quality Improvement in Health (2010–2015). The Plan proposes to establish a semi-autonomous accreditation agency under the MOH and to make accreditation mandatory from 2018. The Plan is consistent with the draft Health Financing Policy, which proposes the purchase of health services through a National Social Health Protection Fund only from accredited health-care providers, with provider payments linked to quality and efficiency.

2.8.3 Registration and planning of human resources

Nurses, midwives, medical doctors, pharmacists and dentists are required to register with their respective professional councils, which formulate professional and ethical standards for members and license their operations (not including skill assessment). To strengthen the

planning of human resources, the MOH adopted the first Health Workforce Development Plan for the period 1996–2006, which focused on increasing the quantity of trained health personnel, in particular the deployment of staff at ODs in rural areas. A second Workforce Development Plan (2006–2015) focuses on governance functions and the quality and responsiveness of medical staff (in both the private and public sectors). Health education programmes were rationalized and associate degrees introduced. To enable the alignment of planning with workforce coverage requirements, the MOH Personnel Department maintains a Data Management Tool at central and provincial levels. Outcomes included ensuring the availability of a midwife in each Health Centre; a complementary Recruitment and Transfer Policy was developed to stem the flow of staff from rural to urban areas.

2.8.4 Regulation and governance of pharmaceuticals

A regulatory framework for the governance, accountability and legislative enforcement for pharmaceutical supply includes the Law on the management of Pharmaceuticals adopted in 1996 and amended in 2007. The law addresses issues of managing pharmaceuticals, staffing of pharmacies and the oversight authority of the MOH. Prior to the endorsement of the law, a National Medicines Policy had been introduced in 1995 with the aim of ensuring the availability of affordable, safe, effective and good-quality drugs. The Policy was updated in 2010 in accordance with the HSP and also covers pharmaco-vigilance. A national Pharmaco-vigilance Safety Expert Advisory Committee comprising 23 members was established in 2010 to develop a nationwide system and meets twice annually. Consumer groups or representatives of civil society are not included in the Committee.

The MOH Drug, Foods, Medical Equipment and Cosmetics Department houses the national regulatory authority for pharmaceuticals, the Interministerial Committee for Eliminating Counterfeit Drugs and Unlicensed Private Services for Poverty Reduction. The Department maintains a list of registered pharmaceuticals that currently comprises more than 10 000 products. Requests for registration require the submission of pharmacological data, toxicological data, clinical indication, and quality certificates. Registration remains valid for five years. All drugs are required to have Khmer-language instructions, subject to approval by the MOH.

While certification of good manufacturing procedures is required for imported drugs, this is not the case for locally produced medicines. Operating as a Public Administrative Enterprise (semi-autonomous unit within the MOH), the National Center for Medical Laboratory serves as Cambodia's control laboratory for quality of medicines. Anticipating the construction of a new laboratory, the Centre has authority to retest already approved drug products, though durable financing sources have yet to be identified and secured.

2.9 Patient empowerment

2.9.1 Patient information

The generally low level of health literacy among the population and the continued influence of traditional beliefs and practices have affected the understanding of and the demand for modern health services, especially in rural areas. However, health and medical information is generally well received if framed and targeted in appropriate ways.

A variety of media are used to convey health education messages, including television, radio, pamphlets and billboards. In one example, during 2004–2006 the British Broadcasting Corporation World Service Trust ran a successful television soap opera with 100 episodes, focusing on Maternal and Child Health and HIV/AIDS, under the slogan “Good health, bright future”. This was accompanied by 55 television and radio advertisements. Many health education activities are combined with interventions to encourage behaviour change. For instance, to increase facility-based deliveries, information campaigns were complemented by a supply-side financing intervention, the government-funded midwifery incentive scheme (see Chapter 6); as a result, institutional deliveries tripled from 24% in 2005 to 72% in 2010 (NIS, 2011).

The fact that information is generally well received is reflected in the practice of feeding colostrum upon birth, practised by less than a tenth of women in 2000 but by 90% of mothers 10 years later, according to the Cambodia demographic and health survey 2010 (NIS, 2011). Another example is the successful HIV education campaign of the 1990s and 2000s, which achieved a notable reduction in incidence and prevalence.

2.9.2 Patient choice

The Cambodian health market has a wide variety of providers. Qualified providers include public health facilities, pharmacies, private hospitals, and medical professionals rendering services from their own or at patients' homes. Two thirds of public health staff also work privately (World Bank, 2013d). NGO-run health facilities and charitable hospitals also provide services. Private providers and pharmacies are most prevalent in urban areas (Ozawa & Walker, 2011). Non-medical health providers include vendors selling drugs from shops or markets, traditional birth attendants, drug peddlers, and traditional healers (termed *Kru Khmer*), as well as mediums called *kru chol ruup* and Buddhist monks (WHO & MOH, 2012). Traditional healers operate from their homes or Buddhist monasteries, but drug shops and pharmacies tend to be the preferred source of initial treatment in rural areas (Meessen et al., 2011).

In a secondary analysis of the Cambodian Socio-economic Surveys of 2004, 2007 and 2009, it was reported that many factors affected the choice of provider (MOH, 2011a). After controlling for the type and level of illness, these included factors related to geographic location, socioeconomic status, perceived severity of illness, and age group. For the population living below the poverty line, a 2013 World Bank study found that in 2011 some 47% sought care first from unlicensed drug shops and common vendors in markets (World Bank, 2013a). The poor tend to live at a distance from Health Centres and in closer proximity to these informal providers. Nevertheless, 13.6% of the poor sought care from Health Centres compared to only 3.5% of the wealthiest, who accessed public hospitals nearly twice as often as the poor (which demonstrates that the public sector is still the preferred choice for inpatient care). The average cost of treatment at drug shops was reported as US\$ 2 and at pharmacies US\$ 5.

While the general availability of preventive services increased dramatically after 2000, inequities remain. For example, in 2010 some 79% of the poorest pregnant women received antenatal care from a qualified provider, while the figure for the richest women was 99%; while 35% of the poorest had an institutional delivery compared to 88% of the wealthiest; respective figures for caesarean section rates were 1.1% and 9.6% (NIS, 2011). Of children with symptoms suggestive of acute respiratory infection only 33% of the poorest children received antibiotics as indicated compared with 57% of the richest. Despite the proliferation of

health-care providers, 52% of the poorest mentioned distance to the health facility as an impediment to timely health seeking compared with 23% of the richest. Obtaining cash to pay for treatment constituted another hurdle for 79% of the poorest and 48% of the richest.

As the regulation of the private sector is still at an early stage of development, the MOH and donor partners direct their efforts principally towards attracting patients to the public sector, where average cost per visit is considerably less (World Bank, 2013c), to receive treatment under controlled conditions. It should be noted that the lack of a reduction in neonatal mortality rates reflected in the 2005 and 2010 Demographic and Health Surveys is ascribed to the poor quality of care throughout the health sector (World Bank, 2013c).

2.9.3 Patient rights

The HSP 2008–2015 calls for empowerment of the people as patients and consumers as a means to improve service quality and to increase provider accountability. In that context, the Operational Guidelines for Implementing Clients' Rights and Providers' Rights-Duties was introduced with the objectives of: (i) making health services more patient-oriented; (ii) promoting awareness of patients' rights to health; (iii) promoting awareness of providers' rights and responsibilities; and (iv) improving the ethics of health-care provision. There is not yet an ombudsman to deal with official complaints of medical malpractices nor are patient rights legally recognized by law.

2.9.4 Complaints procedures and public participation

There are no official complaints procedures. Early attempts in the 1990s to increase the accountability of public health-care providers were built on community participation through Village Health Support Groups (VHSG) and Health Centre Management Committees, made up of elected community representatives. These groups continue to operate, with various degrees of effectiveness.

However, a recent review found that the Support Group members did not empower the community and acted rather as a barrier to holding health care providers accountable because of their ambiguous roles (Molyneux et al., 2012). The study concluded that there was no other direct mechanism for communities to provide feedback on health services generally or on the services that outreach workers provide. It was found that the Health Centre Management Committees provided some support but failed to perform an

oversight role (Asia Foundation & World Bank, 2013). In some districts, these support groups and committees include representatives of the local Buddhist monasteries in order to tap into the associated social networks and increase the degree of accountability (Molyneux et al., 2012).

At a later stage, in those ODs where Health Equity Funds were in place, the work of the support groups and committees was supplemented by District Health Financing Committees. The Financing Committee is chaired by the Deputy District Governor and offers an additional forum to deal with issues related to access to care by the poor as well as irregularities by public health-care providers. Information from routine monitoring reports by Health Equity Fund Implementers and Operators, which include beneficiary interviews, is fed back to the District Health Financing Committee.

3 Financing

Chapter summary

Reforms in health financing have been at the centre of efforts to rebuild the country's health system. The national budget for health has increased significantly, while donors finance about a third of total government spending through grants and loans. Total health expenditure (THE) has increased with consistent economic growth, reaching US\$ 1033 million in 2012 and more than 7% of GDP; patient out-of-pocket (OOP) payments provided 60% of THE (MOH, 2014c). Without a significant reduction in OOP health expenditures, universal health coverage will not be achieved.

The Government of Cambodia is committed to moving towards universal health coverage. Government funding provides the main health infrastructure and staff, and delivers subsidized care across a standard package of preventive, primary and curative care. Revenues at government facilities are supplemented by nominal user charges introduced in 1996, with funded exemptions provided widely to the poor. A number of demand-side financing schemes provide social health protection, including Health Equity Funds, voucher schemes, voluntary community-based health insurance and private health insurance.

Private providers consume most health expenditures. While both health spending as a proportion of income and catastrophic expenditures have declined, large inequalities exist in the incidence of OOP expenditures across the population: poor Cambodians make less use of public- and private-sector services and outpatient treatments. Government health services are financed from general revenues, supported by donor funding. Donor harmonization and alignment has improved but remains a pressing issue.

Improvement is needed in efficiency in government expenditures. The 2011 World Bank Public Expenditure Review reported that expenditures on drugs and medical supplies were substantially higher than international average prices.

Social health insurance coverage is limited. The government's National Social Security Fund provides work-injury benefits to private-sector employees; and the National Social Security Fund for Civil Servants is yet to commence providing health benefits. Some voluntary health insurance serves rural communities and urban workers, though coverage is low. Subsidized Health Equity Funds for the poor provide coverage and financial protection for a quarter of the national population.

Table 3.1 Trends in health expenditure in Cambodia, selected years, 1995–2012

Indicator	1995	2000	2005	2010 ^b
Health expenditure per capita (current US\$)	19.6	18.9	32.7	45.5
Total health expenditure (THE)				
• Public health expenditure (% of GDP)	1.0	1.3	1.5	1.3
• ODA health expenditure (% of GDP) ^a	0.9	0.5	1.2	0.9
• OOP health expenditure (% of GDP) ^a	4.2	4.5	4.2	3.6
• THE (% of GDP)	6.1	6.3	6.9	5.8
Composition of Total Health Expenditure				
• Public health expenditure (% of THE)	17.0	20.5	22.1	22.5
• ODA health expenditure (% of THE) ^a	14.1	8.3	17.4	15.9
• OOP health expenditure (% of THE)	68.9	71.2	60.5	61.6
Public health expenditure				
Health expenditure, public (% of government exp.)	7.1	8.7	11.6	6.1

exp., expenditure; GDP, gross domestic product; ODA, official development assistance; OOP = out-of-pocket

Source: World Development Indicators (World Bank, 2014a)

a figures calculated by the authors from WDI data.

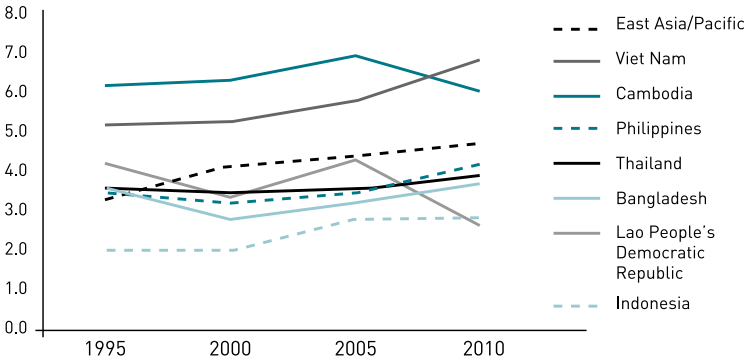
b Health expenditure totals for 2012 are summarised above, showing a significant variation in the results from the recorded numbers for 2010, particularly in the proportions of government and donor spending; we regard the NHA numbers as the more accurate (MOH, 2014c).

3.1 Health expenditure

Total health expenditure (THE) has increased significantly in recent years, in line with more consistent economic growth (see Table 3.1). THE has historically comprised a relatively large share of gross domestic product (GDP) compared to other low-income countries and regional partners (Fig. 3.1) and was 7.2% of GDP in 2012 (MOH, 2014c). THE increased in real terms from US\$ 564 million in 2008 (MOH, 2014a) to US\$ 1033 million in 2012 (MOH, 2014c). THE per capita has increased since the mid-1990s, but remains in the middle of the range within the east Asia region (Fig. 3.2); revised health financing figures produced

for the National Health Accounts estimate THE per capita at US\$ 69.50 in 2012 (MOH, 2014c). The first set of National Health Accounts was produced in 2014 and preliminary figures from the report are included here (MOH, 2014c). Additional financing estimates presented in this Health In Transition study are taken from different sources with diverse reliability in methods of estimation and may differ between sections in this chapter. We have chosen those estimates that appear on the one hand to be the most consistent and on the other the most reliable. Figures produced earlier for the World Development Indicators (World Bank, 2014a) vary from those presented in the National Health Accounts; we regard the NHA as the most accurate and up-to-date figures (some tables below present World Development Indicators for 2012 to reflect consistency of data sources between countries or over time).

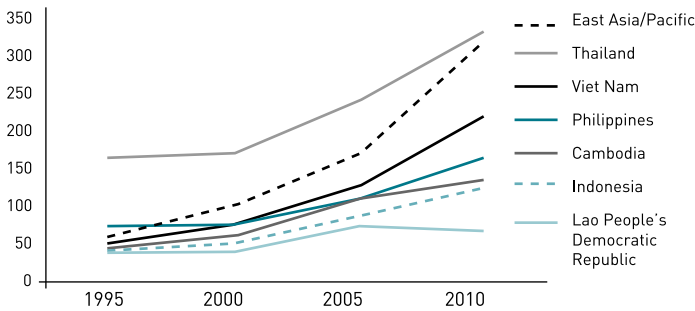
Figure 3.1 Total health expenditure as percentage of GDP, selected countries in South and South-East Asia, selected years, 1995–2010



Note: The East Asia/Pacific region is as defined by the World Bank; in this graph the datum includes only developing countries within the region.

Source: World Development Indicators (World Bank, 2014a).

Figure 3.2 Total health expenditure per capita, selected countries in South-East Asia, selected years, 1995–2010 (PPP constant 2005 international US\$)



Note: “East Asia/Pacific” follows the World Bank classification but here includes developing countries only.

Source: World Development Indicators (World Bank, 2014a).

3.2 Sources of revenue and financial flows

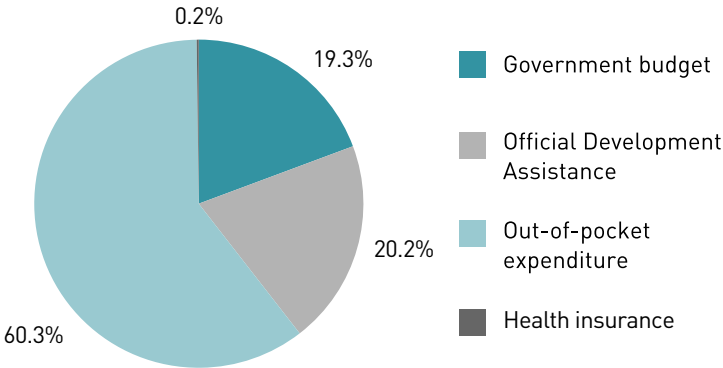
3.2.1 A mixed system of financing

Cambodia has a mixed health financing system with multiple sources of revenue, both public and private. Revenues – which ultimately come from individuals, companies or foreign aid – are collected via four broad mechanisms (MOH, 2014c):

- Government–national budget general taxation revenues (US\$ 199 million in 2012)
- Official development assistance (ODA) –external donors (US\$ 209 million in 2012)
- Out-of-pocket (OOP) expenditure–households (US\$ 622 million in 2012)
- Health insurance – public and private (US\$ 2 million in 2012).

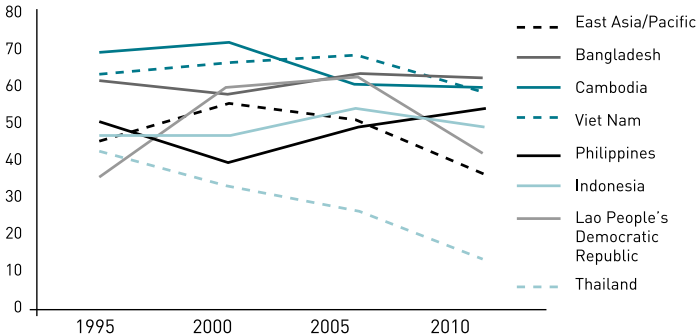
The main sources of revenue for health from government, donors and households are discussed in section 3.3.2. Household out-of-pocket (OOP) spending is the main source of financing for health care (see Figure 3.3 and section 3.4). The high level of OOP expenditure in Cambodia is similar to neighbouring countries (except Thailand) (Figure 3.4).

Figure 3.3 Share of total health expenditure by funding source, 2013



Source: National Health Accounts (MOH, 2014c)

Figure 3.4 Out-of-pocket expenditure as percentage of THE, selected countries in South and South-East Asia, selected years, 1995–2010



Note: "East Asia/Pacific" follows the World Bank classification but here includes developing countries only.

Source: World Development Indicators (World Bank, 2014a).

3.2.2 Inefficiencies in government and donor spending

While total government expenditure remains lower than the average for developing countries in the region (Figure 3.5), the fiscal position of the government has strengthened. Total government revenue collected reached 13.2% of GDP in 2012 excluding ODA or 18.5% in total (Table 3.2). Cambodia remains reliant on foreign aid: ODA comprised 28.8% of total government budget revenues in 2012 (Table 3.2).

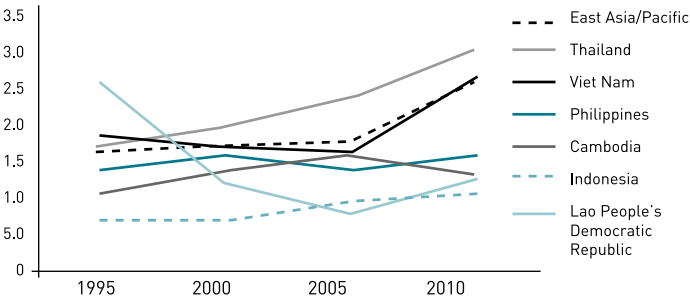
A large proportion of donor funding is pooled with government revenues under the Health Sector Support Program and in support of the Health Strategic Plan. In other areas, donor funding is allocated to donor projects that operate alongside the government system; in these cases there is no effective measure of the efficiencies gained in implementation or the inefficiencies in achieving outcomes.

Government funding for health care has increased significantly, but challenges remain in relation to allocative and administrative efficiencies. Seventy per cent of the health budget remains with the central MOH, National Hospitals and national institutes, and only 30% passes to provinces for service delivery (MOH, 2012a). More than half of total public health spending goes to drugs and procurement, followed by salaries and operating costs (Figure 3.6).

The proportion of total expenditure on drugs and medical supplies is substantially higher than the international average and more than double wage outlays. This is a cause of concern. The central MOH purchases about 96% of all drugs supplied through government health services. Between 2004 and 2009, the expenditure on drugs and supplies more than tripled in nominal terms, and it remains excessive. The 2011 Public Expenditure Review estimated that 0.4% of GDP (or US\$ 50 million a year, equivalent to one third of the government health budget) could be saved by more efficient purchasing of pharmaceuticals, equipment and medical supplies, and suggested that the MOH pays on average six times the international reference price for essential drugs (based on a review of a sample of Central Medical Store invoices) (World Bank, 2011).

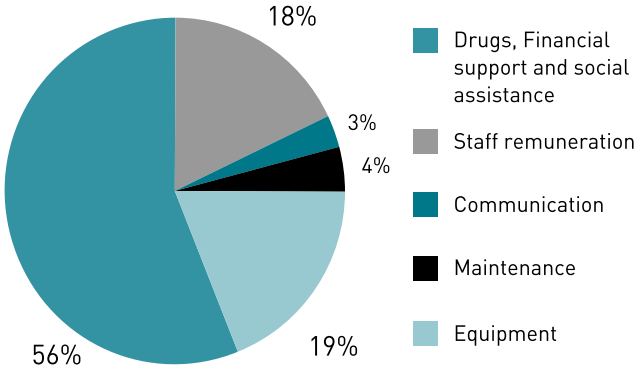
Further inefficiencies were identified in the Public Expenditure Review. Budget allocations from the MOH to central departments, hospitals, provinces and districts move through the administrative system step-by-step from higher to lower levels. The full budgeted amounts rarely reach lower levels. As early as 2008, the Public Expenditure Tracking Survey found that savings and efficiencies would be gained if allocations were based on transparent formulas and clearly agreed outputs, and mechanisms for budgeting and expenditure tracking were strengthened at operational district and facility levels (World Bank, 2008).

Figure 3.5 Government expenditure as percentage of GDP, selected countries in South and South-East Asia, selected years, 1995–2010 (excluding Official Development Assistance)



Note: "East Asia/Pacific" follows the World Bank classification but here includes developing countries only.
 Source: World Development Indicators (World Bank, 2014a).

Figure 3.6 Government health expenditure by Budget Chapter, 2013 (% of total budget)



Source: Official budget figures provided by the Ministry of Health.

Table 3.2 Trends in government total expenditure, selected years, 2002–2012

Indicator	2002	2005	2010	2011	2012
Total government revenues (% of GDP)					
Tax revenue (% of GDP)	8.2	7.9	10.0	10.2	11.6
Other revenue (% GDP)a	2.1	1.8	1.5	1.4	1.6
Grants and other sources (% GDP)a	7.5	5.2	7.5	5.7	5.3
Total government revenues (% of GDP)a	17.8	14.9	18.9	17.2	18.5
Composition of government revenue					
Taxes on goods and services (% of revenue)	29.7	36.9	35.3	39.3	40.9
Taxes on income, profits and capital gains (% of revenue)	5.7	7.1	10.3	12.2	13.8
Taxes on international trade (% of revenue)	22.4	20.7	14.9	15.6	16.4
Other taxes (% of revenue)	0.2	0.2	0.0	0.0	0.0
Social contributions (% of revenue)	0.0	0.0	0.0	0.0	0.0
Grants (incl. ODA) (% of revenue)	42.1	35.1	39.4	32.8	28.8
Government total expense					
Goods and services (% of expense)	35.0	40.0	31.2	29.1	29.3
Remuneration of employees (% of expense)	37.3	36.4	35.7	33.4	33.4
Interest payments (% of expense)	1.8	2.8	2.2	2.4	2.5
Other expenses (% of expense)	10.5	2.1	6.7	10.3	8.3
Subsidies and other transfers (% of expense)	15.4	18.6	24.2	24.8	26.5

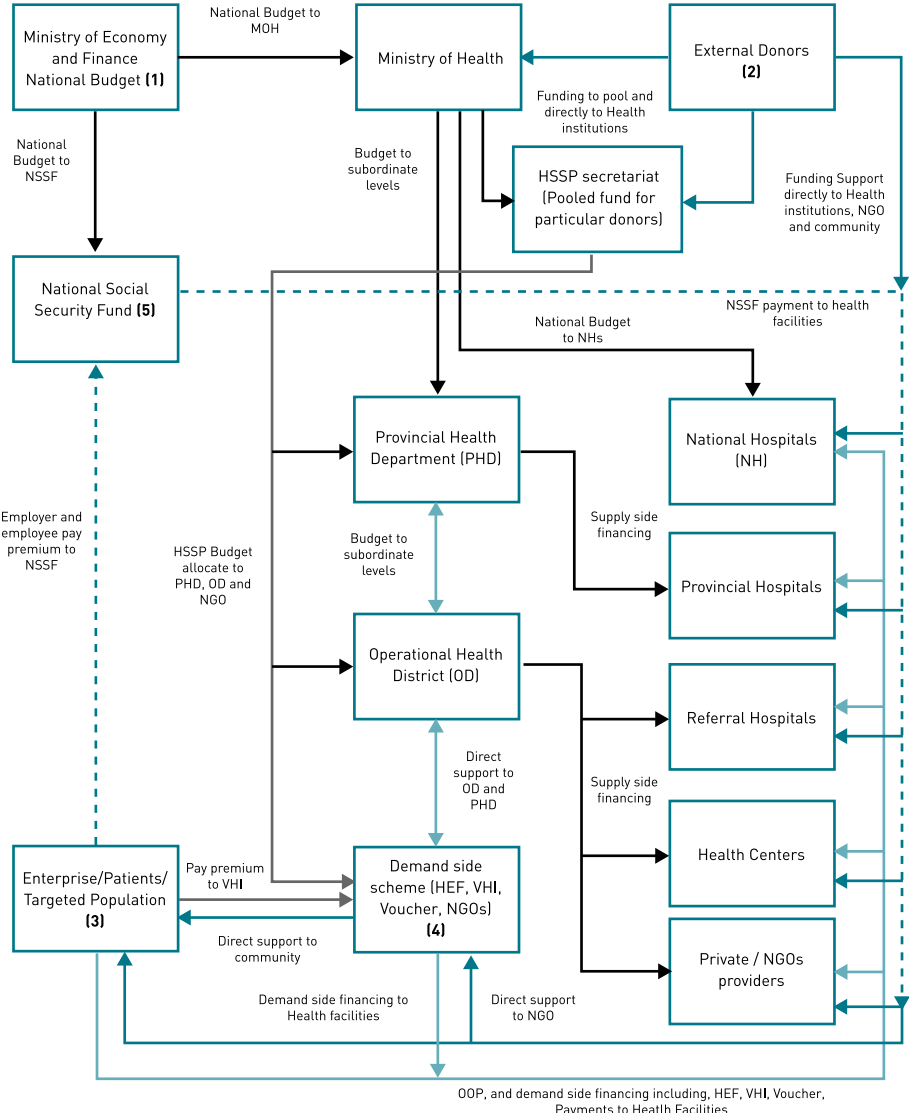
GDP, gross domestic product; incl., including; ODA, official development assistance; OOP, out-of-pocket.

Source: World Development Indicators (World Bank, 2014a).a figures calculated by the authors from WDI data.

3.3 Overview of the national health financing system

A schematic view of revenue sources and flows within the public health system is provided in Figure 3.7. In principle, the compulsory component of health financing is limited currently to taxation funding through the government, with an additional small contribution for workplace injury collected in salary deductions and paid into the National Social Security Fund (NSSF). The voluntary component comprises household OOP spending, which is directed mainly to private health-care providers (see Chapter 5), but also includes user charges at government facilities (see Box 3.1) and to voluntary private and community-based (CBHI) insurance. A large part of the government health budget has been combined with donor funding for health under two successive national Health Sector Support Programs for 2003–2007 and 2008–2015 (both known by the initials HSSP).

Figure 3.7 Revenue sources and flows within the public health system



HSSP is the major national programme, funded jointly by development partners and the government with pooled funds. In some cases, funds from ODA (bilateral, charitable agencies) may pass directly to government and nongovernmental health providers. The ODs provide primary and secondary health care and receive funding from the PHD and the central MOH. The numbers (1) to (5) indicate the main sources of revenue.

Source: Reprinted with permission from the Annual Health Financing Report (MOH, 2012a).

Box 3.1 User fees at government health facilities

The right of public health facilities to levy official user fees was approved by the 1996 Health Financing Charter (MOH, 1997a) with the aim of generating additional facility revenues. In principle, fee levels are nominal, well below full cost recovery, subject to MOH approval, based on local capacity to pay, and (officially) set in a participatory process including community representatives and local authorities.

Patients pay fees according to a fee schedule publicly displayed at government health facilities, and revenues remain almost entirely with the facility: 60% of revenues are allocated to staff incentives, 39% for facility operating costs, and 1% to the National Treasury.

Most public health-care facilities have introduced user fees: all six National Hospitals, three of 11 national health institutes, 78 of 86 Referral Hospitals, and 934 of 1024 Health Centres.

Total revenues generated by official user fees in the government sector remain small, representing only 4% of the health budget in 2011 (MOH, 2011a) and about 5.8% of overall expenditure at the provincial level (MOH, 2010).

User-fee revenues at Health Centres are small in absolute terms, raising only US\$ 2–3 million annually in total, though this represents a large part of Health Centre discretionary income because of limitations in the budget allocation process.

The largest share of user-fee revenues is collected at National Hospitals, where fees provide up to 45% of total facility income. Half of all user-fee revenue in the public sector is earned by one major hospital, the national Calmette Hospital, which operates autonomously.

User fees represent a barrier to access for the poor. Official user-fee exemptions for the poor deprived facilities of needed revenues and were widely ignored. Demand-side financing schemes – including the Health Equity Funds and community-based health insurance – emerged to fund the fee exemptions and protect the poor.

According to user-fee reports for 2009, some 1.5 million exemptions were granted, 87% of which were at Health Centres, equal to 60% of user-fee collections (MOH, 2009a). Unofficial user fees are reported to continue, particularly in some hospitals, but significantly reduced and there may be overreporting of exemptions granted (World Bank, 2011). Further discussion of user fees can be found in sections 3.7, 7.2 and 7.3.2.

3.3.1 Coverage

3.3.1.1 Breadth: who is covered?

The MOH and the government are committed to the achievement of universal health coverage (MOH, 2008a). Unlike most other developing countries, Cambodia has taken the first step on the path to expanding coverage not by providing social health insurance for civil servants and private-sector employees but with coverage of the poor. However, the social health-protection system remains at an early stage of development.

The legal basis for entitlement is being strengthened. Article 72 the Constitution of 2008 establishes the obligation of the state to ensure the health and well-being of all Cambodians, especially the poor and vulnerable. The 1995 Health Coverage Plan and the 1996 Health Financing Charter are policy documents with regulatory status within the MOH (see Chapter 6). Cover for workplace injuries is sanctioned by the 2002 Social Security Law, which requires private enterprises employing eight or more workers to register with the NSSF and pay compulsory premiums (see section 3.3.2).

Population coverage is most complete through Health Equity Funds (HEFs) for the poor and is least well established and most difficult to achieve among the large informal sector, where various CBHI and voucher schemes provide financial protection in some locations. In the formal employment sector, both the NSSF for private employees and the National Social Security Fund for Civil Servants (NSSFC) have yet to begin providing planned health coverage. In practice, service coverage and financial protection is provided in different degrees by a wide range of government, donor and nongovernment programmes (summarized in Table 3.3).

Table 3.3 Sources of government funding for health services and health financing schemes, c.2012

Scheme	Implementer/ operator	Target population	Benefit/ services	Provider-payment mechanism	Coverage/ remark
Tax funding via government budget	MEF, MOH, PHD, OD, RH, HC	All population sectors	Recurrent budget, staff, drugs and supplies	Line item budget and in-kind including equipment and drugs	Public health facilities nationwide
User fees	Health-care facilities	All population sectors with capacity to pay	All available services at health-care facilities	Fee-for-service; lump sum or case-based	98% of health-care facilities implement user fees
User-fee exemptions	MOH, health facilities	Poor patients	MPA and CPA	Fee waiver	Public health facilities nationwide
Global health initiatives and national vertical disease programmes	National programme managers	Patients with TB, malaria, AIDS, and children for vaccination	Treatment for TB, malaria and AIDS patients and children <1 year	Free of charge	Nationwide
Health Equity Funds	NGOs (and pilot projects with CBOs)	The eligible poor (those below the national poverty line)	MPA and CPA services; food, transport, funeral expenses	Official standardized case-based payment	In 1 NH, 51 RHs and 458 HCs; covers 76% of the targeted and 20% of the national population
Government Subsidy schemes (SUBO)	MOH, PHD, OD	The eligible poor (those below the national poverty line)	MPA and CPA services	Official flat rate	Implemented in 6 NHs, 11 RHs and 57 HCs
Voluntary private health insurance	Private companies	People with capacity to pay	Selected health services	Fee-for-service	Where available
Voluntary community-based health insurance	NGOs	Mainly people in the informal sector living above poverty line	MPA and CPA services; food, transport, funeral expenses	Capitation, case-based payment, fee-for-service	19 schemes with 17 RHs, 1 NH and 240 HCs, covering 455 648 persons (about 3% of the national population)
Vouchers for reproductive health	NGOs	Poor women	Reproductive health services	Fee-for-service; in some cases, transport costs	In 9 ODs (with 5 RHs and 121 HCs) and 4 private clinics; covers 255 324 women
Occupational risk	MOLVT, NSSF	Formal private-sector workers	Medical treatment, temporary/permanent disability, funeral expenses and survivor benefit	Fee-for-service	Covers 6107 enterprises with 847 165 workers

Table 3.3 Sources of government funding for health services and health financing schemes, c.2012 (Cont.)

Scheme	Implementer/ operator	Target population	Benefit/ services	Provider-payment mechanism	Coverage/ remark
Maternity benefits	MOLVT, NSSF, MOSVY, NSSFC	Pregnant women in the formal private sector and civil servants (incl. spouses)	From private sector, 3 months maternity leave with 50% salary; for civil servants, 3 months maternity leave with full salary and cash incentive of US\$ 150 per newborn	Salary payment	Nationwide
Social health insurance	NSSF, NSSFC	Formal-sector workers and civil servants	Still to be defined	Under discussion: aiming for simple case payments for hospital and (probably) primary care	Not yet commenced.
Special Operating Agency (SOA) facilities	MOH, donors, HSSP	All population in the coverage area	Delivery of MPA and CPA health services	Line-item budget, user fees, and a Service Delivery Grant	30 SOAs in 9 provinces and 22 ODs with 8 provincial hospitals, 16 RHs, 291 HCs and 63 health posts. 6 more ODs scheduled to commence SOA status in 2014
Midwifery incentive	HC and RH	Midwives working in public facilities	Safe delivery and live births	Case-based payment of US\$ 15 at RH and US\$ 10 at HC per live birth paid to midwives	Nationwide

CBO, community-based organization; CPA, complementary package of activities; HC, Health Centre; HEF, Health Equity Fund; HIP, Health Insurance Project; HSSP, Health Sector Support Program; MEF, Ministry of Economy and Finance; MOH, Ministry of Health; MOLVT, Ministry of Labour and Vocational Training; MPA, minimum package of activities; NGO, nongovernmental organization; NH, National Hospital; NSSF, National Social Security Fund; NSSFC, National Social Security Fund for Civil Servants; OD, Operational District; PHD, Provincial Health Department; RH, Referral Hospital; SUBO, government subsidy scheme; TB, tuberculosis.

Source: Ministry of Health

3.3.1.2 MOH- and donor-funded vertical programmes

A number of services are provided free of charge under MOH and donor 'national programmes' to all patients at public facilities. These include tuberculosis testing and treatment, an expanded programme of immunization for children, HIV testing and antiretroviral treatment. In addition, many Health Centres provide free delivery services, an initiative that is reimbursed through the government's midwife incentive scheme.

User-fee exemptions

The right of public health facilities to levy modest user fees, with MOH approval and community support, was established under the Health Financing Charter, which also provided for user-fee exemptions to the poor. As unfunded fee exemptions are a drain on facility fee incomes, the user-fee exemptions are less effective in protecting the poor. Consequently, various schemes have emerged to reimburse facilities for exemptions granted, including Health Equity Funds, government subsidies (known locally by the acronym SUBO and authorised by Government Prakas 809), voucher schemes and CBHI schemes for enrolled members (where they exist).

National Social Security Funds

Established under the 2002 Law on Social Security Schemes for Persons Defined by the Provisions of the Labour Law, the National Social Security Funds (NSSF) is authorized to provide a range of social welfare benefits for formal private-sector employees. The NSSF began operation in 2008, but currently provides only occupational risk (work injury) insurance in Phnom Penh and 17 out of 24 provinces. Under the Law, private enterprises employing eight or more workers must register with the NSSF. By 2012, the Fund covered 6107 enterprises with 847 165 workers; up to 15% of registered enterprises fail to pay the required contribution. See below for further details on pooling and purchasing. For premium policy and the collection function see section 3.3.2.

The implementation of a compulsory health insurance scheme through the NSSF was scheduled to commence in 2013. After a long delay, there was a commitment to commence health-care benefits for private-sector employees in 2014. Details related to the benefits package and provider payment have been negotiated, the actuarial analysis updated and the implementation plan developed. The scheme will use a simple case payment method for services delivered at government hospitals and Health Centres.

In 2013, the NSSF took control of a previously voluntary health insurance scheme targeting private garment-industry workers in Phnom Penh, called the Health Insurance Project (HIP), as a temporary intervention until its own health programme commences. Introduced in 2009 as a CBHI project by the French NGO, GRET, HIP covered 7733 employees in 11 enterprises in 2013. In some enterprises employers paid the full US\$ 1.60 monthly premium to cover all workers, and in others the premium was split 50:50 between employer and employee for voluntary membership (covering the employee only and not dependents). The scheme contracted two Health Centres (Tuolkork and Stung Mean Chey) and three government hospitals (Khmer Soviet, Preah Kossamak and Pochentong) to provide standard services.

A Royal Decree was adopted in 2008 to establish the National Social Security Fund for Civil Servants (NSSFC) to administer a range of social security benefits for public-sector workers; while a health-care package is among the intended benefits, no plans have yet been made for its introduction.

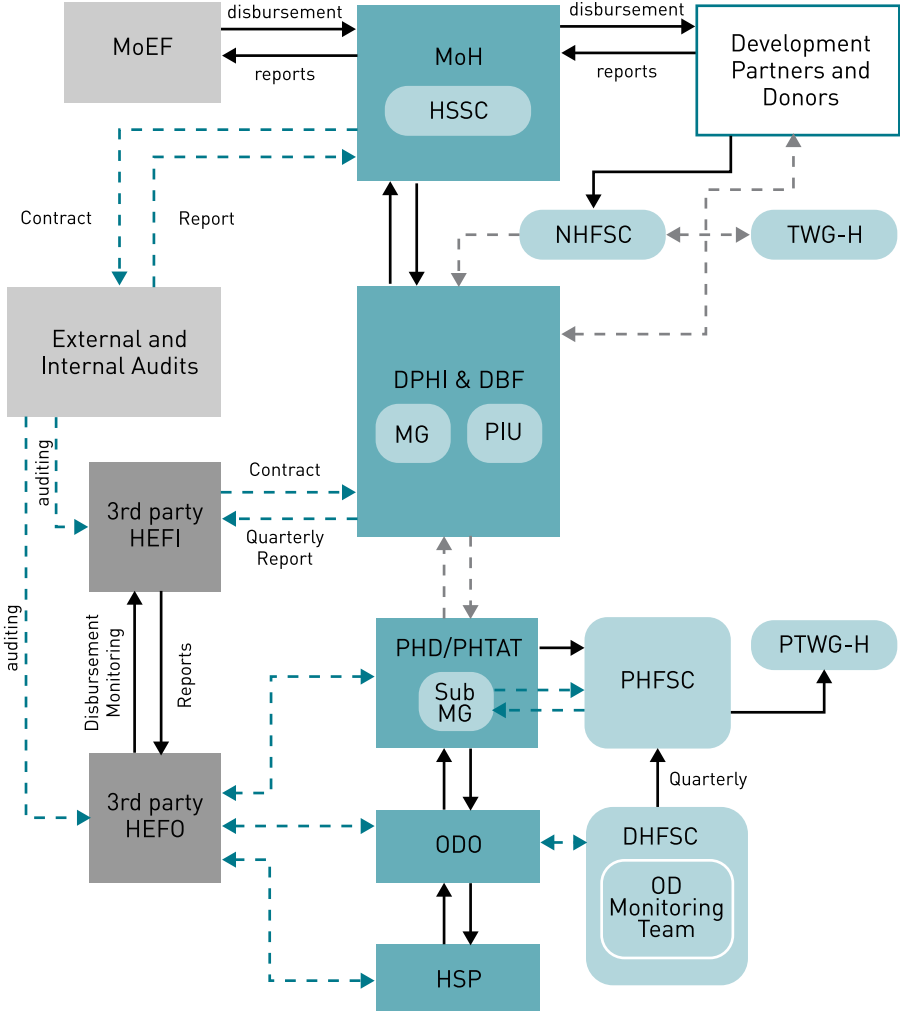
Health Equity Funds

Funded jointly by government and donors, Health Equity Funds (HEFs) are district- and hospital-based demand-side financing mechanisms used to fund user-fee exemptions for the identified poor at public health facilities (see Box 3.2). By 2013, HEFs had achieved 16% coverage of the total population or 2.2 million people living below the poverty line, providing for 1.1 million outpatient (OPD) and inpatient (IPD) visits and US\$ 8 million in medical and non-medical patient benefits annually (out of a total cost of US\$ 9.5 million), according to MOH reports. Originally, HEFs covered only Referral Hospitals, but have now been extended to 45% of all Health Centres. Scaling up to national coverage is planned by 2015. The complex institutional arrangement for HEF implementation designed specifically to accommodate all agencies, actors and interests is illustrated in Figure 3.8. The remaining challenges include maintaining up-to-date pre-identification records, providing a complete range of health services required by the poor (especially the increasing burden of noncommunicable diseases), transferring full responsibility to the government by creating a national administrative agency, and ensuring fiscal resources are adequate to maintain sustainability.

Box 3.2 Health Equity Funds for the poor

- Health Equity Funds are Cambodia's principal social protection scheme and are an international example of an effective means to protect the poor from health-care costs. The district-based HEFs reimburse health facilities for user-fee exemptions and provide costs for transportation, food and funeral expenses to beneficiaries.
- The first HEFs were implemented in 2000. HEFs are operated at district level mainly by local NGO operators working as third-party payers under contract to the MOH, with administrative support at national level by an international NGO, the USAID-funded University Research Co.
- Beneficiaries are mostly pre-identified at home prior to seeking care by the IDPoor survey process implemented nationally through the Ministry of Planning. In districts not covered by the IDPoor survey, HEF operators arrange their own pre-identification and otherwise carry out post-identification at facilities when necessary. Eligibility for HEF coverage is automatic following pre- or post-identification. Services are provided free to beneficiaries and the HEFs directly reimburse the cost to the facility.
- The standard benefit package provided by HEFs includes the cost of user fees for access to services at Health Centres and Referral Hospitals, with referral to higher levels of service when needed, together with the cost of transport, food and funeral expenses for beneficiaries in case of requiring inpatient services or delivery.
- HEFs currently cover 75% of the target population of those living under the national poverty line (approximately US\$ 0.61 per day). Coverage has risen over time in proportion to the number of districts covered by HEFs, while at the same time the poverty rate nationally fell from 48% of the total population in 2007 to 20% in 2011 (MOP, 2013).
- The number of district HEFs increased from the first two established in 2000 to more than 45 out of a total of 79 ODs nationally (56%) in 23 of the 24 provinces by 2013. These schemes had contracted 51 of 83 Referral Hospitals (55%) and 458 of 1024 Health Centres (45%).
- These schemes are funded by the government and donors through the joint Health Sector Support Program. In three ODs, further funding is provided by UNICEF, University Research Co. and the Swiss Red Cross.
- Nationally, the HEF network is administered jointly by the MOH (which supervises the NGO operators and the payment system) and University Research Co. (which provides the main administrative infrastructure and the monitoring and auditing functions). The total national cost of HEF implementation in 2012 was US\$9.5 million, funding 1.1 million cases at health-care facilities for an average cost of US\$8.40 per visit. Medical costs incurred per IPD case were US\$ 29.32 – more than 15times the cost per OPD case (US\$ 1.94).
- Various evaluations have shown that HEFs increase utilization of government services by the poor, reduce OOP expenses, and reduce debt and asset sales for health care (Annear, 2010; Flores et al., 2013). Recent assessments suggest that a large proportion of HEF beneficiaries do not use their entitlement to access public-health services, in particular for primary care, although HEFs have helped to increase demand for secondary care at public facilities; one report quantified the increase in health seeking at public facilities due to HEFs at 34% but found only 46% coverage of the poor (World Bank, 2013a, 2013c).
- The sustainability of HEFs within government fiscal constraints (supported by donors) has been accepted and the MOH plans to achieve 100% national geographic coverage of the poor by 2015.

Figure 3.8 Institutional arrangements of National Health Equity Fund



DBF, Department of Budget and Finance; DHFSC, District Health Financing Steering Committee; DPHI, Department of Planning and Health Information; HEFI, Health Equity Fund Implementer; HEFO, Health Equity Fund Operator; HSP, Health Service Provider; HSSC, Health Sector Support Committee; MG, Monitoring Group; MoEF, Ministry of Economy and Finance; MOH, Ministry of Health; MoU, memorandum of understanding; NHFSC, National Health Financing Steering Committee; OD, Operational District; ODO, Operational District Office; PHD, Provincial Health Department; PIU, Planning Information Unit; PHFSC, Provincial Health Finance Steering Committee; PHTAT, Provincial Health Technical Advisory Team; PTWG-H, Provincial Technical Working Group for Health; TWG-H, Technical Working Group for Health
 Source: MOH Implementation of the Health Equity Funds Guideline (MOH, 2009b).

3.3.1.3 The government subsidy scheme

Known as SUBO, the government subsidy scheme is a limited form of HEF in which government facilities are reimbursed by the MOH for user

fee exemptions for poor patients; patient costs for food, transportation and ancillary costs are not covered. Established under an interministerial decree (known as Prakas 809) of October 2006, the SUBO is administered without a third-party implementer. Provider payment is on a fixed-case basis. SUBOs were decreed for 12 of 77 ODs (11 actually implemented) in 8 provinces, all 6 National Hospitals, 11 out of 83 Referral Hospitals and 152 out of 1024 Health Centres (57 actually implemented). In 2012 subsidies were provided for approximately 25 000 inpatient and outpatient cases with a total expenditure on benefits of US\$ 285 000. However, the SUBO schemes have been less effective, due in part to incomplete administrative procedures and the lack of a strong monitoring system. Coverage and utilization fell dramatically between 2011 and 2012, and a 2011 evaluation report raised the possibility of amalgamating the SUBO schemes with HEFs (Men et al., 2011).

3.3.1.4 Community-based health insurance

A small number of NGO-operated CBHI schemes serve non-poor rural populations and urban workers. The CBHI schemes target local populations in the informal employment sector in various rural and urban locations. Enrolment rates are low and the annual drop-out rate is significant (greater than 5%). The first CBHI scheme was initiated in one Health Centre in 1998, and was expanded significantly in 2005–2006. By 2012, there were 19 CBHI schemes encompassing two National Hospitals, 17 Referral Hospitals and 231 Health Centres nationally, covering 166 663 persons or less than 1% of the national population. CBHI premiums are low, and the schemes reimburse user-fee exemptions for services delivered at contracted government hospitals and Health Centres; some schemes provide additional patient support for transportation and food costs.

Voucher schemes for reproductive health

Initiated by health planners in some districts in 2011, voucher schemes for facility-based deliveries, uptake of family planning and safe abortion services are targeted to poor and underserved populations. In 2012, voucher schemes were provided in 9 out of 79 ODs, 5 out of 83 Referral Hospitals and 118 out of 1024 Health Centres, covering a population of 108 000 with approximately 36 000 patient visits (principally at Health Centres) and a total expenditure on benefits of US\$ 396 000; operating costs are high. A 2014 evaluation indicated that voucher schemes were associated with an increase of 10 percentage points in the probability of

delivery in a public health facility (higher among women from the poorest households) and were responsible for one fifth of the increase observed in institutional deliveries in those districts with voucher schemes; universal coverage of the district rather than targeting was most effective (Van de Poel et al., 2014).

3.3.1.5 Depth: what is covered?

On the supply side, basic service coverage of the population has been largely achieved geographically through implementation of the 1995 Health Coverage Plan (see section 4.1.1, Box 4.1), which provides national coverage of public Health Centres and Referral Hospitals that deliver a Minimum Package of Activities (MPA) and a Complementary Package of Activities (CPA). These standard service packages are established through MOH operational guidelines and are currently (June 2014) under review. There appears to be a need to widen the standard package of services as new needs arise and additional services are provided, mainly due to the increased budget for health care and an attempt to meet unsatisfied demand and emerging health needs.

In principle, the MPA and CPA packages include diagnosis, treatment, prevention, health promotion and rehabilitation.

Each of the demand-side financing schemes has a standard package of benefits. For the HEF, SUBO and CBHI schemes, the benefits package is implicit in the user-fee reimbursement, which provides access to MPA and CPA services. HEF and some CBHI schemes also provide support for transport, food, funeral and other patient costs. The benefit package for vouchers explicitly includes access only to those services covered by the voucher (antenatal care services, facility-based deliveries, emergency obstetrics, post natal care, family planning and safe abortion). Voucher schemes provide additional support for transport for the pregnant woman and an accompanying person, food costs and US\$ 7 (30 000 Riel) to acquire care items for the new baby. In all schemes (outside the private insurance sector), the benefits package is uniform across the whole target population and there are no nominated exclusions.

3.3.1.6 Height: how much of benefit cost is covered?

There are no national data on the proportion of patient costs covered per case for services delivered through the demand-side social health protection schemes. Out-of-pocket payment for health care (even among beneficiaries) remains high, while debt for health care and catastrophic

expenditures have been reduced but not eliminated. In principle, HEF and CBHI schemes cover 100% of user-fee charges for MPA and CPA services, and voucher schemes cover 100% of the costs of the reproductive health services package. Some specific national disease control programmes are provided free to the general population. However, patients face additional OOP costs in the form of informal charges at government facilities, drug purchases in the private market and to attend ancillary private providers.

It has been demonstrated that the HEF schemes reduce household OOP payments by 29% on average (larger for poorer households that mainly use public providers and live closer to a district hospital and where the HEF is operated by a contracted NGO); HEFs also reduce households' health-related debt by around 25% on average (Flores et al., 2013). On average, members of CBHI schemes, where they operate, experience a reduction in health-care costs and health shocks by more than 40%, have 75% less health-related debt, and increase the use of (covered) public health facilities (Levine, Polimeni & Ramage, 2012).

3.3.2 Collection

Financing for health care is provided principally by households through direct OOP payments (see section 3.4). For the government system, revenues are collected principally through taxation and foreign assistance mechanisms. Social health insurance mechanisms are still at an early stage of development.

3.3.2.1 Government budget

According to MOH figures, the national budget for health increased significantly in real terms from about US\$ 105 million in 2008 to US\$ 208 million in 2013, representing 12% of total government expenditure (including ODA)(MOH, 2013).

The government collects revenues from various taxation mechanisms, both direct and indirect – income tax, company tax, consumption tax, and trade and customs duties – collected principally through the national Taxation Department and Customs Department. All revenues flow to the central offices. Government health services are financed from general revenues, with no earmarked health taxes. The health budget is allocated to the central MOH and then distributed to provinces and districts. Government health spending is channelled principally to the supply side

through recurrent budget for salaries, drugs, equipment and supplies, and running costs.

The bulk of tax revenues derive from indirect taxes. One third of all revenues come from value-added tax (VAT), of which 60% is from imported goods. The emphasis on indirect taxes seems to be appropriate given the small numbers of formally employed workers, the large informal economy and the strong potential for tax evasion. In practice, VAT may not be regressive as it applies largely to the urban sector and to commercial goods.

3.3.2.2 Official development assistance

The Cambodian public health system has been dependent on ODA for a large share of health-system financing since 1995, and development assistance remains at approximately one half of total government/donor expenditures (though estimates of ODA vary and data are not completely reliable) (see Table 3.2). The health sector has long been the largest recipient of development assistance (attracting about 19% of total ODA in 2012).

Total external expenditure for health was approximately US\$ 209 million in 2012 (or 20% of total health expenditure (MOH, 2014c). Approximately 40% of health ODA came from bilateral donors and 20% each from multilateral agencies, the Global Fund for Malaria, Tuberculosis and AIDS, and non-profit organizations. These outlays are supplemented by direct support from NGOs – externally financed – to hospitals and health providers, which are not included in the public budget and expenditures. Up to 40% of all ODA for health is for the prevention and treatment of HIV/AIDS. A large proportion of maternal and child health (MCH) expenditures are financed by non-official donations through a chain of charitable hospitals for children (which account for the majority of child inpatient and outpatient contacts in Cambodia).

3.3.2.3 Social health insurance

There are currently no social insurance mechanisms for health care except the NSSF. Private enterprises employing eight or more workers must register with the NSSF under the Social Security Law. To fund the work injury scheme, employers are required to pay a compulsory premium to the NSSF of 0.8% of gross salary. From 2008, employers paid 0.5% and the government 0.3%; since 2011, employers have been required to contribute the total 0.8%.

3.3.3 Pooling of funds

There are various fund-pooling mechanisms. Tax revenues are pooled mainly at the Ministry of Economy and Finance and transferred (following agreement on size and content) to the MOH, with final approval by the Council of Ministers and finally by legislation (Senate and National Assembly). Budgets are fixed and revenues delivered when funds are available at the Treasury. Providers bear no financial risk in circumstances where budget disbursement is inadequate or delayed and service delivery is curtailed, which is true also for the HEF, CBHI and other demand-side financing schemes. Consequently, the risk is born largely by the patient.

Donor harmonization and alignment have improved in recent years. International donors provide support to the MOH through the Second Health Sector Support Program 2009–2014, using a Sector-Wide Management (SWiM) approach. Donor funds are either pooled with government funds under the HSSP or in some cases applied by donors to discrete activities (see also section 6.1).

The HEFs constitute a significant funding pool with some elements of strategic purchasing from approved government providers. HEFs are not insurance mechanisms that pool risk among beneficiaries. Instead, they subsidize facility fee-exemptions in the manner of risk equalization. Much of the funding for HEF patient benefits (medical and indirect) is passed through the HSSP. Some small voluntary insurance schemes pool risk among beneficiaries, including the various CBHI schemes, which reimburse government facilities for the user fees incurred by beneficiaries. Other private insurance agencies also provide health cover, principally in urban areas.

3.3.4 Purchasing and purchaser–provider relations

In general, the agencies that pool funds also purchase services. Traditionally, public Health Centres and hospitals are paid by line item budget allocations. The standard MOH budget process is input-based, reflects historical budgeting, and is the outcome of negotiation between the MOH and the Ministry of Economy and Finance (MEF). Programme-based budgeting has been piloted at the MOH Central level.

Contracting arrangements and performance incentives have been piloted in various forms. By 2014, under the national Public Administration Reform, 26 out of 79 health districts and 10 Provincial Hospitals

nationally had been designated as Special Operating Agencies (SOAs) that purchased services from government providers through internal contracting arrangements (see section 2.4, Box 2.1).

The different demand-side schemes contract with selected government health-care providers to deliver services to beneficiaries in their health district or hospital. The HEF, CBHI and voucher schemes act as third-party purchasers of government services using service-delivery contracts with performance standards. Providers are paid retrospectively upon delivering services appropriately.

Contracting procedures differ between the demand-side schemes and the SOAs. Internal SOA contracts link the different levels of the Ministry of Health – central, provincial, district and health providers/staff. These are relational contracts based on trust and cooperation between parties within the same organization. For HEFs and other demand-side schemes, non-enforceable agreements are signed between the independent fund and the health-care provider (hospital or Health Centre) establishing conditions for service delivery and performance-based payment arrangements; payments are generally capitation-based and may be withheld if performance is below requirement.

In both cases, there is no competition between providers as government facilities offer a monopoly service to their local catchment area, and all facilities meeting quality standards who choose to join may do so. Private providers are not included. For private-sector services, the patient is generally the purchaser (except the few who hold private insurance) under a fee-for-service relationship.

3.4 Out-of-pocket payments

Out-of-pocket spending is unacceptably high. The level of OOP expenditure by households peaked at 84% of THE in the late 1990s (Knowles, 2001) with the legalization of private health-care delivery, imposition of use fees at government facilities, and widespread informal charging at government health-care facilities, and has remained at approximately 60% of THE since 2002 (see Table 3.1).

Since 2009, both health spending as a proportion of household income and catastrophic health expenditures have declined, although OOP payments for health care remain the largest part of household non-food expenditures (Anuranga et al., 2012). The annual per-capita outlay for

those who incurred OOP expenditure was approximately US\$ 258 in 2012 according to national survey data (Table 3.4) (NIS, 2013). Of the total, 62% was spent at hospitals (private clinics and public hospitals) and 77% was spent in the private sector (Fig. 3.9).

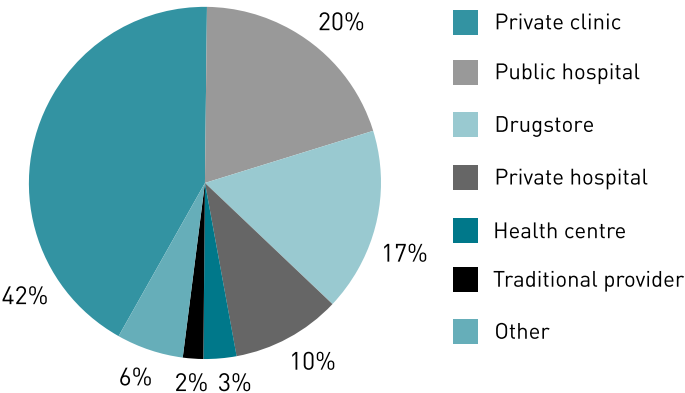
Inequalities in OOP spending between income groups are widespread, with households in the highest income quintile spending 16 times more than those in the lowest quintile (Figure 3.10) (NIS, 2013). The disparity between quintiles reflects affordability not illness – the prevalence of illness is greatest in the lowest income quintile – mainly because the poor have less disposable non-food income, face greater financial barriers, and are less likely to seek care when ill (Anuranga et al., 2012). More recently, the HEFs have been associated with reduced OOP payments for health care and reduced health-related debt (Flores et al., 2013).

Table 3.4 Annual per capita OOP spending on health care, 2012

Population group	US\$
Total population	48
Total for those who were ill	244
Total for those who sought care	257
Total for those who paid OOP	258

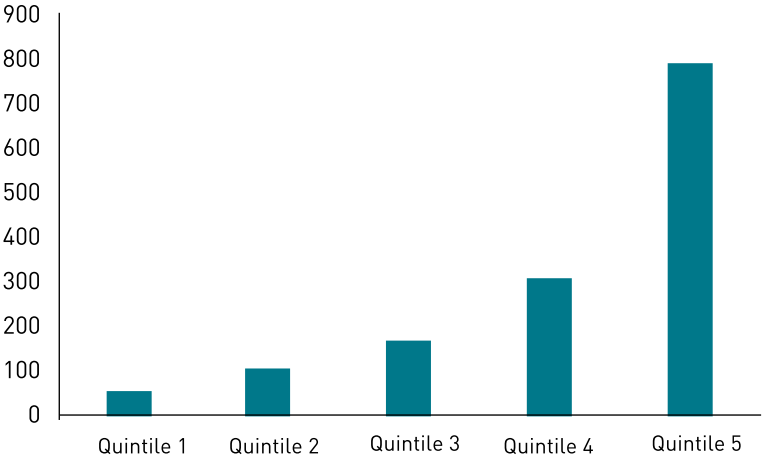
Source: Ministry of Health, based on the CSES 2012 (NIS, 2013).

Figure 3.9 Distribution of providers in annual per-capita OOP spending on health care, 2012



Source: Ministry of Health, based on the CSES 2012 (NIS, 2013).

Figure 3.10 Distribution of annual household OOP spending on health care by income quintile, 2012



Source: Ministry of Health, based on the CSES 2012 (NIS, 2013).

3.4.1 Cost sharing and user charges

Cost sharing for government health service delivery takes the form of official user fees, insurance premiums where they exist, and the private purchase of additional diagnostic, curative and pharmaceutical goods and services. For a discussion of user fees see Box 3.1. There are no official cost-sharing arrangements for the proposed formal-sector health insurance or the demand-side health financing and social protection schemes. Further discussion of the user-fee situation can be found in sections 3.7, 7.2 and 7.3.2.

3.4.2 Direct payments

Apart from under-the-table charges and the private purchase of medical goods, user fees and CBHI premiums are the only form of direct payment for access to government health services. Table 3.5 summarizes the main forms of direct payment by type of health service.

Table 3.5 Direct or indirect cost sharing for government health services

Health service	Type of cost sharing	Exemptions	HEF and other subsidies	CBHI and other insurance
Health Centres	Nominal user fees for admission to services	User-fee exemptions for the poor (partially implemented)	Provided at 370 of 1024 HCs	Insurance premiums; provided at 231 of 1024 HCs
Referral Hospitals	Nominal user fees for admission to services	User-fee exemptions for the poor (partially implemented)	Provided at 47 of 79 RHs	Insurance premiums; provided at 17 of 79 RHs and 1 National Hospital
Drug supply HC-OPD	Free to the patient at all government hospitals and Health Centres and funded by government taxation revenues with donor support	na	na	na
Drug supply RH-IPD	Free to the patient at all National Hospitals, Referral Hospitals and Health Centres and funded by government taxation revenues with donor support	na	na	na
National vertical programmes	Free to the patient and funded by government taxation revenues with donor support	na	na	na
Diagnostic tests	Free to the patient and funded by government taxation revenues with donor support	na	na	na

Source: Asia Pacific Observatory on Health Systems and Policies

3.4.3 Informal payments

While the introduction of user fees and demand-side financing schemes including HEFs led to a reduction in unofficial charges at government facilities, under-the-table charges still continue, particularly at the hospital level. For example, one survey conducted by the World Bank found that on average 45% of women in the study area who deliver at a public health facility paid unofficial charges (World Bank, 2013c). A further initiative to control unofficial charges is the introduction of contracting arrangements for staff working in SOA districts, and the issue is again addressed in the proposed rewriting of the national Health Financing Charter. Further information about these issues can be found in sections 3.7.2, 7.2 and 7.3.2.

3.5 Voluntary health insurance

There is very limited provision of voluntary health insurance in Cambodia. Voluntary insurance is provided in two forms:

- Community-based health insurance, provided by a small number of not-for-profit NGOs – plays a complementary role in financing of government health services;
- Private health insurance through for-profit private companies – plays a supplementary role in providing a choice of provider (e.g. insurance for maternal care in the private sector).

3.5.1 Market role and size

There is no statutory insurance system in Cambodia. The market for voluntary health insurance is small and understanding of the insurance concept is very limited in Cambodia: the poor are reluctant to pay premiums for services they may never access; trust in both insurance providers and health-care providers is low; the quality of care at government facilities often does not meet expectations. Total revenues from all private insurance premiums increased from about US\$ 4 million (0.11% of GDP) in 1998 to US\$ 20 million 2009 (0.19% of GDP); of this, revenues for health insurance totalled US\$ 2.7 million, or 13.8% of total insurance premiums (more recent data are not available).

3.5.2 Market structure

All private health insurance schemes ceased operation under the Khmer Rouge regime. From 1992, when the National Assembly adopted a law on insurance, a small number of insurance companies (predominantly

foreign owned) began to provide coverage. National coverage is still insignificant. Membership of CBHI schemes declined when the main provider, a French NGO, withdrew from Cambodia; local NGOs are now the main providers, organized within the Social Health Protection Association. Evidence suggests that there is substantial adverse selection of CBHI members (Polimeni & Levine, 2012).

3.5.3 Market conduct

In general, CBHI premium rates are affordable for poorer families living above the poverty line, in the range US\$ 5–15 per person per year (discounted for larger families). This level is intended to meet the cost of medical benefits but rarely covers administration costs: on average only 28% of total CBHI revenues come from member premium payments while 72% is funded mainly by donors, according to MOH data. Benefits are provided as a cash reimbursement to facilities for user-fee exemptions. There are no waiting periods or preconditions for insured beneficiaries. Drop-out rates average about 5% of members per year. Health providers are contracted by the CBHI manager to provide services and commonly pay a fee-for-service reimbursement or monthly capitation payment; reimbursement levels are renegotiated regularly by the insurer and the health provider.

3.5.4 Public policy

Regulation of voluntary health insurance is provided through the 2000 National Insurance Law administered by the Ministry of Economy and Finance, which regulates the conduct of CBHI schemes as well as commercial insurance. Commercial schemes make an application for licensing from the MEF, while CBHI schemes apply for licensing from MEF through the MOH. The legislative framework for CBHI schemes is included in a temporary Circular on Micro-insurance issued by the MEF. The purpose of this Sub-decree is to provide a legal tool for licensing micro-insurance providers (micro-insurance company or CBHI operator), including health, life insurance, property and loan insurance. To facilitate the implementation of CBHI schemes, the MOH developed Guidelines on Community Based Health Insurance for: (i) the design, structure and operation of CBHI schemes, which are subject to MOH approval; and (ii) facilitation of CBHI schemes to be operated according to the same purpose and the same principles.

3.6 Parallel health systems

In addition to government and private health providers, a number of local and international NGOs deliver health services outside the government system, along with charitable agencies that provide inpatient and outpatient care. The Kantha Bopha chain of children's hospitals (considered a part of the national hospital system) receives financial support from charitable donors in Switzerland and elsewhere. A prominent charitable service provider is the Sihanouk Hospital Center of HOPE in Phnom Penh, managed by HOPE Worldwide, which has its headquarters in Philadelphia (USA). The mission of Sihanouk Hospital is the further education and clinical training of medical professionals, while delivering high-quality, free medical care for the poor. The hospital provides surgery, emergency services, HIV and tuberculosis care, and operates mobile clinics as well as three medical centres in Phnom Penh.

3.7 Payment mechanisms

A variety of provider payment mechanisms are used to compensate health professionals for services provided:

- For government health services, the main payment mechanism is line item budgeting;
- SOAs receive a Service Delivery Grant, of which up to 80% is allocated in principle to staff incentives based on performance;
- The different demand-side health-financing schemes use various payment mechanisms, including performance-based incentives for staff as well as capitation- and case-based payments to facilities (see Table 3.13);
- HEF income is pooled at facilities with official user-fee revenue, of which 60% is distributed as staff incentives.

3.7.1 Paying for health services

Nationally, about 95% of the government's health budget funding comes from general taxation revenues and 5% from user-fee collections at government facilities. At the facility level, however, user-fee collections often provide a large proportion (30–50%) of additional operating revenues (staff incentives and supplies) for hospitals and Health Centres. Government revenues provide the basic public health infrastructure, including operating costs for salaries and drug supplies, which are provided centrally.

MOH payments to public health facilities are usually made through lineitem budgets based on historical experience rather than programme demands. Budgets are theoretically prospective – based on the Annual Operation Plan or an agreed schedule – but in practice funding is retrospective, and there is no agreed volume or price for specific types of health services (such as outpatient or inpatient care). Provider payment methods are summarized in Table 3.6.

Table 3.6 Provider payment mechanisms by service and insurance provider, c.2013

Health provider	Service and insurance provider							
	MOH	SOA	NSSF (work-place injury)	HEF	CBHI	Voucher	Private Insurance	OOP cost sharing
National hospital	Line-item budget	na	Fee-for-service	Case-based	Fee-for-service and case-based	na	Fee-for-service	Fee-for-service
Provincial hospital	Line-item budget	Service Delivery Grant and PBF	Fee-for-service	Case-based	Fee-for-service and case-based	Fee-for-service	na	Fee-for-service
Referral Hospital	Line-item budget	Service Delivery Grant and PBF	Fee-for-service	Case-based	Fee-for-service and case-based	Fee-for-service	na	Fee-for-service
Health Centre	Line-item budget	Service Delivery Grant and performance incentive	Fee-for-service	Case-based	Capitation and fee-for-service	Fee-for-service	na	Fee-for-service
Private provider	na	na	Fee-for-service	na	na	Fee-for-service	Fee-for-service	Fee-for-service
Pharmacy	na	na	na	na	na	na	na	Fee-for-service
Charitable hospital	na	na	na	na	na	na	na	Care is provided free of charge
NGO facility	na	na	na	na	na	na	na	Fee-for-service

CBHI, community-based health insurance; HEF, Health Equity Fund; MOH, Ministry of Health; na, not available; NSSF, National Social Security Fund; OOP, out-of-pocket; PBF, performance based financing ; SOA, Special Operating Agency.

Source: Department of Planning and Health Information, Ministry of Health.

All tertiary (national) hospitals have been made nominally autonomous and are managed by a governing board with representatives from the various Government ministries including MEF, MOH and the hospital.

Generally, these hospitals receive government funding through line-item budgets to cover recurrent cost and a subsidy to meet fee exemptions based on a case-based fixed rate. National hospitals are paid via a single programme budget line item for operational expenses and have flexibility to allocate their operational budget across expenditure categories, but are heavily dependent on user-fee revenue to finance operational costs and incentives for staff.

SOA status provides public health facilities with a certain degree of autonomy in managing financial resources and establishing performance contracts with staff. These facilities received delegated programme-based budget (PBB) transfers to finance operating costs, receive additional resources through a regular Service Delivery Grant (SDG) provided as a line-item budget based on population size, geographical situation, number and level of health facilities, with 15% of the grant awarded on the basis of performance, including staff availability and achievement of annual performance targets. Initially, most of the SDG was used for staff performance incentives, but this portion declined to 60% in 2013. Most of the SDGs were initially financed by donors through HSSP2, but by 2013 government provided 40% co-financing. SOA facilities also received payments from user fees and the demand-side financing schemes.

Different payment methods are used by the various demand-side financing schemes. Originally, HEFs paid providers through a fee for service schedule approved by the MOH. In 2012 the MOH introduced a standardized retrospective payment system using a fixed case-based payment as well as associated costs, reimbursed on a quarterly basis. CBHI schemes apply mixed payment methods: Health Centres receive a monthly upfront payment based on a mutually agreed per-capita rate; hospitals receive either a retrospective payment based on monthly claims for fee-for-service reimbursement or case-based payment. Both the NSSF work-injury scheme and the voucher schemes make a monthly reimbursement of fee-for-service charges based on an agreed contract.

3.7.2 Paying health workers

Government health workers are paid as civil servants and receive a monthly salary. In recent years, the government has increased salaries by 20% annually (understanding that this is from a very low base).

A recent survey of medical professionals (World Bank, 2013d) indicated that:

- Total compensation for health professionals in government service – including base salary and allowance, government incentives, and dual practice earnings – has more than doubled since 2004;
- While salaries for public-sector health workers have increased significantly, they remain low;
- The average base salary (including allowances) for a government health professional is only about US\$ 100 per month, with doctors and specialists earning only 50% more than the average;
- Government salary and incentives, which were less than a third of health workers' total income in 2004 (including dual practice), now represent about half;
- Dual practice (principally home visits and private clinics) is still the main source of income for specialists and medical doctors and averages between US\$ 50 and US\$ 350 per month, but is a smaller percentage than in 2004;
- Just over half of public-sector health workers report pursuing dual practice, with doctors reporting the highest earnings;
- Most government health workers wish to retain their public-sector jobs, but have unrealistic expectations of additional compensation to forgo dual practice;
- Health workers benefit from a variety of incentive schemes, but the schemes are fragmented and not adequately linked to performance (payments for health projects; user fees and HEFs, SDGs, and midwifery incentive payments);
- There is significant variation in incentive payments depending on the operating revenues that are available to a particular facility
- Staff are often unclear on criteria for incentives, or perceive the criteria to be unfair or not based on their own performance;
- Total median public-sector compensation is now comparable to the private sector for entry-level staff, but diverges for experienced doctors and specialists.

4 Physical and Human Resources

Chapter summary

The public health network comprises more than 1400 public health facilities, organized in health Operational Districts. The public health workforce was rebuilt essentially anew from 1980 and now comprises 20 000 professionals (predominantly nurses and midwives). There is a growing though loosely regulated private sector with more than 5500 licensed providers, who deliver a large proportion of health-care services (mainly curative care), though the exact number of providers is not known. From 1980, the first challenges during recovery and reconstruction were to increase the number and coverage of providers; later, the emphasis shifted towards improving the quality of care in both public and private sectors. Among the key issues are the maintenance of a viable rural health workforce with more equal urban–rural distribution, the development of medical and nursing specialties, and widespread though dual practice by government staff working in the private sector. Emerging challenges are posed by increasing urbanization and the demographic and epidemiological transitions.

4.1 Physical resources

4.1.1 *Capital stock and investments*

The basic health infrastructure – buildings, medical professionals, nursing staff – is provided through the government health system and administered by the Ministry of Health (MOH). In practice, however, many government staff work privately, and the major part of health services are delivered privately (through dual practice or purely private practice). Increasing population numbers, economic growth and increasing demand for health services has led to a steady rise in the number of government health-care facilities in recent decades.

4.1.1.1 Public health facilities

Reconstruction of the health infrastructure after 1980 commenced under the People's Republic of Kampuchea government when khum (or commune) clinics were re-established at the primary level of care. Since then, population coverage with physical facilities – Health Centres and Referral Hospitals – has been largely accomplished through implementation of the 1995 Health Coverage Plan (see Box 4.1). The Plan integrated the then partially functioning 121 district hospitals and 1500 khum clinics into 71 dedicated health Operational Districts (ODs) as Health Centres and Referral Hospitals. Health Posts – which are located in remote areas, more than 15 km from the nearest Health Centre, and cover 2000–3000 people – are the lowest echelon in the public health system. While the number of health-care facilities is constantly changing, depending on which are functioning and what new facilities are constructed, MOH Health Information System data documents the current number of facilities (Table 4.1).

Table 4.1 Type and number of government health-care facilities, 2012–2013

Type of facility	Designated number	Functioning 2012	Functioning 2013
National Hospitals	8	8	8
Operational Districts	81	81	81
Referral Hospitals:	91	82	85
Provincial Hospitals	24	24	24
Referral Hospitals	67	58	61
Health Centres	1024	1020	1085
Health Posts		86	86

Source: All data derived from the MOH routine Health Information System database.

Box 4.1 Plan for coverage of government health services

The *Health coverage plan* (MOH, 2002c; Grundy et al., 2010) is a framework adopted by the MOH in 1995 for developing the health system infrastructure, based on criteria related to population coverage and geographical access. The working principles of the Plan are to cover the entire population with health-care facilities without overlap or gap, and to provide for the basic health needs of the population with integrated quality care making the best use of available resources. The Plan established dedicated health Operational Districts (ODs), each with at least one Referral Hospital and a number of Health Centres.

The criteria related to population coverage, accessibility and service delivery are as follows.

Referral Hospitals

- Optimal population coverage: 100 000–200 000 (in practice between 60 000 and 200 000+)
- Accessibility: 20–30 kilometres between any two Referral Hospitals or a maximum of three hours travel by car or boat
- Providing secondary and tertiary health services through the Complementary Package of Activities.

Health Centres

- Optimal population coverage: 10 000 (in practice between 8000 and 12 000); with 10–20 Health Centres per OD
- Accessibility: located to provide population access within a radius of 10 kilometres or within two hours walk from home
- Providing primary health care services through the Minimum Package of Activities.

The implementation of the *Health coverage plan*, which entailed construction and renovation of Health Centres and hospitals, was funded through two main Source: (i) general tax revenues; and (ii) overseas development assistance, provided largely through two the two successive multi-stakeholder Health Sector Support Programs 2003-2007 and 2008-2015 which pooled funds from the Cambodian government with funds provided by the World Bank, the Asian Development Bank, the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), bilateral funding agencies – including Agence Française de Développement, Belgian Technical Cooperation, the Department for International Development (the United Kingdom), and Australian Aid.

The *Health coverage plan* has been a living plan that has facilitated the expansion of ODs and health facilities over time. Within the framework of new health planning under conditions of decentralization, the Plan has been largely completed and is being reassessed for its relevance and efficiency.

Most Health Centres and Referral Hospitals were built or reconstructed after 1995 and remain in relatively good repair. Standards for the maintenance, renovation and reinspection of buildings, machines and equipment are set at Referral Hospitals by the MOH-defined Complementary Package of Activities (CPA). Both Referral Hospital assessment and Health Centre assessment activities apply the MOH's Quality Assessment Tool Level 1 to evaluate the condition of facilities. This tool focuses on the quality of the infrastructure, including the general condition of the property, availability of electricity, water supply and equipment. Approximately 15 Referral Hospitals (about 20%) are assessed each year and more than half of all Health Centres in the country were assessed during the period 2008 to 2012. These assessments eventually result in an appraisal session with hospital management to highlight areas requiring improvement and further investment. While official results are not publicly available, the Level 1 scores indicate improved quality of care. A Level 2 quality assessment, with a focus on staff–patient interactions, was anticipated in 2014.

4.1.1.2 Private facilities

Private providers operate a diverse range of health facilities generally providing a discreet range of curative services. The MOH issues licences for private health-care facilities upon registration, which requires regular renewal at intervals that depend on the type of facility. There are 5500 licensed private providers (Table 4.2). However, in rural areas a greater number of non-medical providers – including unqualified drug shops, traditional healers, traditional birth attendants, and magicians – accounted for half of all providers according to a 2013 survey (World Bank, 2013c).

4.1.1.3 Other facilities

In addition to government and private health-care providers, a number of charitable agencies and other nongovernmental organizations (NGOs) provide inpatient and outpatient care. The largest and most important of these are the five children's hospitals operated by the Kantha Bopha Foundation, established by Swiss paediatrician Beat Richner in 1991 in Phnom Penh and Siem Reap. The building and operation of these hospitals (which work in collaboration with the MOH) is financed by charitable donations, collected primarily in Switzerland. In addition, the Sihanouk Hospital Centre of HOPE in Phnom Penh, which is managed by HOPE Worldwide (with headquarters in Philadelphia, USA), provides education and clinical training of medical professionals while delivering

high-quality, free medical care for the poor. The HOPE Centre provides surgery, emergency services, HIV and tuberculosis care, operates three medical centres in Phnom Penh together with mobile clinics and outreach services and training activities in almost all provinces. The smaller Angkor Children Hospital in Siem Reap is more integrated into MOH activities and is a clinical medical training centre recognized by the MOH. Another private not-for-profit Emergency Hospital for orthopaedic care is located in Battambang.

Table 4.2 Type and number of licensed private health-care institutions, 2012

Type of facility	Number licensed by the MOH	Location of facility ^a	
		Urban	Rural
Nursing care	1733	na	na
Antenatal care	485	na	na
Physiotherapy	21	na	na
Medical consultation cabinet ^b	2640	na	na
Dental consultation cabinet	368	na	na
Dental clinic	39	39 (100%)	0 (0%)
Aesthetic centre	6	6 (100%)	0 (0%)
Laboratory	23	12 (52.2%)	11 (47.8%)
Maternity clinic	6	3 (50.0%)	3 (50.0%)
General clinic	136	72 (52.9%)	64 (47.1%)
Polyclinic	48	34 (70.8%)	14 (29.2%)
Private hospital	5	5 (100%)	0 (0%)
Total	5501		

a Based on OECD definition of “rural area”, all provinces in Cambodia except Phnom Penh are classified as “predominantly rural regions”; b “Cabinet” refers to private consultation rooms without inpatient capacity; na, not available.

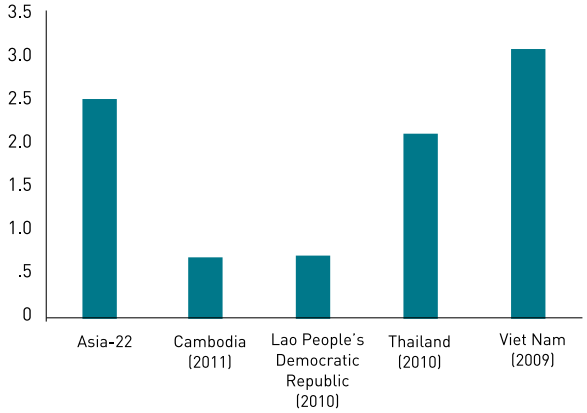
Source: Bureau of Ethics, Hospital Services Department, Ministry of Health.

4.1.2 Hospital infrastructure

The national ratio of hospital beds is 0.72 per 1000 population, with wide variation across provinces. This is similar to the ratio in Lao People’s Democratic Republic but below that in Thailand, Viet Nam and the average for Asia (Figure 4.1) (World Bank, 2014a). Hospital infrastructure is concentrated in urban areas, especially Phnom Penh, where all national hospitals are located, though there are fewer acute beds per population than other districts (Table 4.3). The average length of stay for

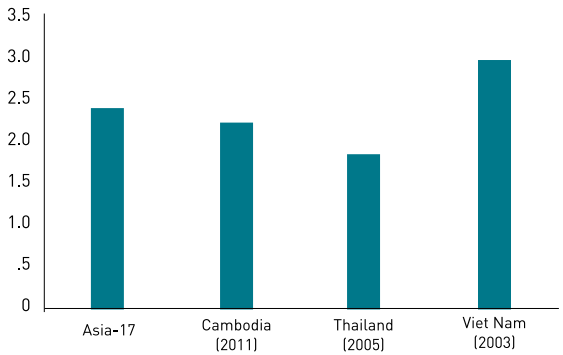
acute care was five days in Cambodia in 2011, comparable to the average of 5.5 days computed for 17 Asian countries (Figure 4.2).

Figure 4.1 Hospital beds per 1000 population, selected countries



“Asia-22” includes Bangladesh; Brunei Darussalam; Cambodia; China; Democratic People’s Republic of Korea; Hong Kong, SAR China; India; Indonesia; Japan; Lao People’s Democratic Republic; Macao, SAR China; Malaysia; Mongolia; Myanmar; Nepal; Pakistan; Philippines; Republic of Korea; Singapore; Sri Lanka; Thailand and Viet Nam
Source: National sources; OECD Health Data 2012 from the Eurostat Statistics Database <http://www.oecd-ilibrary.org/sites/9789264183902-en/03/03/index.html?itemId=/content/chapter/978926418390226-en> (accessed 4 April 2014).

Figure 4.2 Average length of hospital stay for acute care, selected countries



“Asia-17” includes Bangladesh; Brunei Darussalam; Cambodia; China; Republic of Korea; Hong Kong, SAR China; Indonesia; Japan; Macao, SAR China; Malaysia; Mongolia; Myanmar; Nepal; Singapore; Sri Lanka; Thailand and Viet Nam
Source: National sources; OECD Health Data 2012 from the Eurostat Statistics Database <http://www.oecd-ilibrary.org/sites/9789264183902-en/03/03/index.html?itemId=/content/chapter/9789264183902-26-en> (accessed 4 April 2014).

Table 4.3 Acute care beds and operating indicators, by type of hospital and province, 2011

	Population served ^a	Number of beds	Beds/1000 population	Average length of stay (days)	Total inpatient days	Bed occupancy rate (%)
Overall	13 395 682	9637	0.72	5.0	2 900 191	82.45
National Hospitals	13 395 682	3142	0.23	5.3	1 059 229	91.2
Referral Hospitals						
Phnom Penh ^b	1 327 615	435	0.33	4.0	65 604	60.21
Koh Kong	117 481	129	1.10	4.0	19 711	41.86
Mondul Kiri	61 107	58	0.95	3.8	14 312	67.61
Stung Treng	111 671	96	0.86	4.5	21 948	62.64
Rattanak Kiri	150 466	122	0.81	3.4	36 077	81.02
Preah Vihear	171 139	129	0.75	4.2	47 485	100.85
Kratie	319 217	237	0.74	3.9	52 870	61.12
Pailin	70 486	50	0.71	3.5	7986	43.76
Banteay Mean Chey	677 872	469	0.69	6.5	149 371	87.26
Pursat	397 161	267	0.67	4.7	53 223	54.61
Kampot	585 850	339	0.58	5.6	91 863	74.24
Kep	35 753	20	0.56	3.5	3 149	43.14
Takeo	844 906	422	0.50	4.7	139 903	90.83
Siem Reap	896 443	433	0.48	6.3	152 525	96.51
Battambang	1 025 174	486	0.47	4.9	125 538	70.77
Kampong Thom	631 409	291	0.46	5.0	84 856	79.89
Kampong Cham	1 679 992	755	0.45	4.8	275 228	99.87
Prey Veng	947 372	430	0.45	4.6	94 151	59.99
Svay Rieng	482 788	209	0.43	4.3	67 171	88.05
Kandal	1 265 280	508	0.40	5.4	135 589	73.13
Kampong Chhnang	472 341	188	0.40	4.3	64 739	94.34
Sihanouk Ville	221 396	73	0.33	4.1	25 065	94.07
Kampong Speu	716 944	195	0.27	5.1	45 959	64.57
Oddar Mean Chey	185 819	114	0.61	4.3	36 639	88.05

a 2008 National Census; b One CPA-3 hospital and four CPA-1 hospitals in Phnom Penh.

Source: Annual Health Statistics Report (MOH, 2011c).

4.1.3 Medical equipment

The MOH is developing a medical equipment strategy, which will include the management of consumables (e.g. needles, syringes, gauzes), medical instruments (e.g. scissors, scalpels), medical furniture (e.g. hospital beds, wheelchairs) and medical equipment (e.g. X-ray machines, centrifuges, incubators, ECG). The MOH is also preparing a comprehensive inventory of existing medical equipment against the requirements specified by the Health coverage plan, although the exercise depends on full cooperation by national hospitals and vertical programmes. Improvement is needed both in the availability of diagnostic imaging units and in their maintenance (see Table 4.4), and there is lack of skilled staff and an inadequate budget. In 2011, the MOH developed technical guidelines for the management of international capital investments, including the donation of used equipment, against the requirements of the Health Coverage Plan.

Table 4.4 Diagnostic imaging units (MRI units and CT scanners), 2012

Location	MRI units	CT scanners
Public sector		
• Phnom Penh	1	1
• Other provinces	1	2
Private sector		
• Phnom Penh	2	8
• Other provinces	0	6
Total	4	17
Per 1 m. population		
• Average EU (23)	10.3	20.4
• Malaysia (2007)	2	4
• Philippines (2009)	0.5	0.25
• Mongolia	0.5	0.1
• Cambodia	0.27	1.27

EU, European Union; m, million.

No PET survey available in Cambodia.

Source: Hospital Services Department, Ministry of Health; Jaafar, S, et al. (2013); Tsilaajav T, et al. (2013); Romualdez A, et al. (2011) OECD Health Data 2012 from the Eurostat Statistics Database (<http://dx.doi.org/10.1787/888932704304>).

4.1.4 Information and communications technology

Internet usage among the general population is rising rapidly in urban areas but remains relatively low nationally. The 2012 United Nations' E-Government report (United Nations, 2012) assessed four dimensions of ICT and ranked Cambodia 155th out of 190 countries – a particular shortcoming was in ICT infrastructure (Table 4.5). Partly meeting these challenges, the MOH Health Management Information System (HMIS) has been computerized, with web-based access for all ODs (see section 2.7.1). Currently (June 2014), 55 Referral Hospitals, 24 Provincial Hospitals, 8 National Hospitals and 2 NGO hospitals, as well as all OD Offices, enter data electronically each month into the networked HMIS. Not all Health Centres have access to the web-based system as many are located in remote areas with limited access to electricity and the Internet.

Table 4.5 E-government index by component, 2012

Component	Score		
	Cambodia	Asia	World
Overall Index value	0.2902	0.4992	0.4882
Online service	0.1895	0.4880	0.4328
Telecommunications infrastructure	0.0814	0.2818	0.3245
Human capital	0.5997	0.7278	0.7173

Source: United Nations, E-Government Survey (United Nations, 2012).

4.2 Human resources

Significant success has been achieved in rebuilding the health workforce since 1979, when only 25 doctors survived. In the early years, health planning focused strongly on increasing staff training and staff numbers. Major planning documents included the 1995 Health Coverage Plan and two MOH Health Workforce Development Plans for 1996–2006 and 2006–2015.

Room for improvement remains, however, in the number, quality and responsiveness of the health workforce in both public and private sectors. These are important issues in the second Health Workforce Development Plan. Staff capacity and performance are key concerns. For example, while the Health Coverage Plan proposed the recruitment of biomedical technicians, a training programme is yet to be established and there is only limited capacity for medical equipment maintenance, which remains a key issue for the next Health Strategic Plan. The need for quality

improvement has also been addressed through Sub-Decree 21, which defines quality standards for all health educational institutions (DFAT, 2011).

Initiatives to increase the supply or improve the training of health professionals in the immediate future, have been raised as critical areas of need in the midterm review of the Health Workforce Development Plan in 2011.

The *Midterm review of the health workforce development plan 2006–2015* outlined four strategic priorities for the MOH (Rotem & Dewdney, 2011).

1. **Governance of human resources for health:** the need for regulation of the activities of health personnel and for mechanisms to respond to consumer dissatisfaction with professional services delivered in both the public and private sectors; the increasing production of graduates from nongovernmental health professional institutions and increasing involvement of nongovernmental providers in preservice training; the increasing concern of the MOH with the regulation of training activities rather than simply provision; the greater role in regulation of preservice professional training by the Ministry of Education, Youth and Sport, the Accreditation Council of Cambodia and the University of Health Sciences (UHS) and its associated Technical School for Medical Care.
2. **Training:** among a number of significant advances, the long-awaited increased intake of students into midwifery training programmes; Japan International Cooperation Agency (JICA) has supported the rebuilding and extension of the Technical School for Medical Care (moved from the MOH to the UHS); upgrading of nurse and midwifery training programmes through the introduction of associate degree programmes and strengthening of the post-basic specialized nurse training programme; UHS has initiated a range of postgraduate medical and dental training programmes; the increasing number of private-sector training institutions; the need to strengthen the structure, content and delivery of preservice training programmes in both government and nongovernmental institutions; the employment of new graduates and the introduction of a national mandatory preregistration examination.
- 3 **The health workforce:** the slower rate of growth in the number of MOH civil servants compared to population numbers; the continued concentration of health workers in Phnom Penh; the absence of

reliable data relating to the size, composition and distribution of the nongovernmental health workforce and on health-worker productivity; official recognition of the ubiquitous private pharmacy service together with consideration of a programme for training of personnel; dissatisfaction with health-worker salaries despite recent increases and the limited number and poor distribution of incentive schemes; the introduction of a new health workforce projection tool for health workforce planning and incorporating data on private-sector training activities and the nongovernmental health workforce.

4. **Human Resource Information System:** the need for a thorough examination of the information needs of decision-makers concerned with the governance and management of the health workforce.

4.2.1 Health workforce trends

The MOH employs a total of 19 457 civil servants (a relatively small number compared to other ministries), most of whom are nurses (about 46%) and midwives or midwife associates (about 24%) (see Table 4.6). Doctors comprise about 14% of the health workforce, with a greater number of general practitioners than specialists (about 11% and 1%, respectively). To fully implement the Health coverage plan, the MOH estimates there is a need to expand the total public health workforce to 32 000 by 2020, an increase of 64% from 2012 levels, raising the health worker-to-population ratio from 13.6 to 19.9 per 10 000 population.

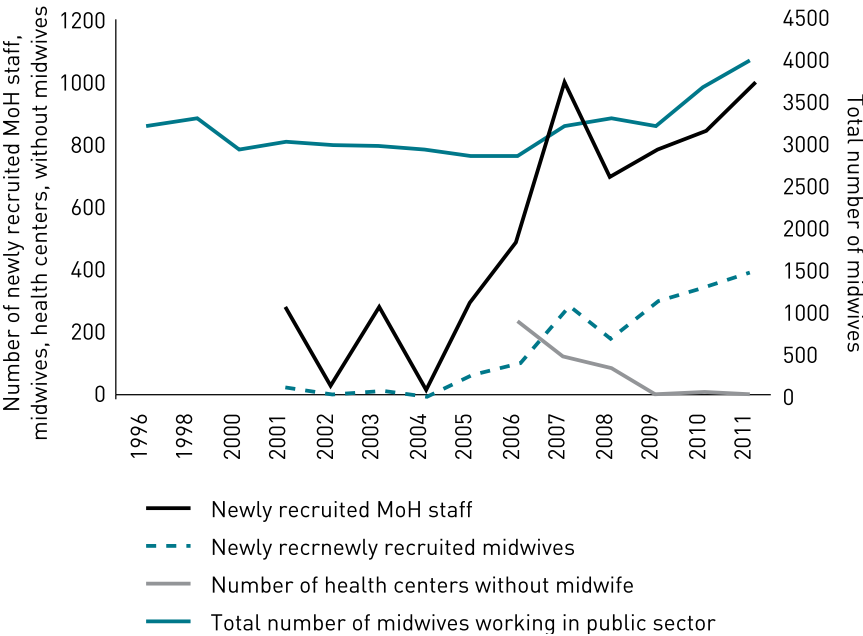
There are no official data on the health workforce in the nongovernmental and private sectors. A recent World Bank survey on health markets in rural areas estimated the contribution to service delivery at 50% from non-medical providers with 29% from qualified private providers and 20% from public providers (with 1% other) (World Bank, 2013c).

Public-sector health workers are recruited through an annual civil service exam, although the more recent use of strategic recruiting has aimed to meet shortages and increase the quality and skill mix, especially for maternal health. The number of midwives has increased significantly since 2004 (Figure 4.3), partly in response to the development and implementation of the Fast Track Initiative Roadmap for Reducing Maternal and Newborn Mortality 2010–2015, which includes four core components of essential maternal and newborn health interventions (emergency obstetric and newborn care, skilled birth attendance, family planning and safe abortions) and three enabling factors (behaviour change communication, removing financial barriers and maternal death surveillance and response).

The health workforce relies strongly on nurses, with 3.47 nurses to each doctor, partly because of the emphasis placed by the Health coverage plan on primary health care (PHC) services. The ratio of nurses and midwives to physicians is in the middle of the range within the region (Figure 4.4). At central and provincial levels, medical doctors are the largest component of the health staff, while in rural areas nurses and midwives prevail. Consequently, more than 40% of general medical practitioners are located at central-level facilities (Table 4.7).

The population density of physicians is increasing and is now comparable to Lao PDR and Thailand, while Viet Nam is significantly higher (Figure 4.5). The densities of nurses and midwives are comparable to Lao PDR, but lower than Thailand or Viet Nam (Figure 4.6). While information on the number of dentists is limited, figures for Cambodia seem to be low in comparison with Lao PDR and Thailand (Figure 4.7). The density of trained pharmacists has seen a steep increase but remains lower than in other countries in the region (Figure 4.8).

Figure 4.3 Number of midwives, Cambodia, 1996–2011 (public sector)



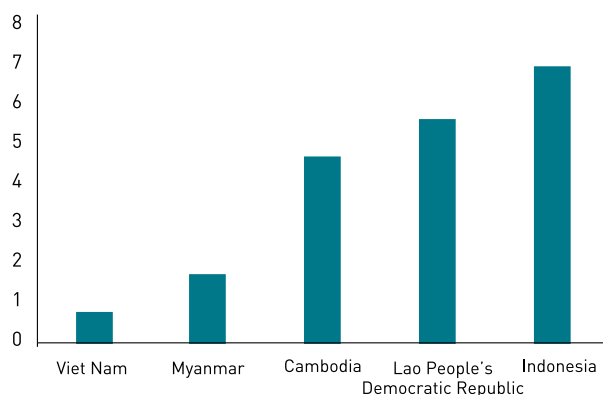
Source: Personnel Department, Ministry of Health, Cambodia. Reprinted from Fujita et al. (2013).

Table 4.6 Ministry of Health Workforce Projection Plan, 2012–2020

Professional category	2012		2020		2012–2020		
	Total existing staff	Per 10 000 pop.	Total need	Per 10 000 pop.	Total gap	Attrition years	Total required
Specialist doctor	259	0.18	367	0.23	108	21	129
Medical doctor	2 157	1.51	2 679	1.66	522	345	867
Medical assistant	778	0.54	584	0.36	–194	124	0
Dentist	223	0.16	324	0.20	101	18	119
Dental assistant	65	0.05	18	0.01	–47	5	0
Pharmacist	487	0.34	668	0.41	181	78	259
Pharmacist assistant	79	0.06	106	0.07	27	6	33
Secondary nurse	5 698	3.99	7 577	4.69	1 879	912	2 791
Primary nurse	3 281	2.30	5 739	3.55	2 458	1 050	3 508
Secondary midwife	2 475	1.73	4 495	2.78	2 020	396	2 416
Primary midwife	2 188	1.53	2 376	1.47	188	350	538
Secondary laboratory technician	462	0.32	649	0.40	187	37	224
Primary laboratory technician	69	0.05	21	0.01	–48	6	0
Physiotherapist	147	0.10	259	0.16	112	12	124
X-ray technician	22	0.02	230	0.14	208	4	212
Administrative officer	58	0.04	372	0.23	314	0	314
Accountant	137	0.10	226	0.14	89	0	89
Information technology staff	68	0.05	186	0.12	118	0	118
Facility maintenance staff	82	0.06	352	0.22	270	0	270
Driver	56	0.04	153	0.09	97	0	97
Other	666	0.47	4 687	2.90	4 021	320	4 341
Total	19 457	13.62	32 070	19.86	12 613	3 683	16 448

Source: MOH Health Workforce Projection Plan 2012–2020; Cambodia Health Staff Projection Tool, 2010, 2011. MOH Personnel Department.

Figure 4.4 Ratio of nurses and midwives to physicians in selected countries (Cambodia data 2008)



Source: Global Health Observatory (<http://apps.who.int/gho/data/node.main.A1444?lang=en>, accessed August 2013).

Table 4.7 Distribution of health workers by central and provincial level and professional group, 2011

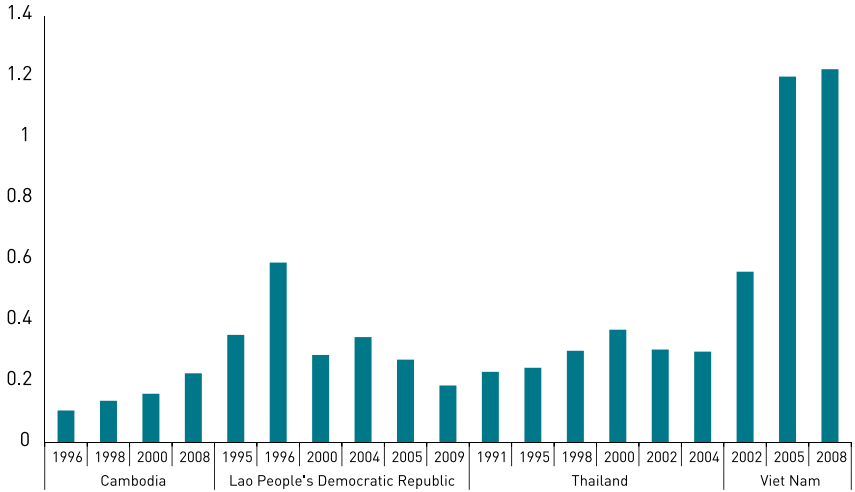
Professional group	Total	Central level ^a (%)	Provincial level ^b (%)
Generalist medical practitioner	2144	864 (40.3)	1280 (59.7)
Specialist medical practitioner	351	261 (74.4)	90 (25.6)
Physician assistants/Health officer	796	188 (23.6)	608 (76.4)
Graduate/Registered/Professional nurse	5389	1167 (21.7)	4222 (78.3)
Vocation/Enrolled/Practical nurse	3260	86 (2.6)	3174 (97.4)
Midwife	2053	253 (12.3)	1800 (87.7)
Midwife associate	1997	10 (0.5)	1987 (99.5)
Dentist	230	94 (40.9)	136 (59.1)
Dental assistant/therapist	62	8 (12.9)	54 (87.1)
Pharmacist	489	213 (43.6)	276 (56.4)
Pharmaceutical assistant	92	45 (48.9)	47 (51.1)
Physiotherapist	137	45 (32.8)	92 (67.2)

a Central level comprises MOH headquarters, University of Health Science, National Centres, National institutions and six national hospitals in Phnom Penh.

b Provincial level comprises Provincial Health Departments, Regional Training Centres for nursing and midwifery, Operational Districts, Health Centres and Referral Hospitals.

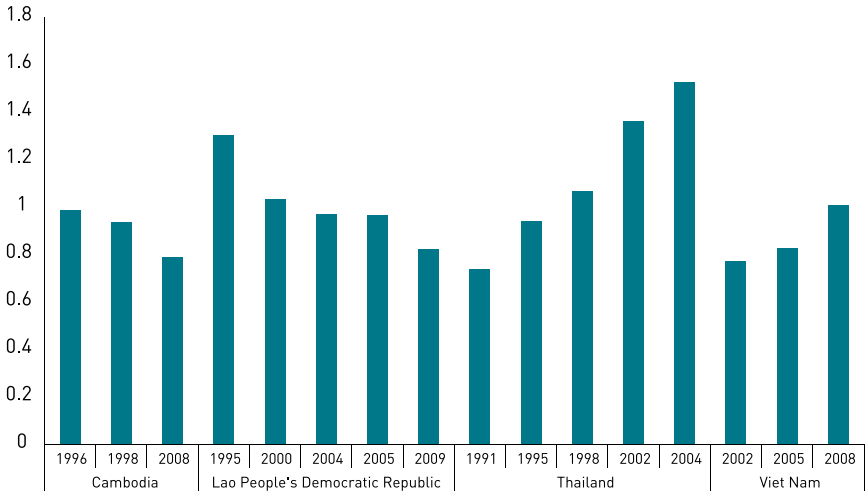
Source: Cambodia Health Staff Projection Tool, 2010, 2011. MOH, Personnel Department.

Figure 4.5 Number of physicians per 1000 population, selected countries, 1991–2009



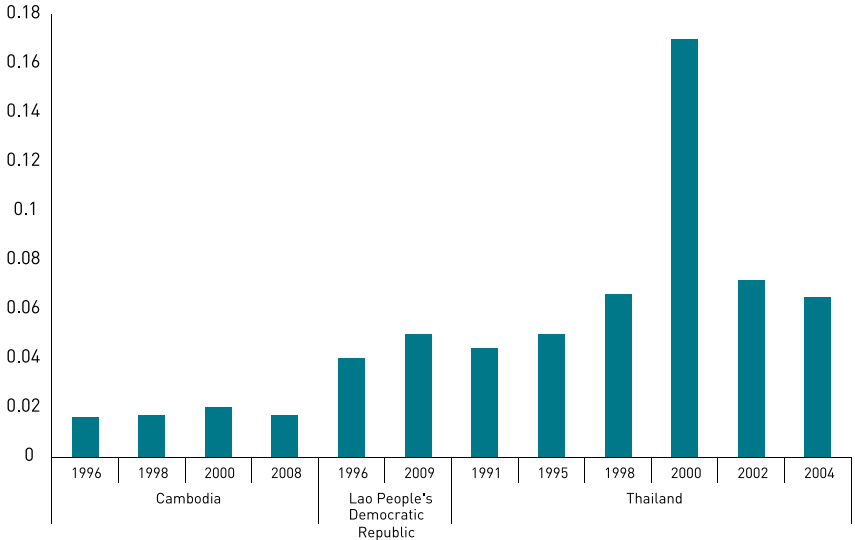
Source: Global Health Observatory (<http://apps.who.int/gho/data/node.main.A1444?lang=en>, accessed August 2013).

Figure 4.6 Number of nurses and midwives per 1000 population, selected countries, 1991–2009



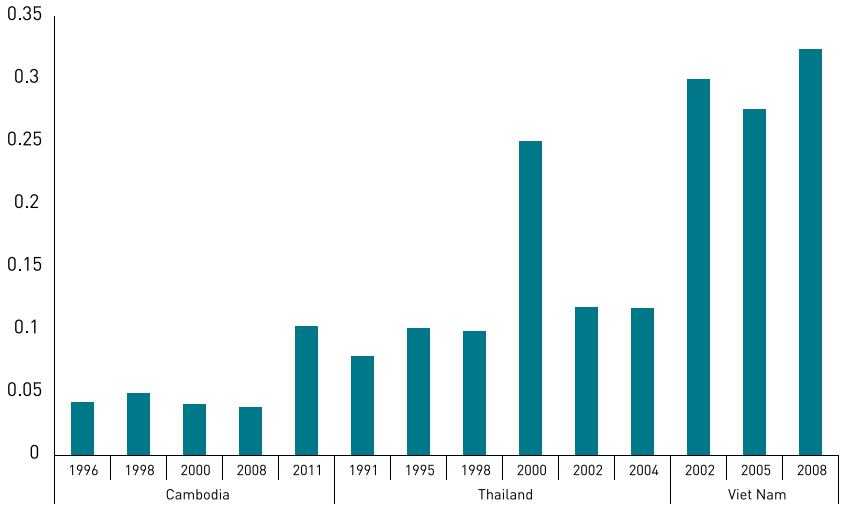
Source: Global Health Observatory (<http://apps.who.int/gho/data/node.main.A1444?lang=en>, accessed August 2013).

Figure 4.7 Number of dentistry personnel per 1000 population, selected countries, 1991–2009



Source: Global Health Observatory (<http://apps.who.int/gho/data/node.main.A1444?lang=en>, accessed August 2013).

Figure 4.8 Number of pharmacists per 1000 population, selected countries, 1991–2011



Source: Global Health Observatory (<http://apps.who.int/gho/data/node.main.A1444?lang=en>, accessed August 2013).

4.2.2 Professional mobility of health workers

There is very little staff turnover in the public-sector workforce, estimated at 0.2% of the total workforce per year, while staff attrition is estimated at 1–2% per year in total and 4% for primary nurses. There is little or no migration of health workers to or from other countries (external brain drain). However, there is a noticeable movement of staff from civil-service to higher-paid international and private-sector positions (internal brain drain) (Chhea, Warren & Manderson, 2010).

Within the MOH, the Director-General for Health and directors of the Personnel Department and the General Directorate for Administration and Finance are responsible for personnel management, including recruitment, deployment and distribution, salaries, and career pathways. Ultimately, the Council of Administrative Reform, the Ministry of Economy and Finance and the Office of Public Function (which serves as the civil service secretariat) are regulators of the number of civil servants and their employment conditions.

The need for more coordinated performance management mechanisms has been highlighted, particularly to reward professional achievement and provide for career development. Without adequate incentives in the public sector, most public health staff engage in dual practice in the private sector. The exact number of public health staff in dual practice is unknown, but has been estimated at two thirds of the total workforce (World Bank, 2013d). MOH employees constitute the largest proportion of health workers employed in the for-profit private sector, either as independent workers (self-employed private practitioners) or employees of nongovernmental health services. Today, a large number of medical graduates do not enter government service, which indicates the expanding role of the private sector (see section 4.2.1). Regulations for registration and (re)licensing of health professionals are incomplete but are currently under development by the MOH.

4.2.3 Education and training of health workers

The redevelopment of the health workforce in Cambodia has been made possible by an expansion of institutions dedicated to health education. A number of government agencies are responsible for the education and training of public health professionals:

- The Council of Ministers is the ultimate authority for the management and regulation of health training institutes;

- The MOH and the Ministry of Education, Youth and Sport (MoEYS) are directly responsible for the training of health-care professionals;
- The departments for Human Resource Development at those ministries have responsibility for preservice training and continuous professional education of health-care personnel;
- There is a growing number of private institutions providing healthrelated education, which are technically accountable to the MOH but remain under the authority of MoEYS for management, reporting and accreditation.

In the public sector, the UHS is the main provider of the scientific and vocational training of health-care personnel. The UHS is the country's main provider of undergraduate degree courses for the training of medical doctors, pharmacists and dentists. The UHS also hosts the Technical School for Medical Care, which provides associate degrees in nursing, midwifery, laboratory technology, physiotherapy and medical imaging. A master of public health degree is provided through the MOH's National Institute of Public Health.

Four Regional Training Centres deliver primary and secondary nursing and midwifery curricula. The National Institute of Public Health offers a Master of Public Health degree. The Institute of Medical Sciences of the Royal Cambodian Armed Forces provides training in several disciplines, including nursing and midwifery, and trains medical assistants, medical officers, pharmacists and dentists to serve in the armed forces (students from outside the armed forces are eligible to enrol as fee-paying students).

A growing number of private institutions offer preservice training and medical education, but detailed information on student numbers and other aspects is not available. The absence of regulation and accreditation of these institutions poses significant challenges to the health and education sectors. All higher public and private educational institutions are responsible to the Accreditation Committee of Cambodia, established in 2003, for bachelor degrees and above.

However, serious concerns still remain about the quality of education provided to medical and health care professionals. The midterm review of the Health Workforce Development Plan therefore calls for: the establishment of the establishment of an institutional body to oversee and ensure the quality of health professional education in the form of a Health Professional Education Committee; establishing a National Examination

for doctors, dentists, pharmacists and degree nurses, which may then function as the national licensing and registration procedure of the health professional councils; strengthening of health professional education institutions with a focus on competency based curriculum for teaching clinical skills; rationalising the curricula against health cadres needed for the public and private health service; providing adequate funding to health education institutions; and the development of clinical placement sites through the establishment of teaching hospitals.

4.2.3.1 Educational infrastructure

The number of private educational providers exceeds the number of public providers by approximately 2:1, producing an overall growth in the total number of health training institutions (Table 4.8). While in the public sector the UHS, the Technical School for Medical Care and the Regional Training Centres provide substantial facilities, the numbers of classrooms and demonstration rooms are insufficient to meet the demand of enrolled students. Libraries at these institutions offer only limited opening hours and little availability of recent editions and up-to-date study materials. Lack of infrastructure, poor water supply and maintenance are serious problems for the Regional Training Centres. Dormitories are not commonly available and only the UHS and the Technical School for Medical Care have well-functioning canteens.

Table 4.8 Numbers of health training institutions (public and private sectors), 2009–2010

Area of expertise	Type of training institution		
	Public	Private	Total
Medicine	2	4	6
Dentistry	2	4	6
Pharmacy	2	4	6
Nursing	6	12	18
Midwifery	6	12	18
Laboratory technician	6	12	18
Imaging and therapeutic equipment operators	1	0	1
Physiotherapy	1	0	1
Public health	1	0	1

Source: Midterm Review of the Health Workforce Development Plan (DFAT, 2011).

4.2.3.2 Enrolment and graduation of health professionals

The annual number of graduates from public-sector educational institutions is provided for 2009–10 (Table 4.9). The basic entrance requirement for all health disciplines – which is set by the MOH – is a high-school diploma. National entrance exams for medical doctors, pharmacists, dentists, and bachelor degrees in nursing were introduced in 2008; applicants for primary nursing and midwifery courses in the Regional Training Centres are exempt. Successful completion of an exit examination, overseen by a committee composed of representatives from the Council of Ministers, MOH, MoEYS and private and public schools, is required for graduation.

While there has been a significant expansion in the number of health education institutions in recent years – especially due to the opening of private education facilities – the quality of education and training of health-care professionals remains open to question. This is a major concern given the expressed goal of the MOH to improve the quality of health services. There is a need to evaluate existing training programmes, in both public and private sectors, against international standards, such as those set by WHO for the education of nurses and midwives (WHO, 2009).

While there are no adequate data on the quality of health education, training standards seem in general compromised by high student-teacher ratios; for example, the student-teacher ratio in most schools offering training in midwifery exceeds 30:1. Challenges include the limited knowledge and clinical experience of many trainers and limited skills in the English language and Internet technology. A train-the-trainers programme for health educators was initiated in 2011 at the Centre for Educational Development for Health Professionals in cooperation with the University of the Philippines, Manila.

4.2.3.3 In-service training and continuing professional education

In-service training and continuing professional education are largely funded by development partners. The MOH Human Resources Development Department maintains a database of continuing professional education courses and their participants. In parallel, NGOs provide in-service training activities for their own staff. Some of these agencies also provide in-service training for government employees, such as training of medical specialists, in large private hospitals. In the private for-profit sector, there are numerous in-service training activities that

are not in congruence with needs identified by the Health coverage plan. These are dominated by vertical disease training activities, particularly for HIV, tuberculosis and malaria. Not surprisingly, one recommendation from the Mid-Term Review of the Health Strategic Plan 2011–2015 was to establish government-recognized continuous education programmes to foster better organization and planning.

Table 4.9 Number of graduates from public-sector health education institutions, 2009–2010

Professional specialty	Total number of graduates
Medical doctor	79
Medical specialist (postgraduate level)	35
Physician assistant	Last graduation in 1997
Bachelor degree in Nursing	First graduation in 2013
Associate degree in Nursing	484
Primary nursing	126
Associate degree in Midwifery	154
Primary midwifery	234
Doctor of Dentistry	47
Dental assistants	Last graduation in 1996
Pharmacist	51
Pharmaceutical assistant	Last graduation in 1995
Associate degree in physiotherapy	29
Associate degree in medical radiology technology	20
Associate degree in medical laboratory technology	40
Master of Public Health	First graduation in 2013

Source: Midterm Review of the Health Workforce Development (DFAT, 2011).

4.2.4 Doctors' career paths

The UHS medical school programme comprises six years of education. On completion, graduates are awarded a Bachelor of Medical Sciences degree. A national exam for medical students will be introduced in 2014 as a prerequisite for graduation. After a two-year residency at hospitals, graduates obtain the University Diploma in General Medicine, which enables doctors to practise as general medical practitioners, in public health facilities (as appointed by the government), in private facilities, or as independent private health-care providers. New graduates

compete in an annual MOH examination for a limited number of posts at MOH health-care facilities at national, provincial and district levels. Doctors are initially placed in rural locations for a few years (duration depending on remoteness). As there is a wider scope for private practice and professional development, the majority of medical doctors pursue their careers in urban settings following the rural placement. A more recent assessment indicates that 40% of public-sector generalist medical professionals and 74% of specialists are located at central level (Table 4.7).

4.2.5 Other health workers' career paths

A national exam prior to graduation for students of nursing, pharmacy and dentistry was introduced in 2013.

4.2.5.1 Dentists

All students are required to pass the national entrance exam after the first year before being permitted to progress further. A Bachelor of Dentistry is achieved after the fifth year and a Doctor of Dental Surgery at the end of the seventh year.

4.2.5.2 Pharmacists

Students are required to pass a national entrance exam to proceed with further training after the first year. A Certificate of Biological Sciences is achieved after the third year and a Bachelor in Pharmacy at the end of the fifth year.

4.2.5.3 Nurses and midwives

Primary nursing and primary midwifery are 12-month programmes. Primary midwifery programmes are offered by all Regional Training Centres; there is no primary nursing or primary midwifery programme at the Technical School for Medical Care in Phnom Penh. The Associate Degree in Nursing is a three-year programme at Regional Training Centres and the Technical School for Medical Care. Several limitations have made these programmes less attractive for applicants: students were not willing to go through an additional year after graduating from a three-year nursing programme; and while the programme was a four-year course it was recognized only as a bachelor's degree. In response to the shortage of midwives at Health Centre level, the MOH developed a three-year Midwifery Associate Degree in 2008, which resulted in a steep increase in the number of midwife graduates.

5 Provision of services

Chapter summary

Basic health service delivery has been restored in Cambodia in the last three decades through a network of public health facilities (essentially Health Centres and Referral Hospitals) and a growing private sector. This mixed health system, composed of numerous service providers and with various funding sources, presents a significant regulatory challenge for government planners and policy-makers. Since then, the focus of the system was the provision of primary health care, particularly for maternal and child health and communicable diseases. Under the 1995 Health Coverage Plan, delivery of public health services has been based on an Operational District's approach, serving defined population catchment areas. Additionally, guidelines described service delivery at each level of service: the Minimum Package of Activities (MPA) at Health Centres and the Complementary Package of Activities (CPA level-1 to level-3) at Referral Hospitals. The period of relatively consistent economic growth since the mid-1990s has led to a change in disease patterns, with a significant rise of noncommunicable diseases. This has been accompanied by a large and growing private medical sector as the main point of first contact for health care. These private practitioners and clinics are particularly frequented for curative care, whereas health prevention activities (such as immunization, tuberculosis, malaria and HIV/AIDS control) are the domain of the public sector. Utilization of traditional healers is in decline, while medical specialities, such as haematology and oncology, are only at early stages of development.

5.1 Public health

Public health services are provided exclusively by the Ministry of Health (MOH) through the network of public health facilities (see section 2.6). Public health is a social and political concept aiming at improving health and well-being of the population through health promotion, disease prevention, treatment and care and other forms of health intervention. In Cambodia, public health also refers to basic primary and curative care provided nationally through a network of Health Centres and Referral Hospitals.

5.1.1 Environmental and communicable disease control

Limited access to safe drinking water and to sanitary facilities, as well as poor hygiene results in waterborne diseases, such as diarrhoea, dysentery and cholera. Continued use of biomass fuels for cooking in rural areas, an increasing number of motorized vehicles, and strong reliance on fossil fuels in the energy sector in urban areas are major sources of air pollution, which results in widespread respiratory diseases, especially among young children. Control and prevention of environmental and communicable diseases are carried out through various disease-specific programme interventions. These interventions are supervised and coordinated by the Department of Communicable Disease Control and the Department of Preventive Medicine, the National Centre for Health Promotion, the National Centre for Malariology, Parasitology and Entomology, the National Centre for Tuberculosis and Leprosy Control, the National Centre for HIV/AIDS, Dermatology and Sexually Transmitted Infections and other institutes.

5.1.2 Mechanisms for notification and surveillance of disease outbreaks

The role of the MOH National Centres, which receive funds from the Government, with financial and technical support from development partners and multi- and bilateral aid agencies, is to manage disease-specific programmes from the central to the peripheral level. While each previously developed its own surveillance system, these have now been integrated into the new web-based Health Management Information System (MHIS), but not full integration.

The HMIS collects data from public health facilities at all levels, including Health Centres, Referral Hospitals and National Hospitals. The HMIS is managed by the MOH Department of Planning and Health Information and focuses on the Routine Reporting System - with monthly reporting of utilization of a wide range of health services, for the purpose of day-to-day management and planning. The Inventory of Health Facilities - with quarterly reporting for the purpose of management and planning - is also managed by the MOH Department of Planning and Health Information. The HMIS captures data only from public health facilities, while 57% of patients sought care for their last illness/injury episode from the private sector first (NIS, 2011), indicating that its coverage and timelines are limited, especially for the Alert System.

More recently, the use of ICT through an Early Outbreak Warning and Response System, known as CamEWARS, has improved the timeliness and completeness of data collection, reporting and analysis through the Alert System. CamEWARS is based on a Microsoft Access database that records suspected and confirmed cases as well as deaths due to 12 identified diseases and syndromes: acute watery diarrhoea, bloody diarrhoea, measles, acute flaccid paralysis, acute lower respiratory tract infection, dengue fever, meningoenzephalitis, acute jaundice, diphtheria, rabies, neonatal tetanus, and clusters of unknown disease. Data are collected weekly from health-care facilities. In addition, telephone text messaging from government facilities is being used to share indicator based surveillance data.

The surveillance and control of avian influenza among humans receives particular attention. The MOH, including Provincial and OD offices and the Department of Communicable Disease Control, manage surveillance and control in cooperation with the Ministry of Agriculture (see Box 5.1 for further details). Cambodia has been working with other countries of the greater Mekong subregion, namely China (Yunnan and Guangxi provinces), Lao PDR, Myanmar, Thailand and Viet Nam, to enhance early detection and effective response measures to communicable diseases; and to address the emergence of new diseases as part of the Mekong Basin Disease Surveillance Network established in 2001 (Phommasack et al., 2013).

Box 5.1 Surveillance and control of avian influenza

The **Ministry of Health** uses existing disease surveillance structures for detection of human cases of avian influenza. Cases of “acute respiratory illness” are reported through a dedicated hotline from staff at Health Centres, ODs and Provincial Health Departments. Surveillance does not occur effectively where patients seek care at private providers and can result in delay of appropriate treatment and a high case fatality rate.

The MOH has established a **sentinel surveillance system** for influenza-like illness at four sites in Battambang, Kampong Cham, Takeo and Phnom Penh to monitor the epidemiology and analyse circulating strains of influenza. Surveillance of media reports has been used for the early detection of suspected cases.

The MOH has established **Provincial Rapid Response Teams** nationwide with assistance from staff at OD level to conduct preliminary investigations, confirm reports of suspected cases, and communicate findings rapidly (by phone) to the Department of Communicable Disease Control.

Laboratory case confirmation is managed by the Institut Pasteur du Cambodge. Upon positive confirmation of an outbreak, investigators from Pasteur, the Department of Communicable Disease Control and WHO are deployed to conduct investigations in collaboration with provincial and OD health staff.

Suspected cases receive **treatment** at the government’s Calmette hospital in Phnom Penh or selected Referral Hospitals in Siem Reap and a few other provinces. The protocol provides for treatment of suspected cases with antiviral medications such as oseltamivir (Tamiflu) within 48 hours of the onset of symptoms or otherwise appropriate antibiotics for secondary infections.

MOH activities are coupled with prevention and control activities in animals under the **Ministry of Agriculture, Forestry and Fisheries**, including: control of the importation of poultry and poultry products from neighbouring countries; control of transportation of poultry within the country; improvement of hygiene levels at poultry farms and slaughterhouses; and the conduct of surveillance of poultry at markets and farms, including regular sampling.

The **Avian Influenza Inter-sectoral Technical Working Group** – with representatives from the MOH, the Ministry of Agriculture, Forestry and Fisheries, WHO, the Food and Agricultural Organization of the United Nations and the Institut Pasteur – meets weekly. A **National Comprehensive Avian and Human Influenza Plan** was adopted in 2007 to coordinate and integrate disease surveillance, prevention and control activities of highly pathogenic avian influenza in poultry and humans among the MOH, the Ministry of Agriculture, Forestry and Fisheries, the National Committee for Disaster Management, and other ministries and health partners (RGC, 2007).

5.1.3 Mechanisms for surveillance of population health and wellbeing

The Cambodian Demographic and Health Survey (CDHS) and the Cambodia Socio-economic Survey (CSES), along with other national surveys, collect information on population health and well-being. The CDHS has been conducted every five years since 2000 to collect regional and national data on demography, health care and health status (with a representative sample down to the provincial level). The CSES is conducted annually by the National Institute of Statistics (NIS) of the Ministry of Planning and provides data reaching back to 1993–94. The survey provides information mainly on housing conditions, education, economic activities, household production and income, consumption patterns, health and nutrition, and labour force activities (NIS, 2013).

The WHO STEPwise approach to Surveillance (STEPS) was first used in 2010 to collect information on non-communicable diseases (NCDs) and associated risk factors (Oum et al., 2010). In addition, many surveys have been carried out to investigate specific health conditions and risk factors among different population groups, often by government and nongovernmental institutions, such as ministries, health development partners and donor agencies. For example:

- A tuberculosis prevalence survey was conducted in 2011 by the National Center for Tuberculosis and Leprosy Control (CENAT, 2012);
- The Ministry of Education, Youth and Sport commissioned the Cambodia Most At Risk Young People survey in 2010 (KhanA, 2010);
- A National Adult Tobacco Survey was conducted in 2010 by the NIS (NIS & WHO, 2011).

5.1.4 The organization of occupational health services

Cambodia is still at an early stage of industrial development, with only a small formal employment sector, including mainly garment- and shoe manufacturing, tobacco, fisheries, timber, rubber, paper, rice-milling and other food-processing industries. Injuries and workplace-related fainting (especially in the garment industry) constitute the most frequent occupational accidents. The Department of Occupational Safety and Health (OSH) of the Ministry of Labour and Vocational Training (MoLVT) is in charge of industrial hygiene and occupational safety. Department of OSH occupational health and safety inspectors at the MoLVT and in municipalities and provinces perform countrywide inspection visits. The inspectors are mandated to conduct technical inspections on industrial hygiene, facilitate the formation of corporate OSH networks, promote

medical check-ups for workers, establish HIV/AIDS task forces or committees in enterprises, implement workplace OSH measures, provide guidance on OSH regulations, and facilitate containment strategies in case of outbreaks of communicable diseases. In addition, employers are legally obliged to provide medical care to their workers, including referral to hospitals when necessary (MoLVT, 2011).

5.1.5 The organization of preventive services

5.1.5.1 Immunization

The Expanded Program on Immunization (EPI) is managed by the MOH National Immunization Program with the aim of improving child health and child survival and to support the achievement of the Millennium Development Goals on poverty reduction (MDG1) and childhood mortality (MDG4). Immunization services are offered free of charge at all public health facilities. Health Centres provide not only on-site vaccination for children and mothers, but also conduct monthly outreach activities to remote villages within their catchment area according to MOH Outreach Guidelines.

The government shares EPI costs with development partners, in particular the GAVI Alliance, UNICEF, JICA and WHO (NMCHC, 2011). The cost of delivering immunization services is expected to reach almost US\$ 9 million by 2015.

Introduced first in 1986 with funding from UNICEF, EPI was extended to all provinces in 1998. Initially, routine EPI targeted infants for five diseases (polio, tuberculosis, diphtheria, pertussis and measles). Intensified polio eradication campaigns began in 1995 and Cambodia was certified as polio free in 2000. In 1999, pregnant women received additional immunization against tetanus. Between 2000 and 2005, hepatitis B vaccine was successfully introduced as DPT-HepB combination vaccine (diphtheria, pertussis, tetanus, hepatitis B) into the national programme as a four-dose schedule, including the first dose (with monovalent hepatitis B vaccine) to infants less than seven days old. In 2010, a pentavalent vaccine, including the above plus *Haemophilus influenzae* serotype b vaccine (Hib), was introduced nationally, and Japanese encephalitis vaccine was introduced in three provinces. Routine catch-up campaigns were intensified after 2010 to eliminate measles and neonatal tetanus.

5.1.5.2 Communicable disease

The MOH national centres are also active in the prevention of communicable diseases through the production of education material, TV spots, and other disease surveillance and control activities. Preventive activities, carried out primarily by national programmes, include the distribution of Insecticide Treated Bed Nets (ITNs) for malaria and vector control for dengue fever.

5.1.5.3 Noncommunicable disease

The prevention and control of NCDs and associated risk factors (including injuries and traffic accidents) are managed by the MOH Department of Preventive Medicine in collaboration with Provincial Health Departments and ODs and the public Health Centres provide disease prevention and control services for both communicable and noncommunicable diseases. Antenatal care and family planning services are provided by the National Maternal and Child Health Center (NMCHC) in Phnom Penh and at all public health facilities, which also manage immunization services.

According to the MPA, government Health Centres provide services, including: measuring blood pressure; education and treatment of uncomplicated hypertension and referral of complicated cases to Referral Hospitals; detection and referral of patients with diabetes to special clinics for diagnostic confirmation and treatment; detection of early signs/symptoms of breast and cervical cancers, education on breast self-examination and risk factors for breast and cervical cancers, and the need for cancer screening; raising awareness in the community on NCD risk factors; identification and referral of chronic diseases; risk-factor education, such as smoking cessation; in collaboration with relevant partners to raise community knowledge on healthy living, including physical exercise, diet, alcohol moderation, and schoolchildren education (MOH, 2007b).

Many nongovernmental organizations (NGOs) also provide preventive services targeting specific conditions at the community level. The Reproductive and Child Health Alliance (RACHA) has worked since 2003 “to improve the lives of individuals and communities in Cambodia by making essential health services including reproductive health, newborn and child health, nutrition, clean water, sanitation, hygiene, infectious diseases, HIV/AIDS and other related services safe, available, accessible, and sustainable” (<http://www.racha.org.kh>, accessed 26 February 2014).

The Patient Information Centre (known by the Khmer acronym, MoPoTsyo) operates a peer education network in 11 ODs and provides care for people with diabetes and hypertension.

5.1.6 Health promotion and education

Health promotion and education for malaria, tuberculosis, HIV/AIDS and EPI is provided through MOH National Programs and National Centers. The National Centre for Health Promotion (NCHP) focuses on community-level interventions that help to improve the environment in which people live, learn and work. The NCHP undertakes research and development of health-promotion policies and strategies at the national level in partnership with health workers at national, provincial and village levels, and from 2005 to 2011 managed, for instance, a Behaviour Change Communications project jointly supported by the European Commission and UNICEF (<http://www.nchp.gov.kh>, accessed 25 February 2014).

5.1.7 National screening programmes

Screening for and control of HIV has been a major success in Cambodia. Introduced in the mid-1990s, an HIV voluntary confidential counselling and testing (VCCT) programme has reduced HIV incidence and provided early treatment and care. The programme runs at Referral Hospitals, Health Centres and community sites. Trained laboratory technicians, working either at the VCCT site or at laboratories attached to Health Centres and Referral Hospitals, perform HIV testing with two different rapid tests.

Apart from HIV testing, no other screening programmes are so far available at the national level. Screening for cervical cancer has occurred previously through a few private practitioners and NGOs (including the Reproductive Health Association Cambodia (RHAC) clinics and Marie-Stopes International). Visual inspection with acetic acid (VIA) screening and on-site treatment began in 2013 at selected Health Centres following training of midwives the year before. Piloting of mass screening of women aged 30–49 years for cervical cancer in one district was planned for March 2014 (Professor Prak PR, Director of MOH Preventive Medicine Department, personal communication, 27 February 2014).

5.2 Patient pathways

Health-care-seeking pathways vary little across the country, though there are clear differences between rural and urban areas. Change is taking place slowly, and in contradictory directions due to the nature of the health market: utilization of public health facilities is increasing due to a reduction of financial barriers for the poor and a slow increase in quality of care; at the same time, there is a rapid growth in services from private providers (which are the first point of service for most people).

For the public health system:

- Health Centres are the first point of contact and act as gatekeepers to higher levels of care, providing (i) maternal, neonatal and child health services, mother and child immunization, nutritional education, integrated management of childhood illness, birth spacing, screening for breast and cervical cancer, safe abortion; (ii) treatment and prevention of communicable diseases, including diarrhoeal diseases, sexually transmitted infections (STIs) and HIV/AIDS, tuberculosis and leprosy, malaria and dengue fever, avian influenza; (iii) treatment and prevention of NCDs and injuries, including high blood pressure, diabetes, breast and cervical cancers, oral health, mental health, eye problems, small surgery; and (iv) outreach activities (once a month per village) (MOH, 2007b).
- District Referral Hospitals provide treatment for referred cases, complicated tuberculosis cases, medical, surgical and obstetrical emergency cases, some surgery, MCH services, provision of X-ray, ultrasound and laboratory services, and rehabilitation services (MOH, 2006).
- Provincial Hospitals and National Hospitals provide the highest-level CPA package in provinces and nationwide, respectively – national hospitals include general hospitals and hospitals specialized in paediatrics, MCH and tuberculosis.

However, the referral system rarely works as intended and most patients seek health care from multiple sources. Critically ill or injured patients usually bypass primary care facilities and seek care directly at public or private hospitals without referral. For lesser illness, most rely first on home remedies (especially in rural areas) or self-prescribed medication from local pharmacies or unlicensed drug sellers; people commonly choose to consult private providers ahead of public facilities; and if the patient's condition deteriorates, private providers generally refer them

to a government hospital. Recent studies have identified care-seeking pathways in the case, for example, of dengue fever in children and revealed attitudes about feelings of trust in health-care providers, both public and private (Box 5.2) (Ozawa & Walker, 2011).

Box 5.2 Two studies on care seeking and trust in providers

The 2006 study of dengue in children was carried out in two villages in the province of Kampong Cham (Khun&Manderson, 2007).

- The most frequent first treatment consisted of self-medication, and a few mothers used only traditional home remedies.
- The next step, when children failed to improve, was to visit a private clinic or arrange a home visit with a private practitioner.
- Only a minority sought care at Health Centres; a few bypassed the Health Centre and attended the Referral Hospital directly.
- When the treatment prescribed by private practitioners failed, the most common next step was to access a Health Centre or Referral Hospital.
- The authors of the study explained that women moved between sectors and sites of care according to circumstances, including availability, accessibility and affordability of service.

A more recent study found that trust in public and private providers in a rural location affected health-care-seeking behaviour, with very different results (Ozawa & Walker, 2011).

- Public providers were trusted for being honest, sincere, having good medical skills, not “bad-mouthing” people, explaining the status of disease, and having an effective referral system.
- Private providers were trusted for being friendly, gentle and sympathetic, having good personal interactions, being easy to contact and visiting patients’ homes, and allowing patients to owe them some money.

5.3 Primary ambulatory care

There are no formal constraints on patients’ choice of provider. A recent World Bank study found that in rural areas 65% of patients sought primary care through the private sector, 20% in the non-medical sector and 15% in the public sector (World Bank, 2013c). Private providers deliver a major proportion of primary health care, often through self-medication at licensed and unlicensed drug sellers or with government health staff working privately (dual practice). In the absence of a family

doctor system or a compulsory referral system, patients using the public sector have direct access to ambulatory services at Health Centres and Referral Hospitals. However, adequate care is not always available.

Under MOH guidelines, Health Centres require a staff of 8–11 health personnel, including at least one physician or physician assistant, two secondary nurses and one or two secondary midwives. However, many Health Centres, especially those in remote areas, are not able to deliver the expected health services, mainly due to shortages of qualified staff. Health Centres commonly have no physician or physician assistant; they are usually staffed by primary nurses and midwives. Health staff must practise privately to supplement inadequate salaries, working conditions are poor, and there are shortages of drugs and medical supplies (Chhea, Warren & Manderson, 2010). For smaller and more remote communities (at a distance of more than 15 km from a Health Centre), there may be a Health Post, usually with no more than two staff, a nurse and a secondary midwife (MOH, 2007b).

There has been an increase in the use of public health facilities as a number of interventions designed to strengthen health services take effect (through staff incentives, demand-side subsidies and reorganization into SOAs – see Chapter 2). The MOH reports that utilization rates at Health Centres and Referral Hospitals increased for all age groups from 0.45 to 0.63 contacts per person per year between 2008 and 2012 and for children under 5 years of age from 1.1 to 1.5 contacts per person per year (MOH, 2013). The main causes for consultations at Health Centres are acute respiratory infections, diarrhoea and dysentery.

5.4 Specialized ambulatory care/inpatient care

Secondary and tertiary services are provided mainly by public hospitals and some private clinics and hospitals. Access to private hospital care is greatest in urban areas – the most common treatment sought is maternal health care. Other than dual practice, there is no official cooperation between public and private providers (even though most private hospitals and clinics are owned and run by public health staff).

5.4.1 Organization and provision of services

In the public sector, Referral Hospitals provide specialized ambulatory care and inpatient care as stipulated by the CPA. CPA-1 services include basic obstetric services and surgery without general anaesthesia; CPA-2

services include emergency care, surgery with general anaesthesia, intensive care and other specialized services, such as blood transfusion, ear, nose and throat, ophthalmology and orthodontic services; CPA-3 services involve a higher volume of activities and various specialized services. According to the MOH (2013), the number of public hospital beds increased from 8986 in 2008 to 12 651 in 2012, with an increase in the average bed occupancy rate from 61% in 2008 to 81% in 2012.

In principle, public health care delivery has been organized to meet population needs. In practice, a number of critical challenges remain in delivering quality health care to those in need. A major proportion of health resources are consumed at national level (see Chapter 3). Even so, the quality of medical care and of service delivery requires considerable further improvement even at National Hospitals (see section 7.4.3 for further details). More wealthy patients commonly seek hospital care in neighbouring countries. There is no single cause of the relatively low quality of care, and the challenges include physical infrastructure, equipment and medical supplies, and the competencies of health care providers. The situation is similar at provincial and district level, where the wide geographical distribution of referral hospitals is not matched by the extent and quality of adequate service delivery. Rather than extended waiting times for hospital care, the issue is one of financial access for those who cannot afford the often onerous patient charges.

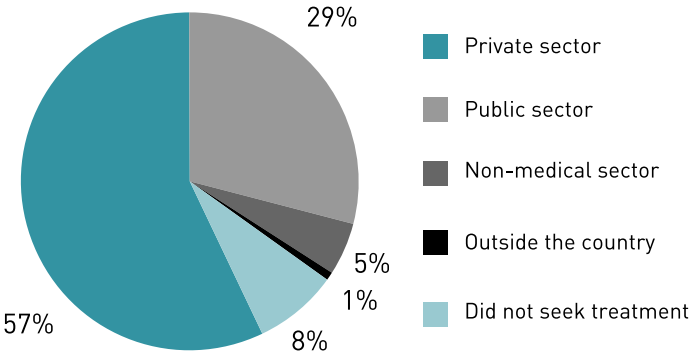
5.4.2 Accessibility, affordability, adequacy and quality of care

The low utilization of the public health facilities remains a concern. Results from CDHS 2010 show that only 29% of ill or injured patients sought care first in the public sector, while 57% turned to private providers (see Figure 5.1). Distance to facilities, transportation costs, staff unavailability and attitudes, long waiting times, drug shortages, and mistrust were the main factors that discouraged patients from accessing public facilities. While the geographic coverage of public hospitals is mostly complete, the costs of transport to facilities, the opportunity cost of time spent at facilities, user fees and ancillary costs all create barriers to access. In recent years, a quality assessment has been required for the commencement of new Health Equity Funds at government facilities, which cover a quarter of the total population, and also provide staff incentives for improved performance, though they do not require a performance assessment prior to provider payment (see section 3.3.1).

In an attempt to improve quality of care at public health facilities, the MOH introduced a Policy on Quality in Health in 2009, which stipulated minimum standards for quality health care and a Health Facility Assessment Tools. Referral Hospitals and Health Centres must undergo annual assessments in line with the MPA and CPA to ensure appropriate medical supplies, basic equipment and sufficient infrastructure. A Client Satisfaction Tool and a Checklist for Monitoring Infection Control have also been developed.

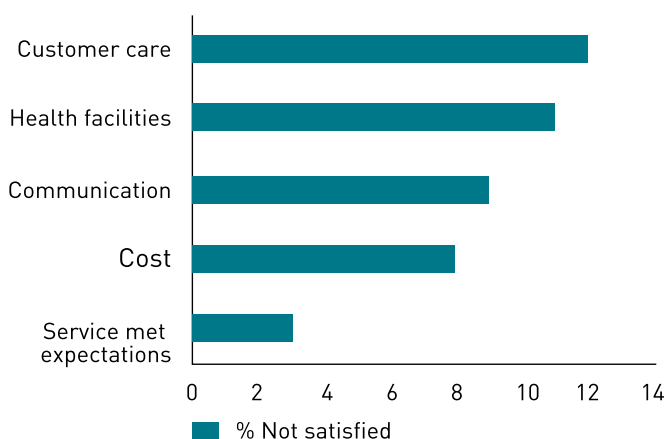
Findings from the first national survey on client satisfaction with public health services in 2012 revealed a surprisingly high level of satisfaction with government services (Eng & Depasses, 2012) (Figure 5.2). With the participation of 3723 patients from three out of eight National Hospitals, 29 out of 82 Referral Hospitals in 23 provinces, and 263 out of 1024 Health Centres, the survey used a composite Client Satisfaction Index (CSI) to measure customer care, facilities, communication, cost and satisfaction with services.

Figure 5.1 Utilization of in- and outpatient services, by sector, 2010



Note: Results vary slightly from the World Bank studies mentioned in section 5.3.
 Source: CDHS 2010 (NIS, 2011); data reflect usage in the 30 days prior to the survey.

Figure 5.2 Results from the first Client Satisfaction Survey, 2012



Source: Eng & Depasses (2012).

5.4.3 Private health-care providers

Private providers have grown rapidly in scope and number. However, a large proportion of the 5500 licensed private health-care providers in 2012 (see section 4.1.1) were small practices or one-person enterprises. The relatively small number of formal private for-profit providers has been classified into three types of facility:

- Outpatient clinics providing clinical consultations and ambulatory treatment – these range from general practitioners to specialist consultations;
- Clinics with outpatient and inpatient services with at least 10 beds providing various medical specialities and diagnostic services;
- Polyclinics with outpatient and inpatient services with at least 20 beds providing a wide range of specialized services.

A frequently accessed and yet inadequate source of treatment is private pharmacies. Some private providers offer home-visiting services, including basic medical care and deliveries, especially in rural areas. Most of the private providers with formal training, including medical doctors, nurses and midwives. This dual practice reflects health workers' preference for their private practice as a more lucrative source of income, often involves conflict of interest, and leads to absenteeism (see section 4.2.2). The quality of care of some private providers is questionable and sometimes harmful, and is characterized by improper prescriptions and unnecessary injections and infusions.

Generally, the regulation and monitoring of the private sector is inadequate. The registration of all private medical and paramedical facilities was made compulsory under a law adopted in late 2000, though compliance has been weak. The MOH reports that all private health facilities/providers were formally licensed by 2012 (MOH, 2013). In addition, individual medical doctors, assistants, dentists and pharmacists are required to register with their respective professional Councils to be eligible for private practice.

National guidelines on best practice for particular diseases or interventions – such as safe motherhood, malaria, tuberculosis and HIV/AIDS – have been developed and made available to both the public and private sectors. In some cases, such as malaria, tuberculosis or immunization services, public–private partnerships (PPPs) have been developed to standardize quality of care and establish pathways between the public and private sectors, though they remain at an early stage of development.

5.5 Emergency care

Emergency care is provided at both public hospitals and private clinics, often through outpatient departments. A patient with a trauma, for example from a road accident, may be taken to either a public or a private facility; transport is provided either by personal means or by public or private ambulance. The patient may be referred by a primary care provider, or bypass primary care and go directly to the hospital emergency department. At the emergency department, the patient usually has access to medical doctors, either physicians or surgeons, who provide treatment. Referral Hospitals at district level usually refer more serious cases to Provincial or National Hospitals.

Phnom Penh has a reasonably well-established emergency system, including national hospitals equipped with ambulances and well-trained staff. The coverage of emergency care services is less adequate at the OD level. Radio communication connects all Health Centres in an OD with staff on duty at the Referral Hospital; ambulance services, which are less numerous and not as well equipped as in Phnom Penh, cover the vicinity of the Health Centre as far as road conditions allow. Critically ill or injured patients are sometimes transferred abroad if they can afford the costs, especially to Bangkok, Singapore or Viet Nam.

5.6 Pharmaceutical care

Public access to pharmaceuticals is widespread, through the large network of private pharmacies, drug stores and informal drug sellers. Some private pharmacies have qualified staff and appropriate drug dispensing. Drugs are commonly provided over the counter without prescription. At public Health Centres and hospitals, drugs are distributed to patients nominally free of charge, but supplies are often inadequate and the range of drugs limited. Patients at public facilities often purchase additional drugs from the private market. Enforcement of regulations on the quality and appropriate use of drugs is difficult.

In the public sector, essential drugs are provided to public health facilities on a quarterly basis through the MOH Central Medical Store (CMS) according to the MPA and CPA essential drugs lists. There are few medical manufacturers in the country and most drugs are imported. Vaccines for the public sector are procured through UNICEF, though procurement of vaccines also takes place in the private sector. At public facilities, qualified pharmacists and assistant pharmacists work under the direction of hospital or Health Centre directors, while the MOH controls and monitors the quality of pharmaceuticals. Drug shortages occur particularly at Health Centres, mainly due to obstacles in procurement and distribution.

Private pharmacies and drug stores procure pharmaceuticals from either from local manufacturers or drug companies. These various drug sellers (qualified and unqualified) often serve as the first point of contact with the health system, frequently provide general medical advice, and generally sell drugs (including antibiotics) without medical prescription. Private clinics also sell drugs, usually at more than the average market price. Circulation of counterfeit or substandard drugs is a concern, though the MOH claims the extent of the problem has been reduced (MOH, 2013). A recent study of drugs provided by private providers found that 14.5%, 4.6% and 24.6% of the samples taken were unacceptable in quantity, content uniformity and the dissolution test, respectively (Yoshida et al., 2014). Shortcomings in rational drug use have led to antibiotic resistance and frequent delays in receiving adequate care.

5.7 Rehabilitation and long-term care

A large part of the ongoing need for rehabilitation and long-term care derives from the period of internal conflict and its aftermath in the 1970s and 1980s. The original conflict and trauma caused by widespread landmine prevalence have been major causes of physical disability.

The Ministry of Social Affairs, Veterans and Youth Rehabilitation is responsible for rehabilitation and vocational training of people with disabilities, and the Disability Action Council is a semi-autonomous body under the Ministry that provides technical support to disability services. Various NGOs and the International Committee for Red Cross run 11 centres for physical rehabilitation nationally. The Cambodian School for Prosthetics and Orthotics provides training for physiotherapists; there is also a Cambodian Association of Prosthetists and Orthotists and the Cambodian Physiotherapy Association.

Considerable progress has been made in landmine clearance, with a consequent decline in landmine-related trauma. According to the CDHS, fatalities due to landmines decreased from 0.7% of all injury-related deaths in 2005 to 0.2% in 2010. Two thirds of injuries and deaths from accidents were due to traffic accidents; 3% of accident-related injuries and deaths were the result of some form of violence; and an additional 2% were the result of gunshot wounds.

Other vulnerable groups are those with high risk of exposure to natural disasters (including seasonal flooding) and the urban poor, as well as orphaned and abandoned children. Violence and substance abuse among adults and young teenagers have also become of concern. These vulnerable groups commonly face barriers to accessing health and social services (Hea et al., 2010). Despite the activities of the various government and NGO associations, there is no continuum of care for people with disabilities following discharge from hospitals and these people commonly rely on community and family support.

There are no long-term care institutions for the aged, disabled or mentally ill (outside of public hospital psychiatric care). Informal care arrangements are often organized through extended family networks or through local NGO support. This presents another health and social policy challenge for Cambodia in the coming years.

5.8 Oncology and palliative care

Despite a significant rise in life-threatening NCDs, such as cervical and liver cancer (the latter of which makes up 20% of all male cancers), oncology and palliative care are extremely limited. The government Khmer–Soviet Friendship Hospital is the only recognized cancer centre in Cambodia, though the autonomous Calmette Hospital has provided cancer services since 2012 and intends to establish a national oncology centre by 2016. There are no haematology, chemotherapy, nuclear medicine and hospital palliative care units. There are no national screening programmes for cervical or breast cancers (see section 5.1.7) and no cancer prevention programmes apart from vaccination for hepatitis B for newborns. Cancer patients therefore commonly present with a late stage of disease (roughly three quarters present with stage three or four). Oncology was, however, recognized in 2010 as a medical specialty and training commenced at the University of Phnom Penh (Eav et al., 2012).

5.9 Mental health care

The incidence of mental health conditions across the population is not well documented but results largely from the earlier civil conflict and resulting social trauma. A 2001 household survey of psychiatric morbidity found that 42% of respondents met the criteria for depression, 53% for anxiety and 7% for posttraumatic stress disorder (Browse & Nancy, 2010). The 2013 MOH National Health Congress Report indicated that 50 302 mental health cases had been treated at public outpatient health facilities in 2012 and 3088 mental health and substance abuse patients had been hospitalized (MOH, 2013).

Located at the Kandal Provincial Hospital, the only psychiatric unit in Cambodia before 1975 (with only a few psychiatrists) was closed under the Khmer Rouge regime and no psychiatrists survived. It reopened in the late 1990s with support from international NGOs. At that time too, mental health counsellors who had received training from the Harvard Program in Refugee Trauma provided mental health services to Cambodians living in refugee camps along the Thai border.

In the mid-2000s, the MOH initiated the National Program for Mental Health in collaboration with health development partners, NGOs, local authorities and communities to address mental health and substance abuse. The programme focuses on: (i) expanding coverage of improved

quality services (to make mental health and substance-abuse services available at all Referral Hospitals and Health Centers), and (ii) improving clinical skills and competency of the mental health workforce.

The MOH has integrated mental health programmes into the public health system, and Referral Hospitals are expected to provide mental health and substance-abuse services. Some Health Centres are also able to provide primary mental health care. By 2010, there were 39 psychiatrists, 45 psychiatric nurses, 170 basic mental physicians and 233 basic mental nurses appointed at national and provincial hospitals. Between 1998 and 2012, a total of 43 psychiatrists graduated from the University of Health Sciences. In addition, village volunteers and staff of the Ministry of Social Affairs were trained to provide counselling and social work. Nevertheless, the supply of mental health professionals, which is concentrated in Phnom Penh and larger towns, remains inadequate. For instance, each health professional working at the Khmer–Soviet Friendship Hospital has to manage 30–40 patients a day.

The inadequate level of formal services means that patients often prefer to consult a monk or traditional healer before seeking treatment at a health-care facility. For monks, the treatment process involves prayer and the application of holy water. Among traditional healers, the Kru Khmer provide traditional medicines or magic and the Chol Rup Arak use spirit possession to communicate with the spirits or devils that are supposedly the cause of mental disturbances (see section 5.13).

5.10 Dental care

All Referral Hospitals in the public health sector provide basic dental care services, including dental extraction, basic fillings and various preventive services. User fees for dental care apply to all patients, with exemptions for the poor. Prosthodontic and orthodontic services are available only at Provincial and National Hospitals. The dental clinic of the University of Health Sciences in Phnom Penh also provides dental implants. Dental surgeons graduate from public and private universities in Phnom Penh. Many dental nurses have also been trained to provide dental care at community level, and several hundred medical nurses have also been trained to provide basic oral health care in rural areas. In the private sector, dental clinics are concentrated in Phnom Penh and other large towns and offer a wide range of

dental care services, including prosthodontics, orthodontics and dental implants. At present there are tooth-brushing programmes with fluoride toothpaste implemented at some schools, but there is no programme for water fluoridation (Hak, 2011, 'Public uses of fluorid for the prevention of dental caries in Cambodia', unpublished paper, cited in Peterson & Phantumvanit, 2012).

5.11 Complementary and alternative medicine

Traditional medicine is used, most often in rural and remote areas. The most recent CDHS demonstrated that use of traditional healers is on the decline, as only 0.5% of the population consulted a Kru Khmer first with their last illness episode (NIS, 2011).

Traditional healers (Kru Khmer) are the most common providers of traditional medicines, followed by Buddhist monks and mediums (Kru Chol Ruup) and each commune has at least one pagoda (temple) with many Buddhist monks. Among other remedies, traditional healers use herbal medicines, which are also available from shopkeepers and traditional-medicine supply stores.

Herbal medicines are not included in the national list of essential medicines and are not available at public health facilities (MOH, 2013). However, the training and use of traditional birth attendants (TBAs), commonly with the assistance of local and international NGOs, to assist in extending maternal health care has been common. TBAs have been trained to identify complications and refer women to formal health facilities when care is required.

At the MOH, the National Centre of Traditional Medicine is responsible for the improvement of traditional medicinal practices and products. The Centre has collaborated with the Cambodian Traditional Medicine Organization to conduct short-course training programmes for traditional practitioners and to publish books, booklets, monographs and the formulae for the use of different medicinal plants and their uses. The Centre also supervises traditional medicine practices, in particular through supervisory visits (43 visits in 2012) to supply stores and meeting with traditional healers in the provinces. Since 1998, the MOH has required traditional medicine practitioners to obtain a certificate when opening a shop for traditional medicines or providing traditional medicine services. However, there is no regulation of health claims or claims about nutrient content in the sale of herbal medicines.

5.12 Health services for specific populations

Health services for military personnel are provided by the Ministry of National Defence through its hospitals and health staff. Health services for prisoners are provided primarily by trained nurses. Prisoners who become critically ill are transferred to public health facilities.

6 Principal health reforms

Chapter summary

A longer-term process of health reform began in 1995–96 when the Ministry of Health (MOH) initiated the Health Coverage Plan and introduced the Health Financing Charter to strengthen the supply of services. Shortly afterwards, community-based health insurance schemes and Health Equity Funds (HEFs) were introduced and scaled up to provide financial access to public health services by the poor. Policies and strategies were also developed in the area of Sexual and Reproductive Health in order to reach the health-related Millennium Development Goals. More recently, reforms in the management and delivery of district-level health services have used internal contracting methods to improve the efficiency, quality and efficacy of government health services.

After 2000, the reforms focused on strengthening the government's capacity to manage health service delivery and to build a common vision for the health sector. The latter was initiated through the first Health Strategic Plan 2003–2007, in which a Sector-Wide Approach was initiated and later modified as Cambodian Sector-Wide Management, to address health issues in a comprehensive way in support of MOH objectives outlined in the Health Strategic Plan. The subsequent, second Health Strategic Plan covers the period 2008–2015. Implementation of the Strategic Plans was supported by two consecutive Health Sector Support Programs 2003–2007 and 2009–2015, together with the broader government decentralization and deconcentration program and public service delivery policy.

A supply-side financing scheme, the government-funded Midwifery Incentive Scheme, was introduced in 2007 to increase institutional deliveries. This scheme contributed significantly to a rapid decrease in maternal mortality in the following years, which indicates the value of strong political commitment to improving maternal health. To strengthen the management of health service delivery at district level,

internal contracting arrangements have been put in place through the establishment of Special Operating Agencies in 2009. On the demand side, the HEFs have become a national programme. under the MOH in line with the government's Policy on Poverty Reduction.

Universal health coverage has been identified as the framework for the continuation of the health financing reform process into the future. The principles of universal coverage are explicitly articulated in the current draft of the Health Financing Policy.

6.1 Analysis of recent reforms

The process of reform in the public health system, which began in the 1990s, has both been sequential (focusing first on expanding the supply of services followed by reforms on the demand side) and included a wide variety of reforms carried out simultaneously. The early reconstruction of the health system relied heavily on financial and technical assistance from bilateral and multilateral development partners, including assistance in service delivery (provided especially by international NGOs). The reform process has focused on expanding the coverage of basic health services, providing improved financial access to quality health services in the public sector, and improving the efficiency and effectiveness of health-service management at district level. Table 6.1 provides a chronological view of the main health system reforms. This Chapter focuses on the reforms implemented from 2000, which have taken place mainly in the areas of planning and management through consecutive Health Strategic Plans, carried out together with innovative health financing interventions aimed at improving equity and access to public health care.

Cambodia has received considerable support from Development Partners, which have helped collectively to shape health policy-making. The openness of the government to international support provided the opportunity for trialling a range of innovations. The partnership between development partners and the MOH has had a significant impact on the development of the public health system. The health reform has unfolded in paralleled with the broader National Public Administrative Reform process, which aims to improve public service delivery efficiency, effectiveness and accountability.. This section considers three themes: the catalyst or motivation for the reforms, development process for the reforms, and the implementation of the reform strategies.

Table 6.1 Selected key country events

Year	Key reforms and events
1995	Development of the Health Coverage Plan as a framework for developing the health system infrastructure, based on population and geographical criteria.
1996	<p>Introduction of the Health Financing Charter, which paved the ways for implementing user charges at public health facilities, with exemptions for the poor; fee revenues are managed locally according to inter-Ministerial Prakas of MOEF and MOH.</p> <p>Commencement of the Asian Development Bank Basic Health Services Project, which carried out civil works to construct and renovate health facilities, train health personnel to increase their capacity, including health service management, and implement a pilot programme for contracting health services, including contracting-in and contracting-out.</p>
1999	Piloting of the external contracting model of service delivery during 1999–2003. This built on public–private partnership in health service management by contracting international NGOs through the MOH, encompassing three main issues: (1) decentralization, (2) use of regulated markets, and (3) harnessing the emergence of private sector and civil society.
2000	<p>Sector-Wide Management (SWiM) framework implemented by MOH and health partners.</p> <p>The first Health Equity Funds initiated in two districts (Sotnikum and Bantheay Meanchey) and in Phnom Penh.</p>
2002	Updating of the 1995 Health Coverage Plan to improve the geographic coverage of services.
2003	Adoption of the <i>Health strategic plan 2003–2007</i> and commencement of the first Health Sector Support Program(2003–2008), with the principal objectives of increasing MOH service-delivery capacity and performance, targeting the poor (particularly in rural areas), and reducing the impact of infectious diseases and malnutrition.
2006	<p>Adoption of the <i>National Strategic Development Plan 2006–2010</i>, including priority strategies, actions and targets for the health sector.</p> <p>Adoption of the <i>National Strategy for Reproductive and Sexual Health in Cambodia 2006–2010</i>. This strategy focused on: service delivery, finance, human resources, information and policy/governance.</p>

Year	Key reforms and events
2007	<p>Joint Annual Performance Review carried out by the MOH and development partners to assess the implementation of the Health Strategic Plan and the Health Sector Support Program 2003-2007.</p> <p>Introduction of the Midwife Incentive Scheme as a government-funded, supply-side incentive paid to midwives for facility-based deliveries.</p>
2008	<p>Development of the second <i>Health strategic plan 2008-2015</i> and preparation of the second Health Sector Support Program 2009-2015.</p>
2008	<p>Introduction of Special Operating Agencies Implementation Guidelines providing OD managers, Health Centres and Referral Hospitals with greater autonomy using internal contracting with performance-based payment and conversion of some ODs to SOA status.</p> <p>Implementation of HEF Guidelines to establish MOH authority over the growing number of HEFs operated in collaboration with local and international NGOs as implementers and contracted by the MOH.</p> <p>Adoption of the government's Organic Law, which provided the framework for the decentralization and deconcentration reform.</p> <p>Adoption and implementation of the second <i>Health strategic plan 2008-2015</i> focusing on five strategic areas: health service delivery, health financing, human resource development, health information system and health system governance.</p>
2010	<p>Introduction of the Fast Track Initiative for reducing Maternal and Newborn Mortality, focusing on six components: (1) assuring universal access to emergency services by improving and expanding emergency obstetric and newborn care; (2) expansion of availability of skilled birth attendance; (3) improvement of family planning through availability of modern contraceptive methods; (4) improvement of availability of abortion services in public health clinics along with regulative strengthening.</p>
2011	<p>Mid-Term Review of Health Strategic Plan 2008-2015.</p>
2013	<p>Drafting of the National Health Financing Policy.</p>

6.1.1 Catalyst for reform: the Health Strategic Plan

Initial impetus for the health reform came from the Strengthening Health Service programme 1992–2001, through which development partners provided assistance in the development of health policy and reform strategy. Over three phases, the programme aimed to bring development partners together to improve MOH organizational capacity. It focused on particular weaknesses in the health system, addressing issues such as insufficient health infrastructure and inadequate technical and managerial skills of MOH staff. The programme provided the platform for the introduction of innovative measures – including coverage of services, the sector-wide management (SWiM) approach, contracting of services, and Health Equity Funds (HEFs) – and was consolidated through the development of the Health Strategic Plans in 2003–2007 and 2008–2015.

6.1.1.1 Health facility coverage and financing

In 1995, the MOH developed the Health Coverage Plan (Grundy et al., 2009) to guide the development of health infrastructure, mainly health centers and referral hospitals, within Operational Districts (ODs) according to population and accessibility criteria (see section 4.1.1). Guidelines for developing Operational Districts were developed and implemented (MOH, 1997a). The guidelines include, but are not limited to, the roles and functions, as well as organization and management structures, of the OD, including District Senior Management Team, District Health Technical Advisory Team. The National Health Financing Charter was approved in 1996. The Charter allows public health facilities to levy nominal user fees with formal approval by the MOH and subject to exemptions for the poor (MOH, 1997b) (see section 3.3). The Charter was accompanied by guidelines for managing Health Centres (MOH, 1997c).

6.1.1.2 Sector-Wide Management

A form of Sector-Wide Approach (SWAp) was introduced and envisaged a new dynamic partnership between the MOH and development partners, who would collaborate and coordinate around sector-wide planning and financing of health services. The SWAp called for development partners to support and work within a single set of national goals, objectives and strategies, a single budget (encompassing all financing sources) to support plan implementation, and, as appropriate, common systems for planning, budgeting, financial management, monitoring and evaluation (M&E).

Subsequently, the MOH adopted a modified version of sector coordination arrangements which it called sector-wide management (SWiM) and which

refined the features of the initial SWAp concept. First, under MOH leadership, all of the development partners – national and international (including NGOs and the commercial private sector, external development partners [DPs] and MoH staff) – would work together within a common strategic framework to achieve national goals and objectives, as articulated in MOH’s first Health Strategic Plan 2003-2007. Secondly, the pooling of funds and the adoption of common implementation arrangements, especially those linked to national systems, was not mandatory, thus providing more flexibility to development partners who might otherwise want to be involved.

6.1.1.3 Health Strategic Plan 2003–2007

The Health Strategic Plan is a strategic management tool used to guide the MOH and health institutions, and concerned stakeholders, and to focus their energy on common goals. The Health Strategic Plan marshals the available resources for the most efficient and effective use, to put health strategy into institutional action at all levels of the health system for the achievement of defined goal and objectives. The MOH adopts a participatory and consultative approach to the plan development. The Health strategic plan 2003–2007, formulated detailed strategies in six priority areas: health service delivery, behaviour change, quality improvement, human resource development, health financing and institutional development. These six priority areas were supported by 20 strategies, of which eight were selected as core strategies (see Box 6.1). The Plan was launched in August 2002.

To support the implementation of the Health Strategic Plan, the Asian Development Bank (ADB) and the United Kingdom Department for International Development (DFID), together with the World Bank’s International Development Association and the United Nations Population Fund (UNFPA), cooperated in developing the Health Sector Support Program 2003-2007. The Project focused on four main areas:

- The development of affordable and accessible basic curative and preventive health services;
- The strengthening of institutional capacity to plan, manage, finance and implement health-sector strategic policies and to manage resources effectively;
- Increasing the utilization of health services;
- Controlling and mitigating the effects of infectious disease epidemics and malnutrition.

Box 6.1 Core strategies of the *Health Strategic Plan 2003–2007*

Health service delivery

1. Further improve coverage and access to health services, especially for the poor and other vulnerable groups, through planning the location of health facilities;
2. Strengthen the delivery of quality basic health services through Health Centres based upon minimum package of activities;
3. Strengthen the delivery of quality care in all hospitals, especially for obstetric and paediatric care, through measures such as the complementary package of activities.

Behavioural change

4. Change for the better the attitudes of health providers to communicate with consumers, especially regarding the needs of the poor, through sensitization and building interpersonal communication skills.

Quality improvement

5. Introduce and develop a culture of quality in public health, service delivery and their management through the use of MOH quality standards.

Human resource development

6. Increase the number of midwives through basic training and strengthen the capacity and skills of midwives already trained through continuing education.

Health financing

7. Ensure regular and adequate flow of funds to the health sector, especially for service delivery, through advocacy to increase resources and strengthening financial management.

Institutional development

8. Organizational and management reform of structures, systems and procedures in the MOH to respond effectively to change.

6.1.1.4 Contracting of service delivery

The contracting of health-service delivery was first piloted by the MOH in 1998 under the Basic Health Services project supported by an ADB loan. The MOH contracted international NGOs to manage the delivery of health services by public health providers in five ODs (Bhushan, Keller & Schwartz, 2002). The aims of the pilot, which was termed external

contracting, were to improve community participation, to implement a pro-poor orientation to service delivery, and to increase the flexibility, innovativeness and commitment of health staff. The pilot occurred within a changing social, political and economic context in which the private market had strengthened and most public health staff engaged in dual practice. Two models of external contracting were implemented: contracting-out, where an NGO contractor had full responsibility for the delivery of all health services (including hiring of staff) in accordance with the Health coverage plan and MOH technical protocols; and contracting in, where the NGO contractor provided only the management of the health OD, while health staff remained civil servants and other inputs were provided by the government.

6.1.1.5 Health Equity Funds

In practice, exemption for the poor are not consistently applied across health facilities, and user fee remains financial barrier in access to health services by the poor.. Therefore, to fund health facilities for user-fee exemptions for the poor, a unique and innovative financing mechanism was piloted from 2000 in the form of OD-based Health Equity Funds (HEFs) (see section 3.3.1, Box 3.2). in order to remove financial barriers to access to Referral Hospitals, to reduce out-of-pocket expenditures and to promote patients' rights for the poor (Noirhomme et al., 2007). A HEF was defined as any mechanism or fund that is used by a third-party payer in the interest of poor people to purchase health care for the poor from health providers. Purchasers of services, widely known as HEF Operators, are independent, (MOH, 2009b). The first HEF was initiated by Médecins Sans Frontières Belgium and implemented by a local NGO in the OD of Sotnikum, Siem Reap province. The concept was also trialled independently in poor urban settlements in Phnom Penh and later expanded to several other rural locations. The HEFs subsequently evolved into more complex institutional arrangements, including pre-identification of the poor, expansion of benefit packages, refinement of contractual arrangements with providers, and development of complex monitoring and management systems with various stakeholders.

6.1.1.6 Millennium Development Goals

To reduce infant and maternal mortality rates and to achieve Cambodia's Millennium Development Goals (MDGs), several important policies and strategies were formulated to strengthen sexual and reproductive health services, including: the Policy on Birth Spacing (1995); the Law on Abortion (1997); the Strategy on Safe Motherhood (1997); the Domestic

Violence Law (2005); the national Strategy for Reproductive and Sexual Health (2006–2010); and the Cambodia Child Survival Strategy (2006). The national Strategy for Reproductive and Sexual Health provided a comprehensive framework to advocate for improved outcomes, engage in annual planning and mobilize the resources necessary for effective action; the Strategy was revised in 2008, following a mid-term review and in response to the results of the 2005 CDHS (NIS, 2006), to align it with the goals of the second Health Strategic Plan.

6.1.2 Development and process of the reform

A review of the Health Strategic Plan carried out in late 2007 identified major achievements in reaching target indicators, most notably for health financing, quality improvement and institutional development. Health service utilization, both inpatient admissions and outpatient care, had increased but remained low in comparison with neighbouring countries. Three recommendations arose from the review: (1) to geographically expand interventions for which successful pilots were completed, including contracting, HEFs and improved remuneration of health staff; (2) to further strengthen institutional roles and responsibilities across the health system, via capacity building and improved monitoring; and (3) to improve aid effectiveness by consolidating fragmented donor financing allocations through harmonization.

6.1.2.1 Health Strategic Plan 2008–15

The second Health strategic plan 2008–2015 was built on gains made through the implementation of the first plan. This second plan put an emphasis on addressing critical health system issues. These issues included but are not limited to providing integrated health service delivery; ensuring an adequate level of health financing; addressing human resource needs; strengthening health system governance; and improving health information systems. The main objectives of the plan were to improve health outcomes in the three main areas: reproductive, maternal, neonatal and child health; communicable diseases; and noncommunicable diseases. The plan was supported by the second Health Sector Support Program 2009–2015, mainly focusing on strengthening health service delivery, health financing including social health protection for the poor, and human resource development and civil work including provision of basic medical equipment.

6.1.2.2 Special Operating Agencies

From 2009, the MOH began institutionalization of contracting via the establishment of Special Operating Agencies (see section 2.4, Box 2.1). The SOAs were established through internal contracting arrangements between the units of the MOH (central, provincial and OD levels) and with the health-service providers, including performance incentives. The new arrangements replaced earlier forms of external contracting-in and contracting-out using NGO implementers. Evaluation of the early contracting pilots launched in 1998 indicated positive results in service delivery, supported by a considerable increase in resources provided to the district facilities. Under the first Health Sector Support Program, a new, hybrid form of contracting was adopted in which the MOH contracted NGOs to deliver OD services under the direction of the MOH. Following a request from the Council for Administrative Reform, the MOH adopted the new form of internal contracting under the SOA arrangement (MOH, 2008a). The aim was to improve the quality of service delivery through greater management flexibility and staff autonomy with additional motivation.

6.1.2.3 Health Equity Funds

Based on the early success of HEFs (see section 3.3.1), in 2005 the MOH produced the National Equity Fund Implementation and Monitoring Framework to achieve greater uniformity in administrative and financial settings among the different schemes, with oversight of the HEF network provided nationally through the MOH Department of Planning and Health Information. The Department works in conjunction with a single national Health Equity Fund Implementer (University Research Corporation, an American NGO active in the field since 2002), which monitors performance, audits accounts and verifies services provided by local NGO HEF Operators, which manages the funds at district level as a third-party purchaser of services provided by government health facilities.

A different, more limited form of HEF was introduced by the MOH from 2006 in a number of ODs and hospitals (see section 3.3.1), called the Government Subsidy Scheme (abbreviated as SUBO). The SUBO operates through the MOH to reimburse facilities for user-fee exemptions alone without a third-party operator. A 2011 evaluation found the administrative procedures and approvals to be cumbersome, involving three to six month delays in the payment of reimbursements, with a considerable administrative burden on facility health staff (Men et al., 2011). The SUBOs have no effective monitoring system, the eligible poor do not

receive reimbursement for food or transport costs, and health providers show little commitment due to the irregular reimbursement processes.

6.1.2.4 Millennium Development Goals

With the maternal mortality ratio still unacceptably high (472 per 100 000 live births according to the 2005 CDHS), the government introduced a new supply-side scheme to increase institutional deliveries, known as the Midwifery Incentive Scheme. Under the scheme, midwives are paid an incentive of US\$ 15 per live birth for a delivery at a Health Centre and US\$ 10 per live birth at a Referral Hospital. Although it is not fully institutionalized, in many sites traditional birth attendants receive an incentive of approximately US\$ 1.25 per referral of a pregnant woman for delivery. By 2010, the maternal mortality ratio had fallen to 210 per 100 000 live births.

6.1.3 Implementation of the reformed policies

In line with the progress of the National Strategic Development Plan and the Cambodian MDGs, the 2011 mid-term review of the Health Strategic Plan in 2011 concluded that, “looked at with a ten year perspective one can only conclude that the level of progress ... achieved by Cambodia over the last decade has been nothing short of phenomenal”. Progress in health outcomes was confirmed by the 2010 CDHS, which recorded a reduction of under-five mortality from 124 per 1000 live births in 2000 to 54 in 2010; a rise in deliveries attended by skilled providers from 10% to 70%; and a rise in the proportion of fully vaccinated children from 31% to 78%.

6.1.3.1 Sector-Wide Management

The Mid-Term Review also argued that further progress on outcome indicators would require more focus on governance, management and regulation, and increased community involvement, especially at district and provincial levels. These challenges are at the heart of the on-going reforms that focus on the consolidation of successful pilot programmes, particularly HEFs and SOA, and the midwife incentive scheme. How far the SWiM arrangements has helped to harmonize and align donor funding remains has not yet been analysed. The 2011 review noted that, for various reasons, very little progress had been made in improving aid effectiveness under SWiM implementation since an earlier, 2007 review (MOH, 2011b).

6.1.3.2 Health Equity Funds

Strengthening the HEF network has become a national priority, with the government taking increasing ownership and providing national stewardship of the schemes. Evidence shows that HEFs are both effective and affordable within the country context. The MOH has indicated its commitment to scaling up HEFs to national coverage by 2015, and the government has increased its financial contribution to HEF expenditures, indicating the Government's political interest and commitment to investing in improving health of the poor population. The Government funding for HEFs increased from 10% in 2009 to 40% in 2013 of total direct benefit cost, and the remainder is financed from pooled funds under HSSP2.

The MOH and development partners are currently working on creating a uniform HEF model and strengthening the MOH capacity to oversee and manage HEFs. The major challenge confronting the government now is to transfer full responsibility for the HEFs to an autonomous semi-government agency while maintaining some form of third-party payer status. The recent draft MOH Health Financing Policy addresses this need.

A long process of consultation and research, including stakeholder meetings, expert consultations, national workshops and individual inputs, is needed to support the scaling-up process. The process culminated in 2009 with the development of the MOH Implementation of the Health equity funds guideline (MOH, 2009b), which established an institutional arrangement designed to accommodate all agencies, actors and interests through common memoranda of understanding, contracts, and monitoring and evaluation agreements (see section 3.3.1).

Scaling up to reach national coverage may require refinement of the pre-identification (ID-Poor) process through the Ministry of Planning to overcome exclusion errors.

6.1.3.3 Special Operating Agencies

The introduction of SOAs as a form of provider autonomy is an important complementary reform to the health financing reforms. As the pathways for public health funding shift increasingly to the demand side, strengthening the design and implementation of policies for autonomy of public health care providers is a high priority. This is also consistent with the MEF's public financial management reform program for strengthening reporting and accountability for non-tax revenues.

Early results from the implementation of the SOA based on internal-contracting model are positive (though not yet conclusive). Based on initial progress, the number of SOAs was expanded from 11 ODs in 2004 to 26 ODs and 10 Provincial Hospitals in 2012. While there are still challenges in providing SOA funding on time, providing clear instructions to ODs, providing adequate training in the new process, and monitoring outcomes effectively, both health staff and facility managers appear to value the new management approach (World Bank, 2013c, 2013d).

6.1.3.4 Millennium Development Goals

The Midwifery Incentive Scheme is considered as one of the strongest expressions of government support for improving maternal and newborn health, driven by high-level social and political interests. Designed to increase institutional deliveries and to strengthen reproductive, maternal and newborn health services, this incentive scheme has been associated with a large reduction in maternal mortality ratio. In practice, a number of interventions have been implemented concurrently to improve maternal care (including the maternal voucher scheme and the HEFs, see section 3.3.1). Some of the improvement could be attributed to increasing socioeconomic development and some to a notable improvement in equity in the uptake of these services across income quintiles (Dingle, Powell-Jackson & Goodman, 2013). It is therefore not possible to attribute the decline in maternal mortality to the midwifery incentive scheme alone.

6.2 Future developments

A major point of discussion, and a catalyst for further reform, is the draft Health Financing Policy formulated during 2012–13. The vision adopted by the Policy is “to enable active participation of all residents of Cambodia in society through a health system that provides universal access to an essential package of quality health interventions in a regulated health market based on fairness of contributions and equity in access, thereby providing protection against impoverishment due to ill health”. The Policy applies a health-system perspective and proposes initiatives that lead towards universal coverage.

The Health Financing Policy assesses the country’s performance against the basic health-financing functions (the collection of funds, the pooling of funds and the purchasing of services). Reflecting both historical and recent development, and the Cambodia political, macroeconomic, and social context, the policy calls for greater attention to psychological

disorders, improve care for the elderly, access to affordable care for people with chronic and noncommunicable diseases, and improved service delivery to remote populations. The Policy addresses six major themes with associated objective (summarized in Box 6.2).

The point of departure for the Policy is to provide financial risk protection to the population, especially the poor, when accessing health care services. It not only considers the direct and indirect costs of care seeking, but also recognizes the costs of foregone treatment due to unavailability or inaccessibility of services, and costs associated with poor medical practice by private providers whose legal status is questionable. The policy proposes the establishment of the National Social Health Protection Fund to assume responsibility for the implementation of all demand-side financing schemes for the informal sector, including the poor.

The policy anticipates a gradual shift from supply-side financing to demand-side health financing. While a longer-term aim of unifying various schemes under a single national social health protection structure is widely acknowledged, the current policy discussion has centred on the establishment of the National Social Health Protection Funds, together with the established National Social Security Fund for Civil Servants and the National Social Security Funds for employees in private sector (see section 3.3.1).

Box 6.2 Themes and goals of the national Health Financing Policy

Theme 1: Universal population coverage

Objective 1: To enable risk pooling and financial protection against the cost of illness

Theme 2: Benefits

Objective 2: To ensure access to management of common prevailing, emerging and priority health conditions

Theme 3: Purchasing services

Objective 3: To ensure quality of health services that are conducive for good health while making optimal use of available money

Theme 4: Institutions

Objective 4: To ensure equal access for all population groups and optimal administration of the Social Health Protection Institutions

The purpose of the three social health protection institutions is to assist the move towards universal health coverage (Objective 1). To address concerns about the fragmentation of health financing arrangements and risk pools, the Policy proposes unified benefit packages, provider-payment mechanisms, claim-processing mechanisms, information management systems and disease classification systems. It proposes that a common benefit package (Objective 2) will be determined by the MOH in consultation with other ministries, based on prevailing morbidity and mortality rates, provision of public goods and externalities, technical feasibility, costs and actuarial projections. A review of the Minimum and Complementary Packages of Activity is required to effectively address emerging conditions, especially chronic diseases. As public-service provision of some services may be slow to develop, NGOs will find an interest in providing social health-protection mechanisms for people with psychological conditions, physical impairments and old age.

Under the new arrangements, services will be purchased (Objective 3) only from accredited providers. Quality of care (based on regularly updated standard treatment guidelines) will be further promoted by adopting appropriate provider-payment methods. A remuneration package that enables a move away from the dominant user-fee system will be developed. Additionally, unifying all related activities of the three national social health-protection agencies at district level and below will

increase the leverage of the purchasing parties (Objective 4). At district level, local NGOs may be contracted to ensure operation of the new social health-protection arrangements in a manner consistent with current HEF operators.

The policy also proposes that enrolment of the informal sector will be subsidized through general tax revenues (Objective 5), while formal-sector employees and their dependents will be funded through salary and employer contributions. Apart from nominal co-payments, access to services specified in the benefit package at the point of service delivery will be free. Health services not covered in the benefit package or solicited at non-recognized health providers will have to be paid through out-of-pocket payments.

The final objective is to develop the necessary legislation and effective mechanisms for its enforcement (Objective 6).. Regulatory bodies will be provided with sufficient funds to enable enforcement of existing and new laws. Private practitioners will have to display their fees, similar to public health providers. The Policy also calls for the establishment of an ombudsman to deal with malpractice and irregularities by providers and social health-protection institutions.

7 Assessment of the health system

Chapter summary

The Cambodian health system is on track to achieve its broad objectives and health-related Millennium Development Goal targets. The health status of the Cambodian people has substantially improved since 1980, evidenced by a steady increase in life expectancy and a reduction in mortality rates, particularly the infant mortality rate and maternal mortality ratio. The joint efforts of government and development partners to increase the coverage of and access to essential health care, especially maternal and child health services, and to decrease the incidence and prevalence of major communicable diseases, appear to have significantly contributed to this improvement. Financial protection from spending for health care has increased, particularly for the poor, partly due to the significant rise of government spending on health and better coverage of social health-protection schemes, particularly Health Equity Funds.

However, significant challenges remain. National health-status indicators are relatively low compared to other countries in the region and to regional and global averages. Continuing high rates of child malnutrition have significant implications for well-being and human capital development. Disparities in health outcomes by socioeconomic status and between urban and rural populations are major issue of concern, despite considerable improvements in equity in access to health care. The impact of increased government spending for health has been undermined by shortcomings in allocative and technical efficiency. The predominance of out-of-pocket health expenditure remains a major barrier to accessing health care, especially for the poor and vulnerable, and puts people at risk of impoverishment. The quality of care in both public and private sectors remains inadequate. Climate change, demographic and epidemiological transitions, including emerging noncommunicable diseases and road traffic accidents, and outbreaks of new global infectious diseases, such as avian influenza and multidrug-resistant malaria and tuberculosis, will further challenge efforts to strengthen the health system and improve health status in Cambodia.

7.1 Stated objectives of the health system

The vision of the Ministry of Health's (MOH) key planning document, the *Health strategic plan 2008–2015* (MOH, 2008a), is, “to enhance sustainable development of the health sector for better health and well-being of all Cambodians, especially of the poor, women and children, thereby contributing to poverty alleviation and socioeconomic development”. The MOH aims to provide stewardship to the entire health sector (public and private) in order to create a supportive environment for equitable access to and provision of quality health services. Ultimately, the government aims to provide universal access to a package of essential health interventions of high quality with financial protection against impoverishment due to ill health, commonly known as universal health coverage (UHC).

To support the move towards UHC, three specific goals and 12 strategic objectives for the health system were formulated in the Health Strategic Plan (see Box 7.1) and a number of key indicators were identified in the updating of the government's National Strategic Development Plan 2009–2013; progress in achieving these targets is summarized in Table 7.1. The Health Strategic Plan also highlights five cross-cutting strategies: supply and demand-side interventions to improve health service delivery, health financing, human resources for health, the health information system, and health-system governance. These health-sector goals and strategies are also reflected in the Cambodia Millennium Development Goals and Targets (MOP, 2011).

On the demand side, the Strategic framework for health financing 2008–2015 (MOH, 2008b) lays out a number of strategic objectives to improve the three health financing functions (collection, pooling and purchasing) and facilitate a move towards prepayment and risk-pooling mechanism.

Box 7.1 Strategic objectives of the Health Strategic Plan

Goal 1 is to reduce **maternal, newborn and child morbidity and mortality** and to improve reproductive health. Four objectives have been formulated:

1. to improve the nutritional status of women and children
2. to improve access to quality reproductive health information and services
3. to improve access to essential maternal and newborn health services and better family care practices
4. to ensure universal access to essential child health services and better family care practices.

Goal 2 is to reduce morbidity and mortality due to **HIV/AIDS, malaria, tuberculosis and other communicable diseases**. Five objectives have been formulated:

1. to reduce the HIV prevalence rate
2. to increase survival of people living with HIV/AIDS
3. to achieve a high case-detection rate and maintain a high cure rate for pulmonary tuberculosis smear-positive cases
4. to reduce malaria-related mortality and morbidity rate among the general population
5. to reduce the burden of other communicable diseases.

Goal 3 is to reduce the burden of **noncommunicable diseases** and other health problems. Three objectives have been formulated:

1. to reduce risk behaviours leading to noncommunicable diseases such as diabetes, cardiovascular disease, cancer, mental health, substance abuse, accidents and injuries, eye health, oral health
2. to improve access to treatment and rehabilitation for such noncommunicable diseases
3. to ensure essential public health functions, including environmental health, food safety, disaster management and preparedness.

Table 7.1 Health indicators and targets of the National Strategic Development Plan 2008-2015

Health indicators	Base-line value		Target values			
	2008	2009	2010	2011	2012	2013
Reproductive, maternal, newborn and child health						
2 or more ANC health personnel consultations	81	85	88	90	92	94
% births delivery by trained health personnel	58	65	70	75	80	85
% births delivery by trained personnel at health facilities	39	45	50	55	60	65
% of deliveries by C-section	2	2.2	2.5	3	3	3.2
Contraceptive prevalence using modern method (%)	26	37	40	45	46	49
Proportion of children under one year fully immunized	87	85	86	87	88	89
% of children under one year immunized against measles	91	90	91	93	95	95
Consultations (new cases) per person per year:						
• General	0.54	0.5	0.6	0.6	0.7	0.8
• Children under 5	1.1	1.3	1.5	1.7	1.7	1.8
Communicable diseases						
% PLHAs on ART survival after a 12-month treatment	na	>85	>85	>85	>85	>85
Case detection rate: smear+ pulmonary tuberculosis (%)	69	>70	>70	>70	>70	>70
Tuberculosis cure rate (%)	90	>85	>85	>85	>85	>85
Malaria case fatality rate per 100 000 of population	2.10	1.50	1.20	1.10	0.99	0.90
Public-facility dengue hemorrhagic fever case fatality rate	0.68	0.7	0.6	0.6	0.6	<0.6
Noncommunicable diseases and other health problems						
Diabetes reported at public facilities/1000 adult population	3.5	4.0	4.5	5	5.5	<5.5
No. of mental health cases reported by public facilities	15 320	15 000	18 000	19 000	20 000	21 000

ANC, antenatal care ; ART, antiretroviral treatment; C-section, caesarean section; na, not available; PLHA, people living with HIV/AIDS .

Source: NSDP update 2009-2013 (RGC, 2010)

7.2 Financial protection and equity in financing

7.2.1 Financial protection

An improvement in financial protection for health care has been noted since 2000, despite continuing high levels of out-of-pocket (OOP) payment as a proportion of total health expenditure. This greater financial protection coincides with a significant increase in government spending on health and an increased coverage of social health-protection mechanisms, particularly through the Health Equity Funds (HEFs) (see Chapter 3).

The absolute level of OOP expenditures remains at a relatively constant 60% of total health expenditures². Cambodian Socio-economic Survey (CSES) data for 2004, 2007 and 2009 (MOH, 2011a, 2012b) reveal a rapid growth of household income, an increase in capacity-to-pay (measured by total consumption minus subsistence income) and a decline in the proportion of households affected by catastrophic health expenditure (defined as OOP payments exceeding 40% of household capacity-to-pay). Catastrophic expenditures fell from about 6% of households in 2004 to about 4% in 2009 despite an increase in utilization of health services. The proportion of households with debt due to ill-health decreased from about 5% to about 4% over the same period. CSES data for 2011 show a further decline in catastrophic health expenditure to 2.8% of households (World Bank, 2013a).

The decline in catastrophic health expenditure during 2004–2009 was found across all income quintiles, with the most substantial decline in the lowest quintile (by 37%) compared to the highest (by 21%) (MOH, 2012b). Economic analysis of the CSES 2009 data, controlling for illness type and other factors, indicated that residents in areas with HEFs had lower levels of OOP and were less likely to suffer catastrophic health expenditure or health-related indebtedness (among households incurring any OOP), especially among poorer households and those mainly using public health services (Flores et al., 2011).

2 Data from Cambodia Socio-economic Surveys show an increase in the absolute value of OOP per capita spending from US\$ 15 in 2004 to US\$ 28 in 2009 (MOH, 2012b).

7.2.2 Equity in financing

Despite gaps in health outcomes by income quintile, equity in health financing has improved along with the increase in government funding for health (much of which has focused on primary health care and HEFs) and the expansion of social protection mechanisms. Differences are evident, however, in the use of primary care services and hospital access. Earlier analysis of CSES data for 2004 and 2007 indicated that the two lowest income quintiles took a larger share of government-subsidized health care at public facilities (mainly at Health Centres) than the two highest income quintiles, although the higher quintiles used public hospital care more frequently (World Bank, 2007, 2011; MOH, 2011a). This suggests that government spending on primary health care tends to benefit the poor and rural populations, whereas spending on provincial and national hospitals tends to benefit the better-off. Both stronger supply-side interventions and the scaling up of social health-protection mechanisms are needed to improve both the accessibility and the quality of service provision in the public and private sectors.

7.3 User experience and equity in access to health care

7.3.1 The health user experience

Health-seeking behaviour patterns among Cambodians follow the pluralistic nature of the health care system (Meessen et al., 2011), though with a strong preference for private providers. Approximately 62% of all first-treatments of illnesses or injuries reported in the CDHS 2010 took place with private providers (NIS, 2011).

Differences in the pattern of health-seeking behaviour are evident between preventive and primary care on the one hand and hospital inpatient care on the other. Access to publicly provided and subsidized preventive care services (including vaccinations, family planning services, antenatal and postnatal care, and facility-based deliveries), most of which are provided free to the patient, is widespread (NIS, 2001, 2011; NIPH, 2006). According to a 2012 survey of rural health-care providers, facilities and households in 160 randomly selected villages in eight health districts, of all reported visits to primary health care 65% occurred with private medical providers, 20% with non-medical providers and only 15% at public facilities (World Bank, 2013c). However, the study found that 60% of all hospitalizations took place at public facilities. While only 46% of the poor held an HEF card, ownership of a card increased the likelihood of seeking care in a public facility by 34%.

Measures of patient satisfaction are notoriously difficult to interpret. However, according to a national survey of client satisfaction among public health service users, the satisfaction index score was 87/100 for public Health Centres, 85/100 for National Hospitals and 82/100 for provincial and district Referral Hospitals (Eng & Depasses, 2012). The survey recorded dissatisfaction in several areas, including attentiveness of health-facility staff, availability of staff at night, cleanliness of facilities, and communication on illness diagnosis and prevention. Patient exit interviews conducted in 2013 as part of a provider competency assessment in eight ODs revealed that, while providers at private facilities showed better communication with patients, patients appeared more satisfied with public facilities (World Bank, 2014b).

7.3.2 Equity of access to health care

Improved access to health care has been reflected in an increase in the use of preventive and curative health services. CSES data show an increase in the proportion of unwell individuals seeking care from medical providers from 52.2% in 2004 to 68.6% in 2009 (MOH, 2011a, 2012b). CDHS shows a similar increase in access to public and private medical providers from 69.8% of unwell people in 2005 to 85.7% in 2010 (NIS, 2001, 2011; NIPH, 2006). The data also reveal a particular increase in the coverage of reproductive, maternal and child health services (e.g. vaccinations, family planning services, antenatal and postnatal care, and facility-based deliveries).

Equity of access has also improved considerably. CSES data reveal a greater increase in the percentage of unwell individuals seeking care from medical providers among the two lowest income quintiles compared to two highest quintiles (MOH, 2011a, 2012b). The availability of services has improved. For patients in the poorest quintile, the average distance from home to the nearest Health Centre decreased by 36% between 2004 and 2007 (equivalent to 4.5 km in 2007). Using CDHS data, Dingle, Powell-Jackson & Goodman (2013) have shown strong reductions in the coverage gap between rich and poor for six reproductive and maternal health service indicators; equity ratios measuring coverage among the richest divided by coverage among the poorest quintiles declined significantly between 2000 and 2010.

Improved access to services, particularly for the poor, appears in part to result from targeting public resources on the provision of primary health care services in rural areas (especially reproductive health care) and

from the expansion of social protection schemes, particularly HEFs and vouchers for reproductive services (Annear, 2010). Even so, in rural areas the increased utilization of curative medical services was predominantly in the private sector, including non-medical providers (who have low clinical competency) (World Bank, 2014b).

Pronounced inequities remain in access to and utilization of health services by geographical location and socioeconomic status. CDHS data from 2009 demonstrate that rich–poor and urban–rural gaps remain unacceptably wide, and there are significant variations between provinces: for the period 2005 to 2010, the proportion of births attended by skilled personnel was 96.7% in the richest quintile compared with only 48.7% in the poorest quintile, and 94.7% in urban against 66.6% in rural areas; the highest coverage was in Phnom Penh (98.8%) and the lowest in remote provinces, such as Mondul Kiri and Rattanakiri (38.4%), and in Preah Vihear and Stung Treng (28.2%), where there are large ethnic minority communities. Access to care appears most uneven for locations not covered by HEFs and for services not available at public health facilities, such as care for some chronic diseases (Men et al., 2012).

7.4 Health outcomes

7.4.1 Population health

National health status has improved substantially since 1980. Life expectancy at birth increased from 39 years in 1980 to 71 years in 2012 (Table 7.2), while adult (15–60 years) male/female mortality rates declined from 317/281 deaths per 1000 people in 2000 to 262/222 in 2010. The maternal mortality ratio decreased from 437 deaths per 100 000 live births in 2000 to 206 in 2010 (according to local estimates) accompanied by a sharp decline in the total fertility rate from 5.9 in 1980 to 3 in 2010. Infant and under-five mortality rates decreased from 95 and 124 deaths, respectively, per 1000 live births in 2000 to 45 and 54 in 2010.

These improvements in health status have put Cambodia well on track to achieving most of its health-related Millennium Development Goals and National Strategic Development Plan indicators. However, challenges remain. Improvements in child nutritional status have stagnated, as indicated by the proportion of stunted and underweight children less than five years of age, and slightly increased for wasting (as reported in the CDHS 2005 and 2010). This has significant implications for well-being and for human capital development, including: an estimated 6400 annual

malnutrition-attributed child deaths; an estimated annual economic loss of US\$ 146 million due to vitamin and mineral deficiencies; and long-term deficiencies in cognitive development (World Bank, 2013a).

Table 7.2 Health indicators for selected Asian countries, 2012

Country	Life expectancy at birth (years)	Maternal mortality ratio (per 100 000 live births) ^a	Infant mortality rate (per 1000 live births)	Children <5 years mortality rate (per 1000 live births)
World average	71	210	35	48
Low-income countries	62	410	56	82
East Asia and Pacific region (WB)	75	78	16	20
Singapore	82	3	2	3
Viet Nam	76	59	18	23
Malaysia	75	29	7	9
Thailand	74	48	11	13
Indonesia	71	220	26	31
Cambodia	71	250	34	40
Philippines	69	99	24	30
Lao PDR	68	470	54	72
Timor-Leste	67	300	48	57
Myanmar	65	200	41	52

a all numbers for 2010, based on consistent modelling.

Source: World Development Indicators (World Bank, 2014a).

7.4.2 Equity in health outcomes

Despite improvements, health outcomes still exhibit urban–rural and rich–poor differentials and are poor in comparison with some regional neighbours (Table 7.2). One clear example is the disparity in maternal and child health outcomes according to socioeconomic status and geographic location (Table 7.3). The fertility rate of women in the poorest quintile is more than double that of the richest quintile; children in the poorest quintile have a three-fold risk of death before their fifth birthday than those in the richest quintile; stunting is more than twice as common among children in the poorest quintile than in the richest.

Table 7.3 Maternal and child health outcomes by socioeconomic group and location, 2000–2010

Key indicators	Q1 poorest	Q2	Q3	Q4	Q5 richest	Poorest/richest ratio	Rural	Urban	Rural/urban ratio
Infant mortality rate (per 1000 live births)									
CDHS 2010	76.9	70.1	60.9	38.2	22.7	3.39	63.6	21.9	2.90
CDHS 2005	100.2	108.0	97.3	78.4	34.6	2.90	91.4	65.1	1.40
CDHS 2000	109.6	108.7	88.1	89.0	49.8	2.20	95.7	72.9	1.31
Under-5 mortality rate (per 1000 live births)									
CDHS 2010	90.7	82.4	67.0	47.8	30.3	2.99	74.5	28.9	2.58
CDHS 2005	126.1	128.0	113.4	91.8	43.1	2.93	110.2	76.4	1.44
CDHS 2000	154.8	137.1	113.6	113.3	62.6	2.47	125.6	93.1	1.35
Total fertility rate (per woman)									
CDHS 2010	4.4	3.0	3.0	2.7	2.1	2.10	3.3	2.3	1.43
CDHS 2005	4.8	3.2	3.2	2.9	2.3	2.09	3.6	2.8	1.29
CDHS 2000	5.0	4.2	3.4	4.0	2.3	2.17	4.2	3.1	1.35
Children <5 years stunted									
CDHS 2010	49.4	38.7	38.7	34.0	22.0	2.25	41.3	26.9	1.54
CDHS 2005	52.3	44.3	44.3	37.8	22.9	2.28	43.6	34.3	1.27
CDHS 2000	57.9	47.5	47.5	48.8	31.6	1.83	50.9	41.9	1.21
Children <5 years under weight									
CDHS 2010	34.4	27.4	27.4	23.3	15.4	2.23	29.5	18.3	1.61
CDHS 2005	34.5	26.6	26.6	28.0	15.5	2.23	28.4	27.1	1.05
CDHS 2000	44.2	37.0	37.0	35.1	30.0	1.47	39.4	32.5	1.21

Source: WHO Health Equity Monitor (http://www.who.int/gho/health_equity/en/, accessed 2 April 2014).

7.4.3 Quality of care

The early reconstruction of the health system from 1995 put an emphasis on expanding the quantity of services, with less attention to quality of care. Now, the quality both of health service delivery and of clinical care is becoming a priority concern (as discussed in Chapters 2 and 4). The quality of care in both public and private sectors remains inadequate, evidenced by indicators such as high neonatal mortality rates (World Bank, 2013c). As well, the increasing use of expensive medical technology in the private sector without an associated improvement in the quality of care reflects the lack of clinical skills. Poor clinical skills are particularly evident among medical staff in the 45–60 age group, who were called on to re-establish health care without sufficient training and education in the aftermath of the Khmer Rouge regime.

Specific interventions are required to improve the quality of clinical services: improved education of medical and public health staff, enforcement of regulations, and stronger incentive mechanisms both on the supply side (salaries) and on the demand side (purchasing through social health protection mechanisms). Accreditation of health providers will eventually be mandatory under the Master Plan for Quality Improvement in Health but is yet to take effect (see section 2.8.2). The Workforce Development Plan 2006–2015 aims to strengthen health education programmes and the responsiveness of medical staff, both public and private. The proposed stronger regulation of providers – through the introduction of clinical protocols and guidelines for delivery of standard service packages at government facilities, interventions for maternal and child health, treatment of AIDS, tuberculosis and malaria and rational drug use – is yet to be enforced. However, while these programs have been proposed, there is no evidence yet of a change in the quality of clinical care in the delivery of health services.

Among the key issues are the maintenance of a viable rural health workforce with more equal urban–rural distribution, the development of medical and nursing specialties, and the enforcement of minimum standards for quality health care and a Health Facility Assessment Tool. Referral Hospitals and Health Centres in principle face annual assessments in line with the MPA and CPA to ensure appropriate medical supplies, basic equipment and sufficient infrastructure. The need for quality improvement has also been addressed through Sub-Decree 21, which defines quality standards for all health educational institutions (DFAT, 2011). However, the quality of education and training of healthcare professionals remains open to question and enforcement of regulations on the quality and appropriate use of drugs is difficult.

Ozawa & Walker (2011) have shown that the popular view of quality of care by public and private providers in Cambodia relates to waiting time, perceived costs, effectiveness and availability of medicine, mode of administering medicines and interpersonal skills displayed by medical personnel.

A number of initiatives have been introduced to address this situation.

- Policy documents supporting improved quality of care include the National Policy for Quality in Health (2005), Operational Guidelines for Clients' Rights and Providers' Rights and Duties (2007) and the Master Plan for Quality Improvement in Health (2010).

- National protocols (with mandatory compliance by the public and private sectors), clinical guidelines and quality standards have been implemented.
- A new Quality Assurance Office has been established within the MOH Hospital Department.
- Ethical codes for medical doctors, surgeons and midwives have been introduced by the medical councils and professional associations.
- Recently introduced quality assessment tools at government hospitals and Health Centres (developed by the MOH with support from development partners and introduced gradually) have shown improved scores from the Level 1 assessment tool, which constitutes a first step towards a standardized quality accreditation of public and private health facilities.
- The concept of quality of care and client-centred approach to service delivery has been introduced into several medical training programmes.
- Continuing medical education for health staff and several in-service training initiatives have been rolled out to improve the knowledge and skills of medical practitioners.

Data on the results of these interventions are not available, but there is evidence that quality of care in both public and private sectors remains low. Among the users of the public health services, many complain about lack of hygiene and high cost (Eng & Depasses, 2012). Anecdotal evidence suggests that services provided by the private sector are often unnecessarily expensive and of questionable quality (Rose et al., unpublished data, 2002; Gollogly, 2002). An increasing number of patients are seeking care abroad, mainly in neighbouring countries such as Thailand and Viet Nam.

7.4.4 Health system contributions to health improvements

Recovery from conflict, economic growth, rising living standards and improved access to clean water and sanitation have all contributed to improved health outcomes. Strengthening of the health system has also played an important part and reflects close collaboration between the government and development partners. The MOH has a strong record in health planning and strategy dating back to the 1980s and expanded in the 1990s. The Health Coverage Plan led to the reestablishment of the health infrastructure (see section 4.1.1). The Health Financing Charter laid the basis for affordable access to care (see Chapter 3). Consecutive

Health Strategic Plans have set the framework for strengthening service delivery. And documents including the recent draft Health Financing Policy have created the basis for financing health care and strengthening social health protection.

The first step was to rebuild health-care facilities and provide service coverage nationwide. Introduction of regulated user fees coupled with subsidized exemptions for the poor through the HEFs provided improved access to the newly created services. With rising demand, the emphasis in MOH planning is shifting towards interventions that will improve the quality of care. A number of new and innovative healthsystem interventions have been piloted in the public health system, from supply-side strengthening (including the Health coverage plan and the contracting of service delivery) to the demand-side HEFs. A more recent initiative showing signs of success is the conversion of government health districts to SOAs with a degree of autonomy in management, supported by additional Service Delivery Grants (Khim & Annear, 2013) (see section 3.3.4).

Data are not available to measure the contribution of health-system strengthening to improvements in health status. However, at least a part of the recorded improvements in health status – particularly the decline in communicable diseases and improvements in maternal and child health – can be traced to stronger health-system performance. One example is the improvement in child and maternal health following the implementation of the MOH’s Fast Track Initiative Roadmap for Reducing Maternal and Newborn Mortality 2010–2015, which includes four core components – emergency obstetric and newborn care, skilled birth attendance, family planning and safe abortions – and three enabling factors – behaviour change communication, removing financial barriers, and maternal death surveillance and response.

Maternal and neonatal mortality have fallen as a result of a substantial increase in the coverage of skilled birth attendance and other safe motherhood services. More than 95% of children under the age of five are now fully immunized, resulting in a significant decline in the incidence of vaccine-preventable diseases. Cambodia was declared polio-free as part of WHO Western Pacific Region in 2000 and measles elimination is expected in the next few years. The challenge before the health system now is to respond adequately to the rising burden of noncommunicable disease that accompanies the economic and demographic transitions and

to prepare for the health effects of climate change. To date, these issues have received little attention in the health planning process and threaten to derail the considerable gains made in other areas.

7.5 Health system efficiency

One of the key challenges in achieving the government's commitment to the goal of universal health coverage is to overcome the clear shortcomings in various aspects of health-system efficiency (see section 3.2.2). The World Health Report 2010 (WHO, 2010) on financing for universal coverage estimated that on average 40% of national health expenditures could be saved through increased efficiencies. This is evident also in Cambodia. With a severe fiscal constraint on inputs, and clear inefficiencies in resource allocation, procurements and operational costs, it is imperative that potential improvements in allocative and technical efficiency are pursued.

7.5.1 Allocative efficiency

While significant improvements in recent years are evident, total health expenditure (THE) remains relatively small (see Chapter 3). Total health expenditure was little more than US\$ 69 per capita in 2012, of which 60% was out-of-pocket (spent predominantly in the unregulated private sector). While government funding for health care has increased significantly, reaching 12% of total government spending, it remains at only 24% of THE and 1.4% of GDP. Official development assistance provides an additional 15% of total expenditures.

Allocative inefficiencies include a concentration of resources in urban areas (particularly hospital care), a preference for vertical programmes over health-system strengthening, an emphasis on the provision of tertiary services, and an overconcentration of government resources at central level; primary care is underfunded (World Bank, 2011) (see Chapter 3). Resources are concentrated on the treatment of communicable diseases and secondary prevention, with little allocated to primary prevention and at a time when the burden of noncommunicable diseases is rising. A 2008 Public Expenditure Tracking Survey in Health (World Bank, 2008) raised concerns about the small proportion of budget expenditures reaching the service-delivery level. In the private sector, the allocation of resources follows market demand, with investments concentrated overwhelmingly in urban areas and catering for those who can afford to pay.

Steps have been taken to address some of these issues. Reform of governance structures has begun in the health sector and across government with decentralization and deconcentration initiatives at the political level and public financial-management reforms within the government administration. The MOH has successfully implemented procedures designed to improve the disbursement rate of expenditures, with more than 90% of budgeted allocations expended annually (compared to one third in 2007). The government and the MOH have also shown leadership in measures designed to align ODA with national priorities, particularly through the SWiM process under the Health Sector Support Program (see Chapter 3).

The *Health strategic plan 2008–2015* (MOH, 2008a) aims to create a more efficient allocation of resources in three priority areas: maternal and child health, communicable diseases and noncommunicable diseases. It identifies the need for improvement in health-service delivery, health financing, human resources for health, health information systems and health-system governance. Implementation of the MOH plan is supported by the Budget Strategic Plan, which connects the Ministry of Economy and Finance with financial needs of the health sector. Programme-based budgeting, which links resource allocation to priority programmes, has been piloted in the health sector since 2007. Annual Operational Plans prepared at all levels of the public health system link strategic and operational planning to budget allocation, supported by improved computer software used to compile information. The decentralization of resources to service-delivery level is gradually improving, with an increasing share of budget disbursed through Health Centres and Referral Hospitals at the provincial level.

However, the allocation of government resources remains largely centralized and non-programme based. In 2010, more than 70% of the health budget was managed centrally, allocated principally to salaries and the procurement of drugs and medical supplies. Service delivery is underfunded. Only 1% of the health budget was allocated to noncommunicable diseases and just 10% for reproductive, maternal and child health (MOH, 2010b).

7.5.2 Technical efficiency

Shortcomings in government administration, irregularities in procurement and pricing, the low level of staff salaries, and inadequate regulation in the public and private sectors are all sources of technical

inefficiency in the health sector. Perhaps the most significant challenge is provided by the extensive documented inefficiencies in the procurement of pharmaceuticals, medical equipment and supplies through the MOH and the Central Medical Service (World Bank, 2011) (see Chapter 3). In the private sector, the increasing use of more expensive medical technology without an associated improvement in the quality of care is another cause of limited efficiency within the health system.

Efforts to improve the quality of care in the public sector – to produce more health for the money – have included the introduction of clinical protocols and guidelines. These include National Guidelines on a Minimum Package of Activities for Health Centres and a Complementary Package of Activities for Referral Hospitals, as well as national protocols on maternal and child health, HIV/AIDS, tuberculosis and malaria. The development of a National Essential Drugs List for public health facilities and a Rational Drug Use Policy have contributed to improved use of drugs supplied.

While no reliable data are available to scrutinize the technical efficiency of health services, signs of improvement are evident. In the public hospital sector, the national bed occupancy rate increased from 52% in 2002 to 82% in 2011, while the average length of stay remained stable at 5–6 days. The increasingly high tuberculosis cure rate and decreasing case fatality rates of some life-threatening infectious diseases (such as dengue and malaria) also suggest improved technical efficiency.

Nonetheless, some widely recognized human resource-related shortcomings put technical efficiency at risk. Limitations in general and medical education are the cause of limited medical knowledge and skills of public health personnel. The low level of staff salaries (below the level needed to support a family) have led to widespread dual practice of public-sector workers in private practice. This produces regular absence from the workplace, a generally low commitment to work, and clear inefficiencies in the use of the public health infrastructure.

7.6 Transparency and accountability

Transparency and accountability remain limited within the Cambodian health system.. Accreditation of health-care providers and its enforcement are at a preliminary stage of development. In the private sector, insufficient regulation means that private providers remain mostly unaccountable for their practice other than through the influence of market demand.

A number of interventions have been developed through the government and the MOH to address these challenges. These include:

- Recent strengthening and computerization of the MOH health information system;
- Increasing application of performance-based contracting and financing mechanisms, such as SOAs, HEFs, voucher schemes and CBHI mechanisms;
- Strengthened monitoring and evaluation procedures for the MOH and development partners under the *Health strategic plan 2008–2015*, used also as a tool to inform MOH policy decisions (the framework includes 87 commonly agreed input, process, output and outcome indicators);
- The introduction of inclusive and participatory review processes, particularly through Joint Annual Performance Reviews;
- Efforts to strengthen community participation in health management and financing through various community structures, including Health Centre Management Committees and Village Health Support Groups;
- The promotion of consumer and provider rights (Leang, Sin & Ir, 2013);
- The recent introduction of public forums to allow questioning and criticism of health-care providers and authorities;
- Increasing involvement of news media in reporting events and shortcomings at public and private health facilities.

Even so, a recent study of local service delivery revealed a number of remaining institutional and operational limitations in the health system and argued that accountability in relation to the delivery of primary care services (for example) is more effectively assured when supported by external agents, such as nongovernmental organizations, which provide an additional informed and critical voice (Asian Foundation & World Bank, 2013). Transparency and accountability will be strengthened when all aspects – government administration, increased autonomy, stronger regulation, improved monitoring and evaluation, and a stronger voice for the public requiring health services – receive the attention that is required.

8 Conclusions

Key findings

Cambodia is no longer a country emerging from conflict. Relative political stability has prevailed since the 1998 election, providing the basis for a long period of significant economic growth. In the following years, the government pursued a national policy based on strengthening the economy, and Cambodia is now about to cross the line between low income and lower middle-income status (measured in international terms as a per capita GDP of US\$ 1035 per head). Gross domestic product is currently growing at more than 7% per annum.

Under conditions of economic growth and poverty reduction, health status has improved. Life expectancy has increased, adult, maternal and child mortality have decreased, and the incidence and prevalence of infectious diseases, such as malaria, tuberculosis and HIV/AIDS, have been curbed. However, in comparison with the neighbouring countries, regional and global averages, there is still a great deal of room for further improvement in health status.

8.1 Health and health care achievements

The health system of today is characterized by a pluralistic mix of public and private providers. National demographic and health data reveal that about 57% of all patients seeking care went first to private providers and only 29% to the public sector. In rural areas, World Bank research indicates that 65% of patients seeking primary care first went to the private sector, 20% to the non-medical sector and only 15% to the public sector.

In addition to the more than 5500 licensed private providers, there are an unknown but larger number of unlicensed and unqualified private providers. The majority of private providers nationally are pharmacies, drug sellers and non-medical providers. Dual practice of public employees in the private sector is widespread. Non-medical providers – including unqualified drug shops, traditional healers, traditional birth

attendants, and magicians – are widespread in rural areas. Nevertheless, the number of qualified private providers in clinics and registered pharmacies is growing. These circumstances mean that there is considerable scope to reinforce the regulatory mandate of the Ministry of Health.

Both public and private providers offer outpatient and inpatient care, but the public sector predominates in the delivery of preventive health services, hospital inpatient care, and for those patients who remain uncured in earlier episodes of care or who are unable to pay for private services. Public health services are provided through a network of more than 1400 public health facilities (Health Centres for primary care and Referral Hospitals providing higher levels of care) with more than 20 000 trained professionals. Nurses and midwives comprise almost 70% of public health workers. Expanding the workforce, improving technical skills and competence, and raising public-sector salaries have been identified by the government as human resource priorities.

Household out-of-pocket (OOP) spending provides the majority of total health expenditures nationally, with most of that spent in the private sector. The national budget allocated to public health has risen significantly in recent years, although external aid still provides a large but declining share of government spending and inefficiencies remain. Recent data on total health expenditures nationally indicate that 50% of health funding that is not derived from OOP spending comes from government general revenues and 50% from bilateral and multilateral donors (MOH, 2014c).

Significant inequalities remain in expenditure on health care, access to health services, and health outcomes. In general, health outcomes exhibit urban–rural and rich–poor differentials greater than regional averages. Government spending on primary health care tends to benefit the poor and rural populations, whereas spending on provincial and national hospitals tends disproportionately to benefit the better-off. The use of private providers is much greater among the rich and the use of non-medical providers is greatest among the poor. Even so, there is a greater increase in the proportion of ill individuals seeking care from medical providers among the two lowest income quintiles compared with the two highest. While the proportion of births attended by skilled personnel was 97% in the richest quintile compared to 49% in the poorest quintile and 96% in urban against 67% in rural areas, reductions in the coverage gap

between rich and poor have been documented for six reproductive and maternal health service indicators.

Cambodia has a strong record in health policy and planning. The Ministry of Health (MOH) leads and owns the process, with technical support provided by development partners. A long-term process of health reform began in the 1990s with the now completed plan for establishing national geographic coverage of public health facilities, implemented jointly with development partners. More recently, the MOH developed the comprehensive Health Sector Strategy over two periods, which has been supported by comprehensive health workforce and health financing plans. The MOH continues to advance the planning process with the 2013 drafting of a national health financing policy that paves the way for the move towards universal health coverage.

The support provided by a multitude of donor agencies has made health systems policy, planning and implementation stronger but more complex. In practice, the MOH and development partners have worked closely together, though development partners have at times followed their own agendas (albeit generally with the consent of the MOH). Fragmentation in donor funding, and the disparate interventions that resulted, led eventually to a stronger process of harmonization among donors and alignment of programmes with government policy and strategy when a number of the key stakeholders joined a pooling arrangement for donor and government funds under two consecutive Health Sector Support Programs.

This pooling of funds in support of the MOH's main health-systems project provided the basis for a partial Sector-Wide Approach, called Sector-Wide Management (SWiM). The pooling of donor and government funds under SWiM in support of the Health Strategic Plan is administered through the Health Sector Support Program, though funds are held separately and are not directed through the MOH budget. Donors also hold funds aside for other projects they identify as important. The pooling arrangement is therefore partial, but provides the basis for advances in health expenditure transparency and accountability, and might at some point provide the basis for a full Sector-Wide Approach.

Since the mid-1990s, donor partners initiated (together with the MOH) a large number of pilot and experimental interventions in different aspects of health-system strengthening, particularly in the supply of services and health financing. Some of these have been successful, others much

less so. Pilot projects in external contracting using nongovernmental providers were terminated in favour of internal contracting processes within the MOH. A number of pilot community-based health insurance (CBHI) schemes were initiated by NGOs in cooperation with the MOH, but these schemes generally failed to achieve significant population coverage, and the extent of MOH support for them, both financially and in terms of health strategy, has been curtailed.

The most significant and successful intervention has been the development of Health Equity Funds (HEFs) for the poor. The HEFs, which provide financial access to government health services, now provide coverage for almost 700 000 poor households or three quarters of all people living below the poverty line. The HEFs are the most extensive and significant social protection programme in Cambodia and provide the administrative foundation for the extension of universal coverage measures into wider population sectors. The HEFs have been shown to provide increased utilization of services, reduced OOP spending and lower debt for health care among the poor.

The MOH proposes that the period of extensive experimentation should come to an end and the focus of government and donor activity should now be on scaling up those interventions that have proven to be effective, particularly the internal contracting of service delivery within the MOH through the Special Operating Agencies on the supply side and the expansion under government administration of the HEFs and other social protection schemes on the demand side.

8.2 Lessons learnt from health system changes

The achievements since the 1990s reflect two important preconditions: the early direct assistance for reconstruction provided by development partners and the leading role of the MOH in the policy and planning process. Over time, the government role has strengthened (in planning and financing) and development partners have moved into a more supporting role.

The early programme of supply-side strengthening – which began as a new health cadre trained in the 1980s and continued with the construction and reconstruction of health facilities across the country a decade later – laid the basis for subsequent reforms. When the introduction of nominal official user fees to support facility revenues created financial barriers for the poor, development partners and the MOH combined to pilot and then

scale up HEFs and other social protection schemes on the demand side. This sequence of health reform is an important lesson.

Remaining open to testing new ideas allowed the MOH and development partners to trial a number of innovative approaches, from health coverage to contracting to social health protection. While not all interventions proved to be effective, the piloting process was underpinned by extensive research and evaluation that provided the evidence base for decision making about the most effective interventions and best options for longer-term strategic planning.

A unique but effective intervention was the implementation of social health-protection measures from the bottom up. While still-to-be-implemented compulsory insurance schemes were proposed for civil servants and the formally employed sector, the real gains in population coverage have been made through coverage of the poor under the HEFs. Even if they constitute a temporary measure (in the longer term), the HEFs provide affordable and effective coverage for a quarter of the population with the prospect of sustainable implementation within the health budget. Cambodia demonstrates the value of this approach, which today lays the foundation for the construction of a more comprehensive national system of social health protection; other countries in a similar position could benefit from understanding the experience.

The positive role of development partners has been an important part of the health reform process. At the same time, the effect of hosting a large number of donors each with their own assessment of needs and their own development agenda has been the fragmentation of policymaking and the risk of unnecessary delay in the sustainable development of the national health system. Cambodia has now entered a period where the consolidation of existing and proven interventions is the most pressing need. Further experimentation and the piloting of completely new interventions are no longer required. The process of research and evaluation, however, will continue as existing programmes are tested and scaled up.

8.3 Remaining Challenges

The successful expansion of the health infrastructure, relatively low levels of utilization, and the rapid increase in the number of private providers all focus attention on the limitations of public health-service delivery, in particular the persistently low quality of care. In the health reform cycle, this shortcoming returns planners' attention to strengthening the supply side. The health reform process is dynamic and requires a balance over time between supply and demand initiatives. Improving the quality of care is now the most pressing imperative in health-system strengthening. In the public sector, this requires attention to funding, management processes and the remuneration of public-sector workers. For the private sector, it poses the immediate need for extended regulation, accreditation and enforcement.

The elements of a more comprehensive approach to universal coverage of the population are largely in place. Improvements on the supply side, increased access to services and stronger oversight by the MOH are the ingredients necessary for moving to the next stage. Most importantly perhaps, this framework strengthens the ability of the government both to compete in a more productive way and to coordinate more effectively with the disparate private sector. Further progress will require an increased allocation of resources to public health facilities, increased incentives to health staff to deliver services appropriately, the use of strategic purchasing through the social health protection programmes, or more likely a combination of these activities.

The reforms since the mid-1990s have resulted in substantial improvements of health status and put Cambodia on track to achieving its Millennium Development Goals. Even so, widespread inequities remain in the distribution of health services and in health outcomes, between the rich and the poor and between urban and rural populations. Reducing these gaps is a key challenge in coming years.

Central to this is the need to reduce the excessive level of OOP spending, which is a major cause of impoverishment, prevents access to needed services and constrains further gains in health status. International evidence suggests that Cambodia is likely to make progress towards universal coverage only when OOP is reduced to a level close to 30% of total health spending. This can be achieved only through further strengthening of public health-care delivery and an extension of social health protection and prepayment mechanisms, funded by both social

insurance and government taxation revenues together with donor support. Continuation of the recent annual increases in government health expenditures is therefore necessary, coupled with more purposeful and more extensively implemented programmes for removing inefficiencies in government health expenditures.

The most immediate challenge is to consolidate recent gains in demand-side financing. The amalgamation of numerous demand-side schemes under a single National Social Health Protection Fund is proposed in the draft national Health Financing Policy. A first step will be to develop uniform or consistent procedures for the benefit package and provider-payment mechanisms of the various schemes. Combining the different informal-sector schemes under a single administrative structure may pave the way for later including the soon-to-be-established formal-sector insurance scheme. The challenge lies in the strengthening of the institutional, organizational, administrative and human resource capacities required for running a national health protection agency.

A parallel challenge is to commence operation of the proposed social health-protection programmes under the National Social Security Fund (NSSF) and the NSSF for Civil Servants through the Ministry of Labour and Vocational Training and the Ministry of Social Welfare, Veterans and Youth. The eventual amalgamation of the three proposed national health protection funds under a single agency as identified in the Health Financing Policy remains an important objective.

In strengthening the supply of services, an immediate challenge is to use public health resources in the most efficient way. Improving resource allocations, more efficient procurement, guaranteeing the full and timely delivery of budgeted resources to facilities, and increasing staff efficiencies through the use of appropriate incentives are all required. One clear concern is the need to improve efficiencies in the purchase and distribution of pharmaceuticals, equipment and supplies. Another is to find the means to increase public-sector salaries (across the civil service, not just in the health sector) in order to overcome the inefficiencies that result from unregulated dual practice. A third challenge is to improve efficiency in the use of donor funding by deepening and strengthening harmonization and alignment.

These challenges must now be met within a pluralistic health system that provides an appropriate role for private providers. A stronger public sector means that public health concerns are more adequately

addressed, those in need have a safety net, and a new standard is set for quality of care. Stronger public-sector competition with private providers will both benefit the provision of effective health services and lay the foundation for effective public-private coordination. The development of new social health-protection mechanisms provides the opportunity to incorporate private providers in an appropriate way in national health-system functions, with common aims and objectives to improve health status, using demand-side approaches supported by supply-side contracting, monitoring and quality control. The role of the MOH in providing stewardship, regulation and oversight of the health sector – as well as more efficient service delivery – is critical to the further development of the ongoing health-sector reform.

9 Appendices

9.1 References

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9.2 Useful websites on Cambodia

Asia Pacific Observatory on Health Systems and Policies:
http://www.wpro.who.int/asia_pacific_observatory/

Belgian Technical Cooperation – Cambodia:
<http://www.btctb.org/en/node/62/view>

Cambodia Development Resource Institute:
<http://www.cdri.org.kh>

Cooperation Committee for Cambodia:
<http://www.ccc-cambodia.org>

Countdown to 2015 Maternal, Newborn & Child Health:
<http://www.countdown2015mnch.org/>

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Cambodia
<http://giz-cambodia.com>

Institute for Health Metrics and Evaluation:
<http://www.healthmetricsandevaluation.org/gbd/country-profiles>

Global Health Observatory Data Repository (WHO):
<http://apps.who.int/gho/data/?theme=main>

Medicam e-Library:
<http://www.medicam-cambodia.org/activities/info/library/index.asp>

Ministry of Health:
www.moh.gov.kh/?lang=en

Cambodia Health Information System:
http://www.hiscambodia.org/public/homepage_en.php

National Centre for Health Promotion:
<http://www.nchp.gov.kh>

National Institute of Statistics:
<http://www.nis.gov.kh>

National Institute of Public Health:
<http://www.niph.org.kh/niph-web/>

University Research Co., LLC:
<http://www.urccambodia.org>

World Development Indicators (World Bank):
<http://data.worldbank.org/data-catalog/world-development-indicators>

9.3 HiT study methodology and production process

HiTs are produced by country experts in collaboration with an external editor and the Secretariat of the Asia Pacific Observatory based in the WHO Regional Office for the Western Pacific in Manila, the Philippines. HiTs are based on a template developed by the European Observatory on Health Systems and Policies that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources and examples needed to compile reviews. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The most recent template is available online at: <http://www.euro.who.int/en/home/projects/observatory/publications/healthsystem-profiles-hits/hit-template-2010>.

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents to published literature. Data are drawn from information collected by national statistical bureaux and health ministries. Furthermore, international data sources may be incorporated, such as the World Development Indicators of the World Bank.

In addition to the information and data provided by the country experts, WHO supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on the Western Pacific Country Health Information Profiles (CHIPs) and the WHO Statistical Information System (WHOSIS). HiT authors are encouraged to discuss the data in the text in detail, including the standard figures prepared by the Observatory staff, especially if there are concerns about discrepancies between the data available from different sources.

The quality of HiTs is of real importance since they inform policy-making and meta-analysis. HiTs are subject to wide consultation throughout the writing and editing process, which involves multiple iterations. They are then subject to the following.

- A rigorous review process consisting of three stages. Initially, the text of the HiT is checked, reviewed and approved by the Asia Pacific Observatory Secretariat. It is then sent for review to at least three independent experts, and their comments and amendments are incorporated into the text, and modifications are made accordingly. The text is then submitted to the relevant ministry of health, or appropriate authority, and policy-makers within those bodies to check for factual errors.
- There are further efforts to ensure quality while the report is finalized that focus on copy-editing and proofreading.
- HiTs are disseminated (hard copies, electronic publication, translations and launches). The editor supports the authors throughout the production process and, in close consultation with the authors, ensures that all stages of the process are taken forward as effectively as possible.

9.4 About the authors

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The Asia Pacific Observatory on Health Systems and Policies is a collaborative partnership which supports and promotes evidence-based health policy making in the Asia Pacific region. Based in WHO's Regional Office for the Western Pacific it brings together governments, international agencies, foundations, civil society and the research community with the aim of linking systematic and scientific analysis of health systems in the Asia Pacific region with the decision-makers who shape policy and practice.



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