EXPERT RESEARCH STUDY ON THE CURRENT STATE, SITUATION AND NEEDS OF THE HEALTH SECTOR IN CAMBODIA WITH A FOCUS ON MATERNAL AND CHILD HEALTHCARE

VYPRACOVÁNÍ ODBORNÉ STUDIE ZAMĚŘENÉ NA ANALÝZU POTŘEB V SEKTORU ZDRAVOTNICTVÍ V KAMBODŽI SE ZAMĚŘENÍM NA OBLAST PÉČE O MATKU A DÍTĚ

Cambodia

Published in November 2017 by:
PETRA NOVAKOVA EM SOVANNARITH BERNHARD EDER
(EuroPlus Consulting and Management)

Updated in September 2023 by:
ALIX COOMBS
(Independent Consultant)

This report has been commissioned by the Czech Development Agency (CzDA). The views and opinions are those of the Consultants and do not necessarily reflect the views and opinions of the CzDA.

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Acronyms

AFH	Action for Health
AOP	Annual Operational Plan
BCC	Behaviour Change Communication
BEmONC	Basic Emergency Obstetric & Newborn Care
BFHI	Baby Friendly Hospital Initiative
BMZ	German Federal Ministry for Economic Cooperation and Development
CARD	Council for Agricultural and Rural Development
CBHI	Community-based Health Insurance
CC	Commune Council
CCWC	Commune Council for Women and Children
CD	Communicable Disease(s)
CzDA	Czech Development Agency
CEmONC	Comprehensive Emergency Obstetric & Newborn Care
CHC	Cambodian Health Committee
CMC	Cambodia Midwives Council
CMDG	Cambodia Millennium Development Goals
CPA	Complementary Package of Activities
CSDG	Cambodia Sustainable Development Goal(s)
DA	Department of Administration
DfAT	Department of Foreign Affairs and Trade of the Australian Government
DF	Department of Finance
CDHS	Cambodia Demographic and Health Survey
DoPM	Department of Preventive Medicine
DP	Development Partners
DPHI	Department of Planning and Health Information
DRH	District Referral Hospital
EmONC	Emergency Obstetric & Newborn Care
FGD	Focus Group Discussion
FHD	Family Health Development
GESI	Gender Equity and Social Inclusion
GIZ	German International Cooperation
HC	Health Centre
HCMC	Health Centre Management Committee
HCP	Health Coverage Plan
HE	Her/His Excellency
HEF	Health Equity Fund
HF	Health Facility
H-EQIP	Health Equity and Quality Improvement Programme
HIS	Health Information System
HKI	Helen Keller International
HMIS	Health Management Information System
HSP	Health Sector PLAN
HSS	Health System Strengthening
HSSP	Health Sector Support Project
IFA	Iron and Folic Acid
IPC	Infection Prevention and Control
ISAF	Implementation of the Social Accountability Framework
KC	Kampong Chhnang
KfW	German Development Bank
KOICA	Korea International Cooperation Agency
LB	Live births

MAFF	Ministry of Agriculture, Forestry and Fisheries
MAM	Moderate Accute Malnutrition
MDTF	Multi-Donor Trust Fund
MCH	Maternal and Child Health
M&E	Monitoring and Evaluation
MEF	Ministry of Economy and Finance
MMR	Maternal Mortality Rate
MNPs	Multiple Micronutrient Powders
MoCS	Ministry of Civil Service
MoEYS	Ministry of Education, Youth and Sport
MoH	Ministry of Health
MoI	Ministry of Interior
MoJ	Ministry of Justice
MoLVT	Ministry of Labor and Vocational Training
MoND	Ministry of National Defence
MoP	Ministry of Planning
MSGs	Mother Support Groups
MoSAVY	Ministry of Social Affairs, Veterans and Youth Rehabilitation
MOWA	Ministry of Women's Affairs
MPA	Minimum Package of Activities
NCD	Non-Communicable Disease(s)
NFV	National Fund for Veterans
NGO	Non-Governmental Organisation
NMCHC	National Maternal and Child Health Centre
NPH	National Paediatric Hospital
NQEMP	National Quality Enhancement Monitoring Process
NQEMT	National Quality Enhancement Monitoring Tools
NSPC	National Social Protection Council
NSPPF	National Social Protection Policy Framework 2016-2025
NSSF	National Social Security Fund
NSSFC	National Social Security Fund for Civil Servants
OD	Operational (Health) District
PAE	Public Administrative Entity
PBC	Performance-based Conditions
PCA	Payment Certification Agency
PDO	Project Development Objective
PFM	Public Financial Management
PHD	Provincial Health Department
PIN	People in Need
PP	Phnom Penh
PRH	Provincial Referral Hospital
PWDF	Persons With Disabilities Foundation
RACHA	Reproductive and Child Health Alliance
RGC	Royal Government of Cambodia
RH	Referral Hospital
RHAC	Reproductive Health Association of Cambodia
RMNCHN	Reproductive, Maternal, Newborn and Child Health and Nutrition
RMNH	Reproductive, Maternal and Neonatal Health
SDG	Service Delivery Grant
SDG	Sustainable Development Goals
SHD	School Health Department
SHIC	Social Health Insurance Committee
SHP	Social Health Protection
SHPA	Social Health Protection Association
SHPP	National Social Security Fund

SNV	Netherlands Development Organisation
SOA	Special Operating Agency
SPPF	National Social Protection Policy Framework
SWOT	Strengths, Weaknesses, Opportunities and Threats
TWGH	Technical Working Group Health
U5	Under 5
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
URC	University of Research Company
USAID	United States Agency for International Development
USD	United States Dollars
VHSG	Village Health Support Group
VHV	Village Health Volunteers
WB	World Bank
WFP	World Food Programme
WHO	World Health Organisation

Summary

A study was undertaken in the period October-November 2017 for the Czech Development Agency (CzDA) as a reference document for the design and formulation for the next funding period (2016-2023) in the health sector of the Kingdom of Cambodia. The study was updated in June-September 2023 to reflect recent developments in the health sector in the country, and to serve as the implementation tool of the Bilateral Programme for the next phase 2024-2028.

For the original study, the CzDA provided a framework for which a pointed situational analysis was requested in view of feasibility and viability for a period of five years. This framework contained:

- A programmatic focus on Mother and Child Health (MCH), prevention of chronic malnutrition and health insurance
- A geographic focus on Kampong Chhnang (KC) province
- Birth certificate support for the systematic registration of all newborns
- Focus on vulnerable groups (ethnic minorities)
- The probable annual budget was estimated at 500,000 Euro per year

The initial study team followed a typical methodology for a study of this nature. It comprised a desk review (Terms of Reference of the study, related policies, strategies, guidelines of the Royal Government of Cambodia (RGC), donor and project strategies, plans and reports of Non-Governmental Organisations (NGOs), related research papers, key informant interviews in Phnom Penh (PP) with Ministry of Health (MoH), German International Cooperation (GIZ) and GFA Consulting Group Social Health Protection, Muskoka and Musefo projects, Action For Health (AFH), Cambodian Health Committee (CHC), Family Health Development (FHD)u, World Vision, UNFPA and UNICEF, and visits to Kampong Chhnang for direct observations, interviews with Provincial Health Department (PHD), Provincial Referral Hospital (PRH), Provincial Birth Certificates Bureau, Boribo and Kampong Tralach Operational Districts (OD), District Referral Hospitals (DRH) and visits to Health Centres (HC). Group discussions were held with HC staff and members of Health Centre Management Committee (HCMC) and Village Health Support Group (VHSG) community support groups.

For the review and update of the study, the consultant followed a similar methodology, including a desk review of more recent documents of the same nature, and key informant interviews with the MoH at the national level, Kampong Chhnang PHD, and staff from CzDA who had recently conducted field work in Kampong Chhnang to assess the sustainability and state of the health facilities since the completion of the previous project two years prior.

This study provides relevant background information on related governmental and development partners' (DP) policies and strategies, on the evolution of maternal and child health including malnutrition, the situation in Kampong Chhnang province and supply side health financing mechanisms. An overview is included on the main actors in the health sector in Kampong Chhnang. While the initial study pertained to birth certificates and vulnerable groups, this section was removed in the 2023 update to reflect the evolving priorities of CzDA.

Key points are the remarkable progress in the reduction of maternal mortality ratio and infant mortality rate over the last decades. In this light, additional funding might rather have an impact on neonatal mortality, which makes 66% of all causes of infant mortality, than on further reduction of maternal mortality. However, further progress will only be evidenced in the reduction of mortalities over a longer period beyond the envisioned funding period. Proxy indicators will have to be applied to evidence progress. Similar reasoning is valid for the reduction of (chronic) malnutrition. Cooking and feeding habits and limited knowledge about nutritious food items (type, frequency and diversity of food) appear to be the main causes of inadequate food intake, less so poverty as a direct cause. Striking is also the access and use of sanitation and water. While access to clean water appears less of an issue, it is more the use of it at household level – hand-washing after defecation, before cooking and eating is subject to awareness and behaviour change, i.e. work on community level. Only 83.7% of the rural population has access to improved sanitation facilities, which needs to be addressed through community-involved increase of latrines and the use of them.

Work on the community level is a priority for the increase of awareness, knowledge, and eventually aptitude and behaviour change in nutrition, as well as recognising danger signs in pregnancy and pre-delivery, nutritious food items and the use of them for regular diversity and enriched food, alongside the prevention of chronic diseases (diabetes and hypertension), and improvement in water and sanitation.

Kampong Chhnang does not inhabit indigenous ethnic minorities, however the most vulnerable group identified are textile factory workers, who are mostly female. The original study in 2017 identified a second vulnerable group as the floating village population of around 60,000 at the time, however the government has since relocated these villages to land in order to preserve the health of both the Tonle Sap and the population who were living on it. While no reliably accurate figure could be obtained on the number of female textile factory workers employed in the province, it is estimated at approximately 50,000. Factors impacting negatively on their health, and consequently on their children during pregnancy and the first 1,000 days of life, include overly long and mostly standing working hours and over time, low wages, and distance from home to work. In consequence women tend to eat poorly, are too tired to cook, and go to sleep without dinner. Children, also at breastfeeding age, are left with the grandmothers and other caregivers, who themselves have limited to no knowledge about health and nutrition and are more difficult to reach to modify their habits.

During the recent years some innovative methods were introduced also in reaching the communities. NGO activities usually work with existing community structures, such as the HCMC and VHSG with active participation of community, village and Commune Council members. This creates sustainability in projects and. Currently, there is also a significant focus from a number of NGOs, including Helen Keller International (HKI) and the Netherlands Development Organisation (SNV), to advocate for extending paid maternity and introducing paternity leave, and the installation of lactation rooms in workplaces around the country, which would allow for the large population of garment factory workers to practice better child feeding and care.

Demand side health financing schemes are looked at. The initial study found Community Based Health Insurance (CBHI) initiatives unsustainable, as the NGOs could not sustain their overhead costs after their dual role during the past Health Sector Strategy, when the NGOs functioned as the 'Health Equity Fund Operator' through which they covered their overhead costs. Since this role has changed and reduced the scope of work, the overheads are not covered and could not be maintained through the CBHI because it would increase the premiums to a level un-payable by the insurance card holders. The further roll-out of the institutional social and health protection schemes is a large and slow undertaking, with target groups such as civil servants and private sector formal employees.

Based on the framework of CzDA and the current situational analysis, the study team conducted a SWOT analysis on the interventions that would respond to the framework given by the CDA for the study, which was updated by the consultant in 2023 to reflect the current situational analysis. The SWOT analysis aims to provide a reference for further decisions by the CzDA and includes the priority areas of:

- Neonatal care
- Non-communicable diseases
- Social and health insurance financing
- Community health insurance financing
- Designation of training of equipment/facility maintenance specialists
- Financial management training
- Community nutrition
- Community WASH
- Infrastructure/equipment upgrade and provision
- Infrastructure/equipment provision (for neonatal care)

Introduction

The Czech Development Agency (CzDA), the contracting authority, is participating in revising the Bilateral Development Cooperation Programme between the Czech Republic and Cambodia for the period 2024–2028. The emphasis of the cooperation is inclusive social development, which will amongst other elements, focus on support to the healthcare sector with specific emphasis in the area of maternal and child healthcare (MCH).

To design projects effectively within the defined time frame, an initial study was required to analyse the current situation of the Cambodian healthcare. For this reason, a study was commissioned in 2017 and updated in 2023, which aims to provide the contracting authority with an overview on priority health needs of communities, focusing on MCH, child malnutrition, health insurance and the set up and operations of the health care system in Cambodia.

Cambodia comes from a deeply traumatic history. During the Khmer Rouge period all social sectors were destroyed and the majority of educated professionals were killed or fled the country. Thereafter during the past 3 decades (since the Paris Peace Agreement in 1991) the country has successfully re-established peace and stability, and national elections were held in 1993, 1998, 2003, 2008, 2013, 2018 and 2023.

According to the Human Development Report 2021-2022, Cambodia's per capita income in 2021 was USD 4,079, and the country sat at 146 out of the 191 countries on the Human Development Index. Cambodia is predominantly an agricultural country with a total land area of 181,035 square kilometers.

In 2019 the Ministry of Planning (MoP) estimated the total population to be 15.55 million. 60.6% of the population lives in rural areas, the population density is 87 per square kilometer, while 2.2 million inhabitants reside in Phnom Penh. The average household size is 4.3 and the total male to female sex ratio is 95. The literacy rate among male adults is 90.9%, and 84.8% among females. Currently, it is estimated that the percentage of the total population living below the poverty line fell to 17.8% in 2019, almost half from 2009 (MOP, 2019).

Objectives of the Study[1]

The objective of this study and subsequent update was to provide analyses of the current status of the communities' needs related to MCH in Cambodia as well as of the health care delivery system. As requested by CzDA, the report is structured following strictly the points listed in the initial TOR and is divided into two main parts:

Part I consists of:

- Policies, regulations and programmes focusing on MCH and child malnutrition
- Background information and primary data on MCH
- System of setting up and functioning of social and health insurance
- Operations and the role of individual health facilities (health centers, Referral Hospitals) in the area of MCH and child malnutrition in Kampong Chhnang

Part II covers:

- Needs of local communities in the area of MCH and child malnutrition
- Stakeholder analysis
- Priorities and options for the use of the CzDA Funds

Methodology

The research study was based on a comprehensive review of relevant Governmental documents including statistics, policies, strategies and programmes of the Ministry of Health (MoH), Ministry of

[1] See Annex 6 for full Terms of Reference.

Planning (MoP) and the Ministry of Interior (MoI) of the Royal Government of Cambodia and other relevant actors. In addition, the team also reviewed reports of donors and non-government organisations. For the original study, the document review was complemented by field visits and data gathered during the key informant interviews, focus group discussions (FGD) and observations in Phnom Penh and Kampong Chhnang Province. The 2023 update to the study included a desk review of relevant documents from Government, donors and non-government organisations in the interim period 2017-2023, as well as consultation meetings with the Ministry of Health, Kampong Chhnang Provincial Health Department, and the Foreign Development Cooperation of Czech Republic.

In order to not raise false expectations among the potential beneficiaries of CzDA support and in order to avoid duplication of questions used during formulation, the study does not outline detailed specifics on exact equipment and infrastructure but rather outlines possible areas for interventions. The interventions are analysed using SWOT analysis and take into account the possible integration of other desired sectors for intervention, namely WASH and education.

Principles

The study team adhered to basic principles:

- **Needs based:** The study is based on available data, triangulated with information collected directly from and with communities, as well as health services providers and their respective managers.
- **Making a difference:** The proposed options aim at interventions with a likelihood to make a concrete difference for families in the supported communities, with sustainability as a key factor.
- **Gaps and complementarity:** Emphasis is given to avoid overlaps/duplication with existing programs, and rather identify gaps in order to propose interventions that are complementary to existing support.
- **Consensus:** The study team aims at a joint understanding and agreement between the health authorities at that national, provincial and OD levels, development partners and the CzDA on the needs and options for interventions.

Steps

The initial study process was carried out in the following phases:

1. **Desk review** of policy, strategy and implementation documents of public sector, NGOs, UN agencies and donors.[2]

2. The desk review was accompanied by **initial meetings** by the team member based in Phnom Penh at national, provincial and OD levels. Meetings were conducted with:
   - Director of AFH, CHC and FHD
   - Director of Provincial Health Department of Kampong Chhnang
   - Chief of the Technical Bureau and Chief of Maternal and Child Health in the Provincial Health Department (PHD) of Kampong Chhnang
   - Director of Boribo OD
   - Director of the Boribo District Referral Hospital
   - Director of the Kampong Tralach OD
   - Director of the Kampong Tralach District Referral Hospital
   - Trapeang Chan Health Centre Chief, midwives and staff

[2] See Annex 4 for the full list of documents consulted.

- Long Vek Health Centre Chief and midwives
- HCMC/VHSG members

3. The entire team was **in country** between the 16th and the 24th November 2017. The purpose of the visit was:
   1. Further detail the identified needs within the given framework of CzDA
   2. Identify and describe the implementation options for CzDA and the most suitable modalities
   3. Approach the above points aiming at a consensus between various beneficiaries, the health administration and CzDA. The team understand their role as technical advisors to facilitate the engagement.

4. For this purpose, **further key informant interviews and group discussions** were held.
   - Interviews and meetings on national level included:
     - MoP
     - MoH insurance
     - MCH Director/Nutrition director
     - NGOs that were implementing a health insurance scheme (CHC, FHD, AFH)
     - UNFPA, UNICEF
     - GIZ for health insurance, nutrition, social health protection, maternal health and multi-sectoral food and nutrition security projects
     - World Vision Technical Lead for Nutrition, Health and WASH
   - In Kampong Chhnang the following were consulted:
     - Health centres and hospitals that were expected to receive supporting infrastructure and procurement
     - Community agents/focus group discussions with HCMC and VHSG members with four agenda points:
       1. Clarification that the purpose of the meeting was not to give any promise, but to help the donor and to better understand the situation and needs.
       2. Investigate the understanding about maternal health, what are the problems, what works well, where are the difficulties, what can be done about it by the communities and how the donor can support.
       3. Same as point 2 regarding child health and nutrition.
       4. Investigate what the community knows about health insurance, what are the expectations, what communities can do, and what and how can a donor support.

For the update to the study in 2023, the consultant followed a similar process by conducting a desk review of similar documents to the original study with a view to update any information based on new documents from the interim pierod, as well as interviews with key informants. According to the scope of the TOR, this update did not see any field work undertaken so consultation took place either through online interviews or email communication (as indicated below). The interviews focused on the same principles as listed above in step 3 and 4, and were conducted with:

- Selamawit Negash , UNICEF Nutrition Specialist
- Paul Robyn, World Bank Senior Health Specialist
- HE Prak Vonn, Kampong Chhnang PHD Director
- Lucie Jungwiertová, Czech Development Agency
- Dr. Kim Rattana, Director of National Maternal and Child Health Centre (NMCHC)

Limitations

The main limitation of the study derived from the lack of accurate, more recent data, particularly concerning a number of key strategy documents that had expired and were yet to be updated, and the absence of potential key informants of the MoH and some NGOs active in MCH and/or nutrition, particularly local organisations operating at the community level. However, these limitations are not

unusual in this setting and present rather the nature of this type of work. The team found alternative sources of information to describe the situation fairly. The study team also believes to have overcome the language barriers by flexibly adjusting to situations and worked out translation and interpretation capacities within the team.

Workplan

Table 1: Workplan for the 2017 Field Study

Date	Time	Informant	Person Met
24-10-2017	9:00 - 10:00	AFH Director on Social Health Insurance Project	Dr. Long Leng
25-10-2017	10:00 - 11:30	Director of Provincial Health Department, Kampong Chhnang	Dr. Prak Vun
25-10-2017	14:00 - 15:30	Chief of the Technical Bureau of Provincial Health Department, Kampong Chhnang	Dr. Ker Chanthearith
26-10-2017	9:30 - 11:30	Director of the Boribo Operational District (CPA1)	Dr. Chhun Buntha
26-10-2017	14:00 - 15:30	Director of the District Referral Hospital (CPA1)	Dr. Seung Samnang
27-10-2017	9:00 - 11:00	Director of Kampong Tralach District Referral Hospital	Mr. Mom Sieng Heng
27-10-2017	14:00 - 15:30	Director of Kampong Tralach Operational District	Mr. Chuon Sokhum
30-10-2017	9:00 - 10: 30	HCMC/VHSG	Community members
16-11-2017	10:00 - 11:30	CHC (insurance NGO)	Mr. Heng Bunsieth
16-11-2017	14:00 - 15:00	Action for Health	Dr. Long Leng Mr. Yang Sopheap
16-11-2017	15:30 - 17:00	FHD	Mrs. Kunthea Mr. Chhon Hok
16-11-2017	10:00 - 11:30	CHC (insurance NGO)	Mr. Heng Bunsieth,
17-11-2017	9:30 - 12:00	GIZ Social Health Insurance	Mr. Bern Mr. Kelvin Mr. Jacob
17-11-2017	14:00 0 15:30	GFA MCH Project	Dr. Mary Mohan
18-11-2017	11:00 - 12:00	GFA Nutrition	Dr. Wolfgang Weber
19-11-2017	14:30	Travel to Kampong Chhnang	
20-11-2017	8:30 - 10:30	Provincial Health Department	Dr. Prak Vun Mr. Ker Chanthearith
20-11-2017	11:00 - 12:00	Provincial Referral Hospital	Dr, Karavuthy Dr. Meas Duthy Dr. Sok Kong Yim Phalla (Medical assistant) Kang Morann (Midwife)
20-11-2017	14:00 - 16:00	Provincial Bureau of Birth Certificates	Mr. Un Sopheap

21-11-2017	9:00 - 12:00	Boriba Operational District and Referral Hospital	Dr. Chhun Buntha Dr. Seung Samnang
21-11-2017	14:00 - 15:00	Group discussion with Trapeang Chan Health Centre Group discussion with HCMC/VHSG	Mrs. Prak Sovanna, HC Deputy Mrs. Khuth Vanthun Mr. Ek Sameoun Mrs. Porn Kim
22-11-2017	9:00 - 12:00	Kampong Tralach Operational District and Referral Hospital	Mr. Chuon Sokhun Dr. Ke Vanna Dr. Pok Phalla Dr. Bunna Line
22-11-2017	13:00 - 15:00	Long Vek Health Centre	HCMC and VHSG members
22-11-2017	9:30 - 11:00	World Vision Nutrition Project	Dr. David Raminashvili
22-11-2017	14:30 - 15:30	UNICEF (nutrition)	Dr. Arnaud Laillou

Outline of the report

The report is divided into two parts that includes seven chapters structured according to the topics in the original ToR. Part I includes Chapters 1 – 4 and Part II consists of Chapters 5 – 7.

Part I

Chapter 1 serves as an introduction to the health sector of the Royal Government of Cambodia, outlining the structure of the health system in Cambodia, listing the main health policies and regulations and presenting an overview of international and local NGOs active in the health sector in Cambodia and Kampong Chhnang.

Chapter 2 describes and analyses the status of maternal and child healthcare in Cambodia.

Chapter 3 is then fully dedicated to analyses of social and health insurance, the new developments in this area as well as the available results from past interventions and lessons learned.

Chapter 4 further elaborates on some aspects introduced in Chapter 1, specifically the various roles public health facilities have and the requirements set by MoH that must be fulfilled by health facilities.

Part II

Chapter 5 leads into the needs of local communities in Kampong Chhnang, which was established by the CzDA as the province of focus for this study. Kampong Chhnang is then analysed in terms of needs in MCH, situation of the health facilities and health insurance.

Chapter 6 is fully dedicated to analyses of the stakeholders operating in the health sector in Cambodia. Again, this chapter draws upon the introduction made in chapter 1 of the various interventions and international and local actors active in health system.

Chapter 7 then offers a brief conclusion on the main findings in the report and provides the recommendations for possible interventions of the Czech Development Agency. These recommendations are presented through a SWOT analysis and where possible indicate a link to the education or WASH sector. The intention is not that all interventions are implemented, but rather to offer a base, according to the preferences of CzDA and available funds. Included are also insurance interventions because of the expressed interest of CzDA, however these are not recommended because of the unlikely financial sustainability beyond the funding period.

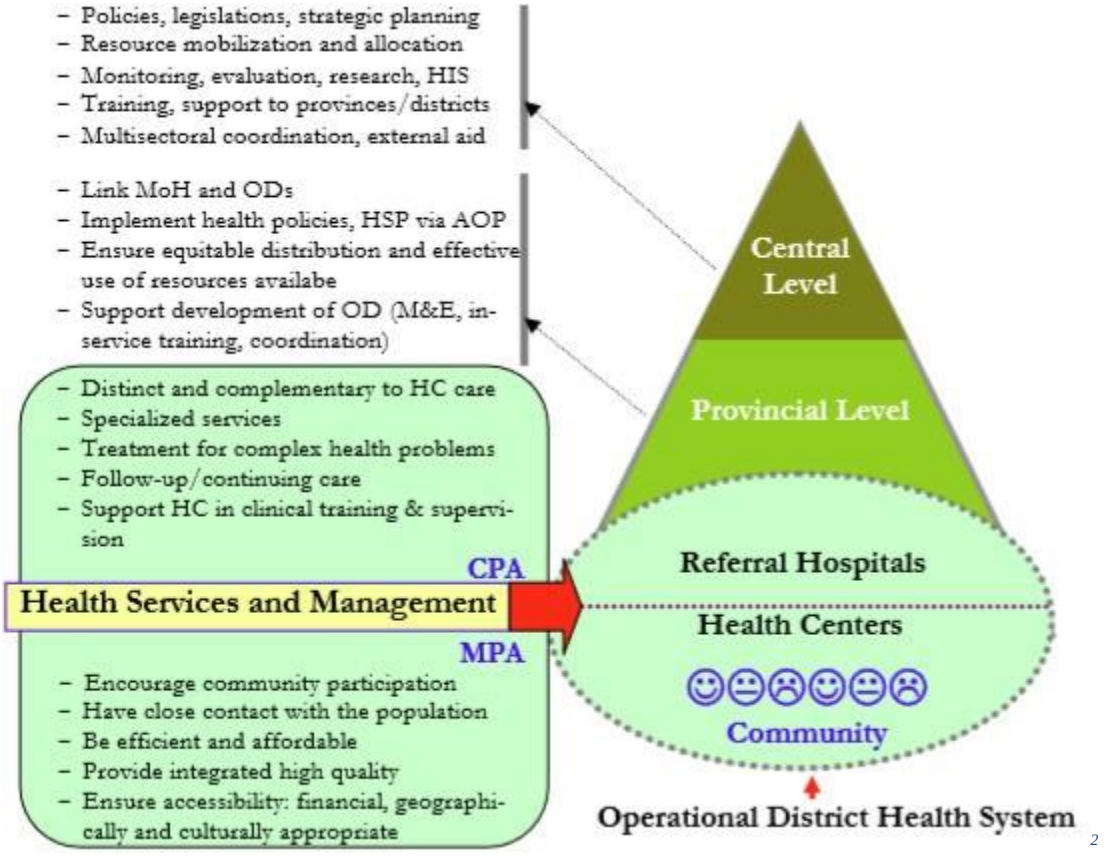
PART I

1. LEGISLATIVE REGULATIONS AND PROGRAMMES FOCUSING ON MATERNAL AND CHILD HEALTHCARE AND CHILD MALNUTRITION

This section provides a comprehensive overview of Cambodia's healthcare system and the pivotal roles played by different health facilities across various tiers. The Ministry of Health (MoH) takes center stage, guiding health policies and overseeing both public, private, and not-for-profit healthcare institutions. A more extensive exploration of the functions of these healthcare facilities in Cambodia awaits in Chapter 4. This chapter also delves into the governmental policies and regulations that have molded Maternal and Child Health (MCH) initiatives to date, and offers an overview of the multitude of organizations actively engaged in Cambodia's healthcare landscape, with a particular focus on MCH and malnutrition interventions, especially in Kampong Chhnang.

1.1. Overview of the Basic Functions of the Ministry of Health in Cambodia

The MoH implemented a health sector reform in 1994. The main objective of the reform was "to improve and extend primary health care through the implementation of a district-based health system approach".[3] The health sector reform shifted from administrative-based health service delivery to the population and accessibility-based health system organization. As a consequence, the current Cambodian health system is organized into three levels: central, provincial and Operational District level (as depicted in Figure 1) and the roles and functions of each level are clearly defined. The organisational structure and responsibilities of the key health actors are outlined, and this is further supported by the MoH organogram in Chapter 6 (Figure 16) where the various lines of reporting are pointed out.



2

[3] The Third Health Strategic Plan 2016-2020 (HSP3): "Quality, Effective and Equitable Health Services." Department of Planning & Health Information. May 2016.

Figure 1: Health System Organisation[4]

The Health Coverage Plan (HCP) is a framework for developing the health system infrastructure, based on a combination of population and geographical criteria, taking into account quality of care and availability of resources. It aims to:[5]

- Develop health services by defining criteria for location of health facilities and their catchment areas
- Allocate financial and human resources in an equitable way with improved efficiencies
- Ensure that population health needs are met in an equitable way through coverage of the whole population
- Define health policy
- Develop planning and strategy for the health sector
- Develop regulations/guidelines to maximize the quality of health services in the public and private sectors
- Monitor, control and evaluate the administrative and technical work of institutes subordinate to the MoH
- Research how to develop the health sector
- Manage resources (human, material, financial and information) at central, provincial, municipal, district, khan and C/S level
- Organize preventive programs and nursing care to decrease the incidence of disease
- Coordinate other resources
- Oversee production, trade and distribution of drugs, medical equipment and paramedical equipment in all public and private health facilities
- Control food safety

1.2. Related and Relevant Legislative Regulation

In this section major health and nutrition policies and their development/reform are briefly introduced. To the main ones belong three Health Strategic Plans for the years 2003 – 2007, 2008 – 2015 and 2016 – 2020. There is currently a fourth iteration of the plan for 2021-2030 being finalized, but unavailable at the time of this study. In general, the goals of the reform are to improve service delivery, financing, human resources and system governance.

1.2.1. Maternal Health Policies and Programme Inputs[6]

- 1995: Birth Spacing Policy
- 1995: Health Coverage Plan
- 1996-2005, 2006-2015, 2016-2020, 2021-2023 (draft): Health Workforce Development Plan
- 1997: Safe Motherhood Policy
- 1997: Legislation on Abortion
- 2006: Comprehensive Midwifery Review in Cambodia
- 2006-2010, 2013-2016, 2017-2023: The National Strategy for Reproductive and Sexual Health and Rights
- 2007 Midwife salary scale increased
- 2007: Report on Midwifery Education
- 2007: Inter-ministerial Prakas on Delivery Incentives
- 2007: National Guidelines for the Use of Iron Folate Supplementation to Prevent and Treat Anaemia in Pregnant Women
- 2008: Multi-year plan of High Level Midwifery Taskforce

[4] Ministry of Health Website

[5] Health Coverage Plan 2010. Ministry of Health.

[6] Success Factors for Women's and Children's Health. Ministry of Health, Cambodia. WHO. 2015.

- 2008: Introduction of three year direct entry Associate Degree in Midwifery
- 2008-2009: EmONC and delivery care quality assessments
- 2008-2012: The Strategic Framework for Food Security and Nutrition in Cambodia
- 2009: ANC behaviour change campaign
- 2010-2015, 2016-2020: Fast Track Initiative Road Map for Reducing Maternal and Newborn Mortality
- 2013, 2020: National Safe Motherhood Clinical Management Protocols
- 2016: Safe Motherhood Protocols for Health Centres
- 2010-2015, 2016-2020: Emergency Obstetric and Newborn Care (EmONC) Improvement Plan
- 2016: Guidelines for Implementing the Service Package of Antenatal Care and Postnatal Care
- 2020: National Guidelines for the Services Provision of Maternal and Newborns Care During the Pandemic of COVID-19

1.2.2. Child Health Policies and Programme inputs[7]

- 1990 – onwards: Immunisation policies and plans
- 1994, 1996, ongoing: Vitamin A policies (Vitamin A linked with routine immunization 1996)
- 1995: Health Coverage Plan
- 1996-2005, 2006-2015, 2016-2020, 2021-2023: Health Workforce Development Plan
- 1997: National policy on ARI/CDD and Cholera Control
- 1997: National Control Programmes for Malaria and Dengue
- 1998: Policy & Guidelines on Integrated Management of Childhood Illnesses (IMCI) in Health Centres
- 2002, 2008: National Policy on Infant and Young Child Feeding
- 2003-2008, 2008-2015, 2016-2020 20216-2030 (draft): Health Strategic Plan
- 2004: Child Survival Benchmark Review and High Level Consultation
- 2004: Child Survival Steering and Management Committee
- 2004: Child Survival Scorecard
- 2004: Exclusive Breastfeeding Campaign
- 2005: Sub-decree 133 on the Marketing of Products for Infant and Young Child Feeding
- 2006-2015, 2016-2020: Child Survival Strategy
- 2008-2012: The Strategic Framework for Food Security and Nutrition in Cambodia
- 2010-2015, 2016-2020: Fast Track Initiative Road Map for Reducing Maternal and Newborn Mortality

1.2.3. Nutrition Policies and Strategies

- 2003-2007: Cambodia Nutrition Investment Plan
- 2011: Interim Guidelines on Management of Acute Malnutrition
- 2008-2012: Strategic Framework for Food Security and Nutrition in Cambodia
- 2009-2015, 2016-2020: National Nutrition Strategy
- 2010: National Micronutrient Survey
- 2010-2013: National Communication Strategy to Promote the Use of Iron/folic Acid Supplementation for Pregnant and Post-partum Women
- 2011-2013: COMBI Campaign to promote complementary feeding in Cambodia
- 2008-2010, 2011-2013: National Communication Strategy for Promotion of Vitamin A in Cambodia
- 2011: National Policy and Guidelines for Micronutrient Supplementation to Control and Prevent Deficiencies in Cambodia
- 2014-2020: Fast Track Road Map for Improving Nutrition

[7] Ibid.

- 2014-2018, 2019-2023: National Strategy for Food Security and Nutrition

Cooperation on MCH topics is mainly overseen by the Ministry of Health and the Ministry of Education, Youth and Sports (MoEYS), and the School Health Department (SHD) of the Ministry of Education also supports hygiene and sanitation for primary school children. Other ministries contributing to MCH are the Ministry of Agriculture, Forestry and Fisheries (MAFF) and Ministry of Rural Development (MRD) with their focus on food security and nutrition, the Ministry of Interior responsible for the birth certificates, and the Ministry of Planning that is in charge of the IDPoor system. In addition, the Council for Agricultural and Rural Development (CARD) plays a significant role in coordinating efforts related to food security and nutrition.

1.3. Overview of Governmental Programme Priorities and Strategies for MCH

1.3.1. Priorities of the RGC in Maternal and Child Healthcare

The MoH is solely responsible for the organisation and delivery of public sector health services. The Directorate General for Health oversees health service delivery through 25 MoH Provincial Health Departments comprising 94 health Operational Districts, distributed according to population.[8] 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.

Figure 2 below illustrates the core priorities of the Ministry of Health in the 2016-2020 Health Strategic Plan.

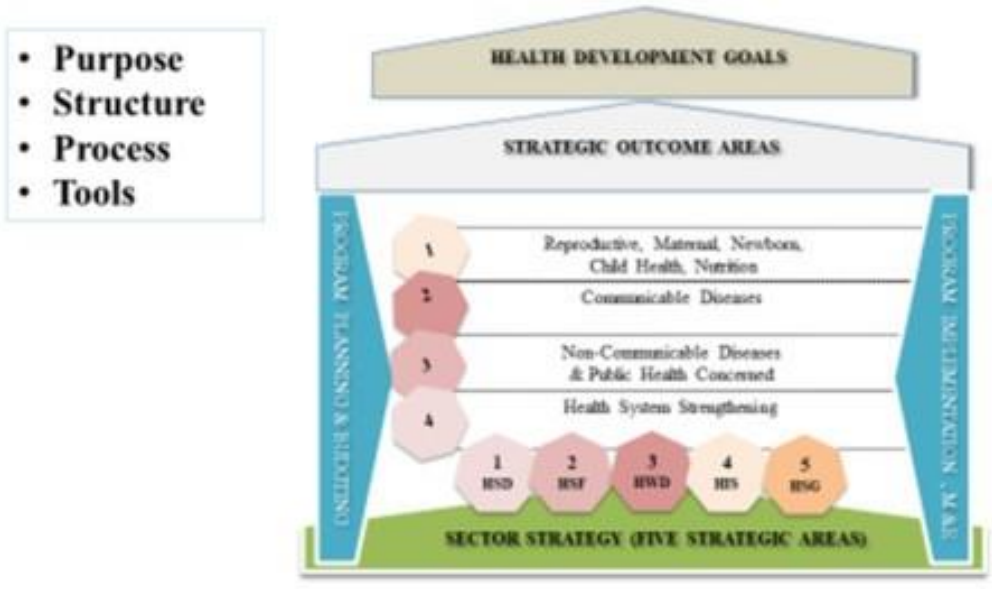


Figure 2: Operational Framework of HSP[9]

[8] Department of Planning and Health Information (DPHI), Health Information System Master Plan 2016–2020. 2017.

[9] The Third Health Strategic Plan 2016-2020 (HSP3): "Quality, Effective and Equitable Health Services." Department of Planning & Health Information. May 2016.

Maternal and child health is a core priority in the third Health Strategic Plan. The MoH issued policies which are enabling effective progress in reproductive, maternal and neonatal health (RMNH).[10] They include promotion of institutional delivery, financial incentives for each live birth in a public health facility and a reasonable midwifery staffing standard for facilities (including at least two secondary midwives per Health Centre). Table 2 summarises the progress on selected indicators between 2008 and end 2020. It also identifies gaps in data collection due to insufficient quality of recording.

The Cambodia Health Strategic Plan responds to specific health needs of the population in MCH care:

- Supporting infrastructure, equipment and materials to improve the quality of maternal and child/neonatal services
  - Operation theater, delivery room, neonate room, some necessary equipment and materials at the provincial Referral Hospital and district Referral Hospitals and some health centers
  - Upgrading EmONC facilities
- Quality/skills and capacity building of medical staff in MCH
  - Upgrading skills in delivery care, neonatal emergency care and post-delivery care
  - Upgrading skills in birth spacing education, nutrition/malnutrition and prevention of severe disease among children
  - Providing trainings on child nutrition, prevention and treatment of child diseases, neonatal emergency care, breastfeeding and obstetric/delivery care.
  - Skill-coaching and monitoring related to MCH
- Strengthening midwifery skills through competency-based training in breastfeeding, proper nutrition, emergency obstetric and neonatal care and expanding opportunities for practice and on-site coaching, especially at Health Centres and Referral Hospitals to:
  - Improve quality and quantity of antenatal care
  - Improve quality of intra-partum/delivery care
  - Improve quality and quantity of post-natal care
  - Reinforce early initiation of exclusive breastfeeding
  - Increase coverage and quality of safe abortion services
  - Improve appropriate newborn care practices
- MCH behavioural change and communication (BCC) promotion for health providers and villagers at the community level through VHSGs and Mother Support Groups (MSG)
  - Strengthening the network between community and health services (community mothers, VHSGs, MSGs)
  - Promoting community health awareness and health education activities
  - Emergency referral of MCH problems to public services
  - Capacity building of the Commune Council members (Health Centre Management Committee (HCMC) to promote birth certificates, especially among poor households
  - Capacity building of community agents (VHSGs, MSGs)
  - Screening for child malnutrition (underweight/stunted children) and health education
  - Conducting community needs assessments in regard to maternal and child healthcare and nutrition
  - Designing community-specific BCC tools to implement MCH and nutrition interventions
  - Increasing quality, availability and accessibility of family planning services
  - Supporting Social Health Protection (SHP) for poor households to access MCH services
  - Removing financial barriers to access the full package of health services (the full package of reproductive, maternal and newborn health services should be included in benefit packages of Health Equity Funds and national health insurance)

Progress in EmONC to date has been strongest in terms of expanding coverage of Basic EmONC Care

[10] Emergency Obstetric & Newborn Care (EMONC) Improvement Plan 2016 – 2020. Ministry of Health. June 2016.

(BEmONC), from 19 facilities in 2009, to 45 in 2020[11]. This is still a shortfall of at least 74 BEmONC facilities to reach the international standard of 4 facilities per 500,000 population. Coverage of Comprehensive EmONC Care (CEmONC) expanded significantly from 2009 to 2015, and remained stable in 2020 at 35 facilities. This is aligned with the goal of the 2016-2020 EmONC Improvement Plan. While coverage has improved, there is still a significant gap in coverage of BEmONC facilities at the lower level (CPA1 Referral Hospitals and Health Centres).

Table 2: Summary of Main Progress in EmONC Between 2008, 2014 and 2020

Domain/ indicator	Baseline 2008	Progress 2014	Progress 2020	Remarks
Number of functional EmONC facilities (defined as 3 months performance of all signal functions) Number of EmONC facilities recommended for upgrade	44, out of 143 recommended EF, out of a total of 347 assessed (incl. 40 private). 99 recommended for upgrade	63, out of a total 178 assessed (no private). 115 recommended for upgrade		Applying the extended definition of 7 and 9 signal functions performed in the last 12 months improves the figures and shows missing signal functions
Density of functional EmONC facilities, per 500,000 population	1.64	2.3511	2.62	Expectation: at least 5
Density of functional CEmONC facilities, per 500,000 population	0.93	1.31	1.14	Expectation: 1.0 (met in 2014)
Geographic distribution of EmONC facilities	5 provinces had none	1 province had none (Kep)	Coverage of BEmONC poor at sub-national level	Depending on size of population. USE MAPS
Proportion of births in functional EmONC facilities	11.4%	23.5%	29.7%	Should be minimum 15% but can go up to 100% (optimal)
Proportion of births in all EmONC facilities	17.8%	35.0%	37.09%	Same
Met need for obstetric complications in functional EmONC facilities	*12.7%*	*23.6%*	*31.6%*	*Indictor not built on reliable definitions of direct obstetric complications*
Met need for obstetric complications in all EmONC facilities	*14.5%*	*30.0%*	*38.7%*	*Same*
Proportion of births by Cesarean section (in CEmONC facilities)	1.3%	3.9% (22.6% in Phnom Penh)	4.9% (15.9% in Phnom Penh)	Decrease in Phnom Penh could be due to more women using private facilities
Direct obstetric case fatality rates in functional EmONC facilities	*0.75%*	*0.19%*	*0.44%*	*Indictor not built on reliable definitions of direct obstetric complications*
Direct obstetric case fatality rates in all EmONC facilities	*0.74%*	*0.16%*	*0.56*	*Same*
Intra-partum mortality rates	*1.2%*	*1.53%*	*1.2%*	*Indicator not built on reliable definitions of*

[11] Ministry of Health. Review of Emergency Obstetric & Newborn Care (EmONC) Improvement Plan 2016-2020. August 2020.

				intrapartum stillbirths and very early newborn deaths
Proportion of indirect obstetric complications	*29.0%*	*16.7%*	*7.3%*	*Indicator not built on reliable definitions of direct and indirect obstetric complications*
Number of maternal complications referred OUT of EmONC facilities to higher level in one year	2,545	5,512	7,172	Causes: hemorrhage, obstructed labour, Pre/eclampsia, preterm, anaemia, other
Number of maternal complications referred INTO EmONC facilities from lower level in one year	2,135	5,274	19,720	Missing the causes of referral
Number of newborn complications referred OUT of EmONC facilities to higher level	258	336	1,812	Causes: low birth weight, prematurity, respiratory problems, sepsis, jaundice, other
Number of newborn complications referred INTO EmONC facilities from lower level in one year	0	993	1,628	Missing the causes of referral
% of functional EmONC facilities with 2 or more secondary midwives	84%	98%	100%	
% of non-functional EmONC facilities with 2 or more secondary midwives	45%	74%	97%	
% of midwives trained in administering MgSO4 for pre-eclampsia (and performed this signal function in last 3 months)	34% (12%)	86% (30%)	92%	

Note: less reliable data is presented in *italic*

The National Nutrition Programme contains four components with key elements in each of them. The current programme focuses on three key priorities in small and at scale interventions:

1. Complementary feeding promotion
2. Multiple Micronutrient Powders (MNPs)
3. Management of Acute Malnutrition (MAM)

The key elements of the National Nutrition Programme are detailed in Box 1 and Box 2.

Box 1: National Nutrition Programme

Micronutrient Interventions Programme	**Nutrition Policies and Strategies**
• Anaemia Prevention and Control Program (WIFA, IFA) • Multiple Micronutrient Powder Supplementation Programme	• 2003-2007: Cambodia Nutrition Investment Plan • 2011: Interim Guidelines on Management of

- National Vitamin A Program
- National Iodine Deficiency Disorder

Collaboration and Coordination

- Nutrition Working Group (government institutions and development partners)
- Food Security and Nutrition Working Group (government institutions and development partners)
- National Council for Nutrition
- Council Agricultural and Rural Development

Infant and Young Child Feeding Programme

- Baby Friendly Hospital Initiative (BFHI)
- Baby Friendly Community Initiative (BFCI)

Acute Malnutrition

- 2008-2012: Strategic Framework for Food Security and Nutrition in Cambodia
- 2009-2015, 2016-2020: National Nutrition Strategy
- 2010: National Micronutrient Survey
- 2010-2013: National Communication Strategy to Promote the Use of Iron/folic Acid Supplementation for Pregnant and Post-partum Women
- 2011-2013: COMBI Campaign to promote complementary feeding in Cambodia
- 2008-2010, 2011-2013: National Communication Strategy for Promotion of Vitamin A in Cambodia
- 2011: National Policy and Guidelines for Micronutrient Supplementation to Control and Prevent Deficiencies in Cambodia
- 2014-2020: Fast Track Road Map for Improving Nutrition
- 2014-2018, 2019-2023: National Strategy for Food Security and Nutrition

Box 2: Small and At-scale Nutrition Interventions

Current Nutrition Interventions Implemented at Small Scale

- Complementary feeding promotion
- Multiple micronutrient powders for children 6-24 months
- Management of acute malnutrition
- Weekly iron/folic acid supplementation for women of reproductive age
- Baby Friendly Hospital Initiative
- Baby Friend Community Initiative

Current Nutrition Interventions Implemented at Scale

- Vitamin A supplementation for children 6-59 months and postpartum mothers
- Iron/folic acid supplementation for pregnant and postpartum women
- Breastfeeding promotion
- Salt iodization and promotion
- In-service training in nutrition (MPA 10)

1.3.2. Sources and Health Financing of Government Funding for Health Services

Currently, the Ministry of Health operates the health system by using the government budget that is financed through the Ministry of Economy and Finance. In addition to this, further portions of external funding come from the H-EQIP pooled resource which is contributed by partner donors and the World Bank through the Cambodia Nutrition Project (CNP) 2019-2024. This government and external funding are allocated to human resource salaries, health staff incentives, monitoring, capacity building and to renovation or construction of health infrastructure.

Despite this financing input to the overall health system, it is reported by stakeholders or service providers at the provincial level that further financial resources are required for the renovation of health infrastructure, equipment and community health activities. Table 3 details the sources and the financing scheme of government funding for health services.

Table 3: Sources and Financing Scheme of Government Funding for Health Services[12]

Scheme	Implementer/ Operator	Target Population	Benefits/services	Provider-payment Mechanism	Coverage/ remark
Tax funding via government budget	MEF, MoH, PHD, OD, RH, HC	All population	Recurrent budget, staff, drugs and supplies	Line item budget and in-kind donations, including equipment and drugs	Public health facilities nationwide
User fees	Health facilities	All population with capacity to pay	All available services at healthcare facilities	Fee-for-Service, lump-sum or case-based	*98% of health facilities implement user fees*
User fee exemptions	MoH, health facilities	Poor patients	MPA and CPA services	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 standardised 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	All population with capacity to pay	Selected health services	Fee-for- service	Where available
Vouchers for reproductive health	NGOs	Poor women	Reproductive health services	Fee-for-service, in some cases transport costs	*In 9 ODs (with 5 RHs and121 HCs) and 4 private clinics; Covers 255 and 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*
Maternity benefits	MOLVT, NSSF, MOSVY, NSSFC	Pregnant women in the formal private sector and civil servants (incl. spouses)	*For private sector, 3 months maternity leave with 50% salary. For civil servants, 3 months maternity leave with full salary*	Salary payment	Nationwide

[12] The Kingdom of Cambodia Health System Review. Health Systems in Transition. Vol. 5 No. 2. 2015. WHO 2015.

			and cash incentive of US$150 per newborn		
Social health insurance	NSSF, NSSFC	Formal sector workers and civil servants	TBD	TBD. 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	*0 SOAs in 9 provinces and 22 ODs with8 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

Note: not all of the information in Table 3 could be verified in the 2023 update to the study. Less reliable data is presented in *italic*.

1.4. Health System Monitoring and Data Collection

Data utilization is crucial for monitoring progress and planning activities, particularly concerning maternal and child health indicators. Cambodia primarily relies on household surveys to assess nationwide improvements in under-five and neonatal mortality, namely the Cambodia Demographic Health Survey that has been conducted in 2000, 2005, 2010, 2014, and most recently in 2021/22, with a focus on health equity outcomes. Ensuring the quality and analysis of these surveys holds significant importance.

To enhance routine data collection, efforts have been ongoing since 2007, supported by regular Health Information System (HIS) reviews conducted by the Ministry of Health's Department of Planning and Health Information, along with WHO. HIS encompasses various systems, including Health Management Information System (HMIS), Patient Management Registration System, Logistics Management Information System, Human Resources Information System, and Financial Management System, among others.[13]

Since 2011, the quality and completeness of HIS data have been assessed, revealing high levels of completeness in reporting (99%) and internal consistency, though some disparities exist in certain indicators, such as measles immunization. Regular performance reviews utilizing data from the Joint Annual Performance Review help track achievements against targets in Annual Operational Plans (AOPs) using HIS data, identifying gaps and devising strategies to address them. Moreover, data from

[13] Department of Planning and Health Information (DPHI), Health Information System Master Plan 2016–2020. 2017.

the Child Survival Scorecard, which was introduced in 2007, plays a vital role in tracking progress and informing planning efforts related to twelve priority child survival interventions.[14]

Sub Decree No. 81 on the Implementation and Functioning of the Digital Government Committee established a governmental body under the Ministry of Health, responsible for developing the Digital Health Strategy that is scheduled for finalization in 2023. Data collection is carried out through the National Institute of Statistics (respectively National Institute for Public Health), drawing from HMIS. HMIS serves as a dedicated information system for managing and planning health programs, collecting and reporting data on disease incidence, patient information, and health services rendered. Although all public hospitals are required to report data monthly, private hospitals are excluded.

The National Maternal and Child Health Centre utilizes various NMCHC Clinical Databases to report to the HMIS Steering Committee regularly. Reports are submitted to the Minister monthly through the Cabinet, using both paper-based and online systems. The DHIS2 database, an open-source platform, plays a significant role in inputting data online, with increasing adoption by provincial and district hospitals.

To enhance nationwide surveying, there are efforts to integrate existing data reporting systems into a Community Health Management Information System (C-HMIS). Additionally, collaborations between the Ministry of Interior, the Asian Development Bank, and the World Bank aim to strengthen civil registration, collecting vital data on deaths and births and providing training to identify the root causes of deaths.

1.5. Overview of Programmes of Foreign Donors

1.5.1. Donors Supporting the Health Sector

Health Equity and Quality Improvement Project Phase 2

The largest contributor to the health sector is the donor group that joined the pool that is funding the Health Equity and Quality Improvement Project – Phase 2 (H-EQIP2). H-EQIP2 derives from its predecessors, H-EQIP and Health Sector Support Project (HSSP 2) and will operate from July 2022 – December 2027 with a focus on improving financial protection and the equitable access to the health services for the poor and vulnerable, enhancing quality of health services and strengthening the health service delivery system. The project also aims to increase the performance, sustainability, efficiency and social inclusion focus of national institutions. H-EQIP2 supports RGC to establish universal health insurance coverage through improved utilisation of the Health Equity Fund (HEF), and strengthens the capacity of the Payment Certification Agency (PCA) as the claims validation agency for major health insurance schemes in Cambodia. It also has a focus on expanding SDGs for health program financing, with performance-based conditions.

The pool of H-EQIP is administered and funded by the World Bank (WB) through an International Development Association credit, and contributions from the Department of Foreign Affairs and Trade of the Australian Government (DfAT), the Global Financing Facility (GFF), the new Cambodia Health Equity and Quality Improvement Multi-Donor Trust Fund (MDTF), which is made up of contributions from the German Development Bank (KfW) and the Korea International Cooperation Agency (KOICA), and the RGC. The financial volume is presented in Box 3.

H-EQIP Phase 2 is aligned with the draft priorities of the Fourth Health Sector Plan (HSP4) 2021-2030, with the Project Development Objective (PDO) to improve equitable access to quality health services

[14] Success Factors for Women's and Children's Health. Ministry of Health, Cambodia. WHO. 2015

in Cambodia, especially for the poor and vulnerable populations. It embraces the 3 components listed in Table 4.

Box 3: H-EQIP Contributions

H-EQIP Pool Partners	Contribution (USD in millions)
WB (IDA)	55
DFAT	19
MDTF (KOICA/KfW)	24
GFF	15
RGC	186
Total	**299**

Table 4: H-EQIP Components

Component		Cost (USD)
Component 1	Improving financial protection and utilization of health equity fund	$112 million
Component 2	Strengthening quality and capacity of health service delivery	$183.3 million
Component 3	Project management, monitoring and evaluation, gender equality and social inclusion	$3.7 million
Component 4	Contingent Emergency Response	$0

PDO indicators are detailed see in Box 4.

Box 4: PDO Indicators

(a) Utilization of health services by HEF beneficiaries in low utilization areas increased

(b) Improved average score on the quality assessment of health facilities

(c) Functions and coverage of PCA services enhanced

(d) Proportion of people diagnosed with diabetes controlling blood sugar increased, disaggregated by gender

(e) Improved average score on the community-based essential service provision

The project beneficiaries are identified as the population of Cambodia, particularly the poor and vulnerable, and public sector healthcare providers.

H-EQIP Phase 2 took lessons from and builds on WB and partners' projects, including H-EQIP Phase 1, HSSP2, CNP, Implementation of the Social Accountability Framework (ISAF), and WB operations in other countries. Key lessons learned that are reflected in the design of the latest phase of the project include:

- Strengthening the social health protection system and increasing focus on the decentralized implementation level.

- Strengthening the results-based focus of the project through the predominant use of output-based payments through HEF, performance-based financing through SDGs, and the use of performance-based conditions (PBCs).
- Mainstreaming the implementation of project activities into RGC systems and strengthening domestic capacity to take over project implementation support, monitoring, and Public Financial Management (PFM) roles.
- Exploring collaboration with the ISAF Project to disseminate feedback from the community collected through ISAF to HFs and health authorities for them to take actions for improvement.
- Utilising HEFs, the impact of the pandemic on disruption of essential health services, gender and social inclusion, capacity gap analysis of RHs, PFM, and SDG impact evaluation.
- Expanding the use of SDGs to more health programs and using PBCs, the similar result-based financing instrument as disbursement linked indicators to incentivize achievement of results.
- PBCs to strengthen the capacity of the RGC's institutional structures for mainstreaming gender equity and social inclusion (GESI) in the health sector at national and sub-national levels, strengthening women in leadership, and producing practical outputs to translate GESI policies into decision-making and practice.

The second component of H-EQIP, 'Strengthening Quality and Capacity of Health Service Delivery', covers Service Delivery Grants (SDGs), with a total of US$130 million dedicated to these SDGs.[15] The SDGs were introduced to provide supplementary funds to Special Operating Agencies (SOAs) identified in HSSP2 in addition to the budgetary funding from MoH in order to strengthen internal health service delivery contracting and to promote decentralisation. The SDG system is largely considered to have been successful, and was thus expanded to the entire country with results verifiable at all levels of the health system.

The SDGs aim at improving the quality of health service delivery and management through incentivising performance with flexible funds for operating costs of health facilities, PHDOs and ODOs in addition to their operational budgets as defined in their Annual Operational Plans (AOPs):

- The fixed elements of the grants are budgeted at USD$93 million for the lifetime of the project, funded by the RGC.
- The performance-based element is budgeted at USD$37 million over the course of the project, with cost shared by all donors.

The payment of SDGs to all HCs and hospitals is linked to performance in the delivery of basic and comprehensive packages of services, the Minimum Package of Activities (MPA) and Complementary Package of Activities (CPA) through the National Quality Enhancement Monitoring Process (NQEMP). Quality improvement shall be achieved through enhanced provider knowledge (pre-service and in-service training), higher availability of essential infrastructure and strengthened public finance management.

H-EQIP2 will offer SDGs to HCs and to hospitals for the provision of CPAs and the management of ODs and PHDs to assist in financing the MPA of HCs and improve their quality. The amount of the payment will be based on the utilisation (quantity) and on the quality of services provided. The financing formula is detailed in the joint Prakas and the SDG Manual. Initially the OD, with its HCs, will implement the joint Prakas issued by the MoH and the SDG manual. It specifies the financing, the aggregate performance score based on the quantity and quality of services delivered by the HCs including the utilisation by the poor and vulnerable using the new National Quality Enhancement Monitoring Tools (NQEMT), applied quarterly. The results are cross-checked and verified by the independent agency and by the independent Payment Certification Agency. Once the results have been verified, MoH will inform the MEF to make relevant SDG payments.

[15] The World Bank. Cambodia Nutrition Project Project Appraisal Document. 2019.

Eligible categories of expenditure for SDGs include minor works, goods, emergency purchase of drugs, recurrent costs, including supplies, short-term staff, consumables, communications, maintenance, transportation, accommodation, training, other incidental expenses, and performance bonuses for health workers.

1.5.2. Two Payment Systems of the SDGs[16]

The SDGs contain two payment systems, a fixed amount, the Fixed Lump-sum Grants and a variable, performance-based amount, the Performance-based Grants (see Figure 3 below).

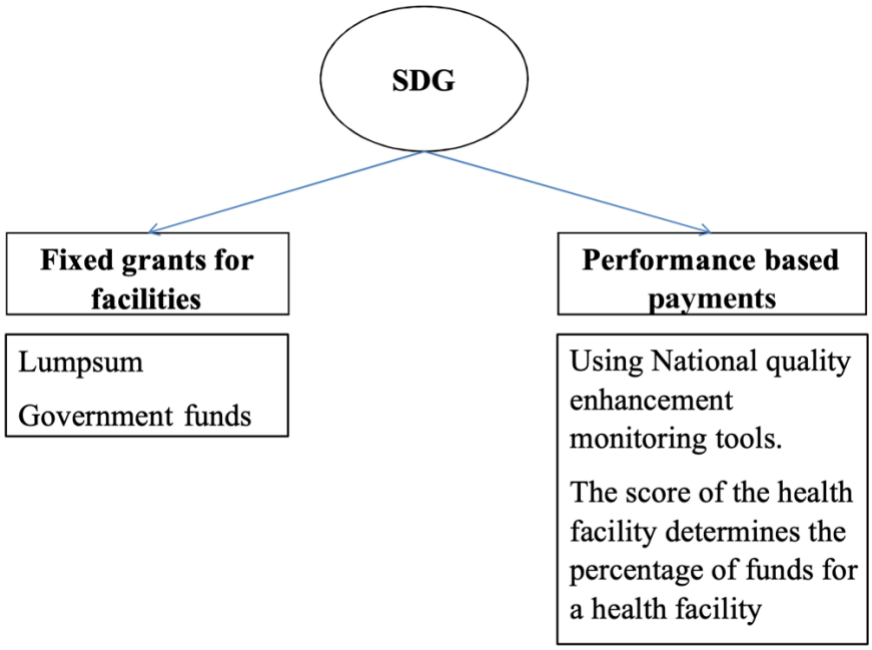


Figure 3: SDG During HSP3

1. Fixed Lump-sum Grants, introduced to the health sector for the first time in the 2016 budget and financed entirely by the RGC, are allocated to all HCs and RHs throughout the country in fixed amounts for operational expenditures. These grants are allocated in addition to the operational budgets elaborated in their annual AOPs. The allocated amount of Fixed Lump-sum Grants is adjusted based on demography, geographical access, and the need to improve quality and expand coverage of health services.

2. Performance-based Grants are co-financed by the RGC, WB and the MDTF. They are provided to HCs, RHs, PRH, the ODOs and the PHDOs based on their quality of care and performance scores (see further on assessment verification). The grants are estimated at US$37 million over the H-EQIP period 2022-2027. The performance-based grant payments foresee incentives up to 80% of the SDG fund. The maximum annual performance-based grant per health facility is defined based on lessons learned. The scores are assessed during systematic reviews and are measured by purpose and results:

- **Grants for HCs** are based on the quality of their MPA. This means that higher quality service delivery leads to a larger allocated amount of the grant, and also that increased quality will produce more effective services and thus higher demand for these services.
- **Grants to RHs** are based on the quality of their CPA and their participation in capacity building and equity promotion.

[16] Ibid.

- **Grants to ODO and PHDO** are based on their management performance, especially in supervision, coaching and capacity building.

While autonomy will be given to HCs, RHs, and ODO/PHDO for utilising the grants in their respective eligible expenditure areas, the performance-based payments require an ongoing and multileveled monitoring and verification system. This will be explained in further detail below.

As mentioned above, the Fixed Lump-sum Grants complement the operational budget and are intended to be used for promoting quality and equity, and cannot be used for staff incentives.

The Performance-based Grants are supposed to be understood as a reward for the health facilities, ODOs, PHDOs for delivering high quality health services, and for certified assessors for conducting ex-ante assessments. Up to 80% of the grant can be spent on staff incentives, leaving at least 20% for eligible expenditures. The HFs have the autonomy to decide on a lower percentage for staff incentives, therefore increasing the proportion for eligible expenditures.

Inter-Ministerial Prakas No. 302 on Expenditure Measure and Procedure Benefit Package for Health Equity and Quality Improvement for Referral Hospitals and Health Centres of Ministry of Health, signed by MEF and MoH on March 25, 2016, and the related instruction No. 634 signed by MoH on May 23, 2016, define the SDG eligible expenditures as listed in the Table 5 below.

Table 5: List of Eligible Expenditures[17]

No.	List of Eligible Expenditures	Fixed-grant	Performance Grant
1.	**Necessary recurrent spending for administrative works**		
Office supplies			
1	Photocopy and printing	**X**	**X**
2	Telephone cards for client satisfaction assessment		**X**
Minor repairing and maintenance			
3	Incinerators	**X**	**X**
4	Laboratory and medical equipment	**X**	**X**
Hygiene			
5	Plastic bags, brooms, standard dustbins (yellow, green), water container, floor cleaning sticks	**X**	**X**
6	Soap, detergent, disinfectant cleanser, alcohol, tissues, towers, buckets	**X**	**X**
7	Transport and disposal of medical wastes (HC Only)	**X**	**X**
2.	**Spending for emergency rescue**		
8	Gasoline for ambulance and	**X**	**X**
9	Alternative means for emergency referral	**X**	**X**
3.	**Emergency purchase of drugs medical equipment and consumable**		
10	Gas for cold chain	**X**	**X**
11	Medical consumable (gauze…, bandage, syringe)	**X**	**X**
12	Drugs on emergency needs and that are shortfall from regular supply chain system	**X**	**X**
13	Minor equipment for patient care (blood sugar testing, urine sugar/ protein/pH testing)	**X**	**X**
14	Reagents when not available from the regular supply	**X**	**X**
4.	**Promotion activities and other measures to improve quality of health service delivery**		
15	Staff incentives based on performance		**X**
16	Per-diems, accommodation and transport costs		**X**

1.5.3. Institutional Arrangements

In H-EQIP1, the project supported the establishment of the PCA as a Public Administrative Entity (PAE)

[17] Ministry of Health, Cambodia. Service Delivery Grants Operational Manual Health Equity and Quality Improvement Project (H-EQIP). 2016.

under the MoH, in coordination with the MEF. The **Third Party Agency** is the independent agency to certify the results obtained through the ex-ante assessments. This activity is called the 'ex-post verification'. Figure 4 presents the institutional arrangements, which while appearing complex, foresee a key position for the third party ex-post verification.

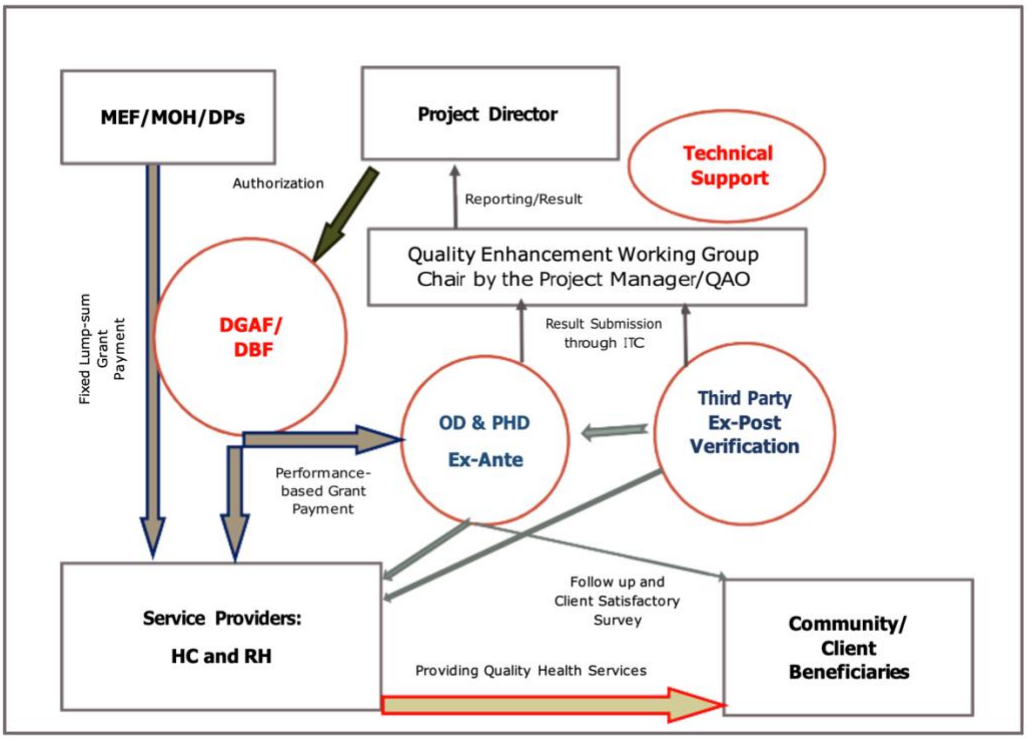


Figure 4: Institutional Arrangements for SDGs

1.6. Overview of NGOs and International Organisations Active in MCH and Child Nutrition

A few organisations are pointed out below because of their institutional importance and/or innovative approaches.

UNICEF's work in Cambodia is primarily in partnership with the Royal Government of Cambodia, and the organisation cooperates with the RGC at all levels, from national to local. The current 2019-2023 program cycle reaches 11 provinces (including Kampong Chhnang) and aims to strengthen UNICEF's partnerships with academia, research, training institutions, the private sector and those representing excluded children in order to maximize the expertise, capacities and resources of all those involved. Specifically, their work is structured into five inter-related programmes, with cross-cutting issues such as early childhood development, adolescents, gender equality, humanitarian action, disability, communication for development, urban poverty and migration, helping connect the different programme components together.

1. **Health and Nutrition:** ensuring equitable access to sustainable health and nutrition services, focusing on vulnerable groups such as pregnant women, mothers, newborns, children under 5, and adolescents, especially in marginalized regions.
2. **Water, Sanitation and Hygiene (WASH):** improving WASH financing and coordination, promoting climate resilience in villages, and providing affordable and accessible sanitation and

water products. UNICEF targets underserved children and communities, emphasizing access to safe sanitation and hygiene in schools, health centers and homes, while promoting awareness and behavior change.

3. **Education:** supporting strong leadership, quality teaching, and a healthy school environment to ensure children's access to and retention in school. The organisation provides specialized teacher training and advocates for equitable and inclusive education for children with disabilities, ethnic minorities, and those in rural and urban poor areas. UNICEF also assists in integrating 21st-century skills into the national curriculum.
4. **Child Protection:** focusing on establishing a child-friendly legal framework, preventing and responding to crime, and promoting a culture of non-violence. They strengthen child protection in health, education, justice, and early childhood sectors, supporting the development of a Child Protection Law, comprehensive information management systems, and training for professionals in relevant fields.
5. **Policy and Public Financing for Children:** reducing child poverty, particularly for children in urban and rural poor areas, ethnic minorities, and those with disabilities. UNICEF employs a multi-sectoral approach, integrating social protection activities with health, education, water, sanitation, and hygiene programs. UNICEF provides technical support to enhance monitoring and evaluation systems in collaboration with the Ministry of Planning and the Ministry of Economy and Finance.

According to their 2019-2023 Strategic Plan, **UNFPA** works in the 8 provinces of Cambodia with the highest rates of maternal mortality and teenage pregnancy (Kampong Cham, Kratie, Mondulkiri, Oddar Meanchey, Preah Vihear, Ratanakiri, Stung Treng, Tboung Khmum, and the city of Phnom Penh for specific interventions). The country programme contributes to national priorities identified in the National Rectangular Strategy: Phase IV, specifically focusing on improving public healthcare, nutrition and quality of education and strengthening gender equality and social protection. The three key outcomes of the program are:

1. **Sexual and reproductive health:** every woman, adolescent and youth everywhere, especially those furthest behind, has utilized integrated sexual and reproductive health services and exercised reproductive rights, free of coercion, discrimination and violence.
2. **Adolescents and youth:** every adolescent and youth, in particular adolescent girls, is empowered to have access to sexual and reproductive health and reproductive rights, in all contexts.
3. **Population dynamics:** everyone, everywhere, is counted, and accounted for, in the pursuit of sustainable development.

GIZ are implementing a number of projects related to maternal and child health across the country, namely:

- **Improving Social Protection and Health:** providing technical support including strengthening the strategic framework, improving communication and the Identification of Poor Household system, and enhancing education and quality management systems in healthcare.
- **Multisectoral Food and Nutrition Security Project (MUSEFO):** improving food and nutrition security through health, hygiene and agriculture measures. It enhances maternal and child health at health centers and promotes diversified agricultural production. MUSEFO aims to influence long-term policy through training, funding and multisectoral cooperation.
- **FIT for School:** promoting sustainable hygiene practices in schools, improving basic hygiene and dental care, and preventing worm infections. By fostering healthy habits in supportive learning environments, it enhances children's well-being and educational outcomes.
- **Identification of Poor Households (IDPoor):** GIZ has worked with the Ministry of Planning since 2006 to develop and improve the IDPoor process for identifying poor households in Cambodia's provinces. They provide advisory support, including developing a tool for urban areas and promoting the use of IDPoor data, while also offering training and capacity

development to ensure sustainable program management by the Ministry of Planning and stakeholders at national and sub-national levels.

World Bank are implementing the Cambodia Nutrition Project to improve utilization and quality of priority maternal and child health and nutrition services in the first 1,000 days of life. The Ministry of Health and the National Committee for Sub-National Democratic Development Secretariat are leading the implementation with support of the local authorities in the seven priority provinces (Ratanakiri, Mondulkiri, Kratie, Stung Treng, Preah Vihear, Kampong Chhnang, and Koh Kong provinces). The project aims to:

1. **Strengthen the delivery of priority health services** by leveraging the Health Equity Fund, National Quality Enhancement Monitoring Program, and Service Delivery Grants to improve the supply-side availability, accessibility, affordability and quality of priority health, nutrition, and immunization services in facilities and through integrated outreach.
2. **Stimulate demand and accountability at the community level** through performance-based financing to sub-national authorities in the seven priority provinces to: (a) promote maternal and child health, nutrition, and social services; (b) increase utilization of health facilities and Health Equity Funds; and (c) mobilize communities.
3. **Ensure an effective and sustainable response** by financing (a) results-based support to Ministry of Health departments and programs, (b) development and delivery of modernized social and behavior change communication campaigns, (c) comprehensive monitoring, evaluation, and adaptive learning and (d) project management.

WHO's strategic plan is based on the outcomes of Cambodia's most recent Health Strategic Plan, and is structured in four strategic priorities that contribute to the national impacts on morbidity, mortality, health equity, quality of care and social health protection. These priorities are:

1. **Providing leadership for priority public health programmes**
2. **Advancing universal health coverage**
3. **Strengthening the capacity for health security**
4. **Engaging in multisectoral collaboration and fostering partnership**

Helen Keller International has been working on a project to pilot lactation rooms in a number of private sector businesses, including government offices, garment factories, banks and more, with the view to influence government policy to legislate lactation rooms in businesses nationwide for improved child feeding and care. The project also advocates for increased maternity leaves, with a recent stakeholder consultation workshop resulting in the idea to create a policy that will be submitted to government for review.

1.6.1. Current Program of the Czech Development Agency in Cambodia

The CzDA project, 'Maternal and Neonatal Care in a Newly Built Perinatology Centre in Cambodia,' began in 2021 and will conclude this year, in 2023. The initiative aims to enhance maternal and neonatal care in Cambodia, focusing on the recently established perinatology center at the National Paediatric Hospital (NPH) in Phnom Penh. Led by experienced Czech healthcare professionals, the project encompasses comprehensive training, infrastructure enhancements, and technology utilization to reduce maternal and neonatal mortality rates and promote sustainable healthcare practices in Cambodia. This endeavor sought to adapt the successful Czech healthcare model to the local context, drawing from previous collaboration with the Czech Development Agency in 2018, which identified areas for improvement in perinatology, neonatology, paediatrics, and bioengineering.

The project's context and problem analysis are based on an inspection conducted at the NPH in Phnom Penh and visits to hospitals in the Kampong Chhnang province in 2018. Several critical issues emerged, including a shortage of qualified staff at all levels, particularly in specific professional specializations, and a general lack of practical skills in caring for women, pregnant women, newborns, and young children. Maternal care was hindered by a lack of experience among NPH staff, inadequate standards

for preconception, prenatal, and postnatal care, and insufficient support for breastfeeding. In neonatal and paediatric care, there was a lack of standards for diagnostic and treatment procedures, as well as low education levels regarding effective practices. Issues related to hygiene, epidemiology, and biomedical aspects also needed to be addressed. The project aimed to improve the situation by providing training in various medical fields, ensuring access to professional information, and using simulation centers for practical skills development. It also complemented the work of the Czech Development Agency and aligned with the priorities of the Development Cooperation Strategy of the Czech Republic. The project engaged target groups and partner institutions, including the NPH and hospitals in Kampong Chhnang province, to implement these improvements in healthcare provision.

The project has a broad focus on various target groups in Cambodia. It started with training specialists at NPH to become trainers in their fields, ensuring sustainability. Training encompassed theoretical and practical knowledge, using a mobile app for effectiveness measurement. Technical staff responsible for medical equipment were also targeted, along with students from local universities. The general public, especially pregnant women and families with young children, were a key focus, aiming to enhance grassroots healthcare. The ultimate beneficiaries included healthcare facilities, expectant mothers, local authorities, and the broader community.

The project's intervention logic focused on reducing neonatal, under-five, and maternal mortality rates in Cambodia by improving access to antenatal and postnatal care services and qualified medical staff. The project set clear indicators and objectives for efficiency and effectiveness, aiming to reduce maternal mortality, preventable deaths of newborns and children under 5, and enhance maternal and neonatal care awareness. These activities were designed to work together cohesively to achieve the project's overarching goal and address the specific healthcare needs of the target communities in Cambodia, and emphasized sustainability and collaboration with government structures. Full project activities are as follows:

Output 1. Implementation of recommendations within the system of lifelong education of specialists in the field of perinatology and care of children up to 5 years of age.

- **Activity 1.1.** Inspection trip to ensure that the needs of the medical staff of the target health facilities are met
- **Activity 1.2.** Development of training modules and their content
- **Activity 1.3.** Creation and launch of a mobile app for healthcare professionals, including an online learning portal.

Output 2. Introduction of standards of care, implementation of screening methods in perinatology, paediatrics, hygiene and epidemiology.

- **Activity 2.1.** Introduction of 3 screehing examinations for pregnant women and subsequent centralisation of cases with pathological conditions. The training and workshops will include training and provision of professional materials to local specialists.
- **Activity 2.2.** Mapping of the sanitary situation with regard to COVID-19 and hygiene and setting recommendations to reduce disease incidence.
- **Activity 2.3.** Establishing a methodology for transporting at-risk patients to a higher-level facility.
- **Activity 2.4.** Establishment of a system of face-to-face workshops with practical training for specialists from the NPH and the Kampong Chhnang province in Cambodia.
- **Activity 2.5.** Creation and implementation of workshops in the Czech Republic.
- **Activity 2.6.** Creation and launch of a mobile app for hospital data collection.
- **Activity 2.7.** Involvement of a Czech specialist in gynaecology and obstetrics at the project site.

Output 3. Setting up a system of educational communication with the general public and subsequent education of the general public.

- **Activity 3.1.** Creation of medical content for the mobile app for the general public and its launch.
- **Activity 3.2.** Creation of a mobile app for the general public, technical implementation, graphic design and content implementation.
- **Activity 3.3.** Project implementation within government structures.

The project adhered to cross-cutting principles by promoting good governance, ensuring transparent management of project funds, and fostering cost-effective service delivery. Post-project, it will aim to integrate project activities with local administration and government, facilitating healthcare data utilization for decision-making and further development. While healthcare improvement is the primary focus, the project also addresses environmental aspects such as medical waste management and sanitary measures. It indirectly promotes environmental efficiency through process enhancements, potentially influencing fertility planning recommendations. Additionally, the project targets human rights and gender equality by reducing maternal and neonatal mortality, prioritizing care for women of reproductive age and newborns, ensuring equal opportunities for all team members, and empowering women through informed reproductive choices.

The project's sustainability and quality are underpinned by key elements. Firstly, the Vita et Futura Endowment Fund contributed expertise in gynaecology, obstetrics, and neonatology, aligning the project with Cambodian target groups. Secondly, practical and technological feasibility were central, with web portals and mobile apps available in English and Khmer, supported by cloud-based infrastructure, to be maintained for five years post-project. Thirdly, economic sustainability ensures access to project materials and adaptability to local needs, while political and institutional sustainability involved Open Access availability and local partnerships. Lastly, an exit strategy aims to establish the NPH as a training leader, with the mobile platforms/apps remaining accessible for five years.

The success and impact of this project are pending the conclusion of the project later this year. Final results will be presented through three final evaluation conferences held in the country of implementation, with participation from local experts, government officials, donors, and stakeholders. The comprehensive efforts undertaken by the dedicated team, supported by their extensive experience and expertise, have the potential to significantly improve maternal and neonatal healthcare in Cambodia. As the project nears its completion, the outcomes and changes it may bring to the lives of expectant mothers, newborns, and communities in need are eagerly anticipated, with the overarching goal of reducing maternal and neonatal mortality rates and enhancing healthcare systems in Cambodia.

1.6.2. Further Externally Funded MCH Interventions in Cambodia

In addition to the above mentioned organisations active in MCH, Table 5 details NGOs, donors, and other stakeholders implementing projects supporting MCH and child nutrition in Kampong Chhnang province. see Table 20 for further detail on MCH and child nutrition projects implemented throughout Cambodia, and Annex 3 for projects registered with the MoH.

1.6.3. MCH Interventions in Kampong Chhnang

Table 6: Overview of Organisations Active in Kampong Chhnang

Name of Organisation	Intervention(s)
FAO	• School feeding programs • Healthy school snack environment • School nutrition guidelines
FIDR	• Child feeding practices • Crop production and healthy diets • School feeding programs • Pediatric surgery
GIZ	• Crop production and healthy diets (GIZ-ILF, GIZ-MUSEFO) • Social protection and IDPoor (GIZ-IDPoor) • Emergency food aid (GIZ-IDPoor) • WASH education and facilities (GIZ-FFS)
HKI	• Crop production and healthy diets

	• Home farming • ANC/PNC • Promotion and protection of breastfeeding
IIRR	• Smallholder farming • School feeding programs
RWC	• WASH education and facilities
SCI	• Livestock distribution
VSO	• Livestock distribution
WFP	• School feeding programs • Food fortification
World Vision Cambodia	• Community and child nutrition • ANC/PNC • Training health workers

1.7. Geographic Focus of the Programmes

Figure 5 contains a map of the International (I) and Local (L) NGOs implementing health interventions throughout the country, according to the MoH. As can be seen on the map, the majority of these actors are focused on more urban areas, Phnom Penh and surrounding areas, and north west of the country. Figure 6 contains a similar map, also from the MoH, detailing interventions active in MCH throughout the country. Interventions specific to Kampong Chhnang province are in detail described in Chapter 6 of this study.

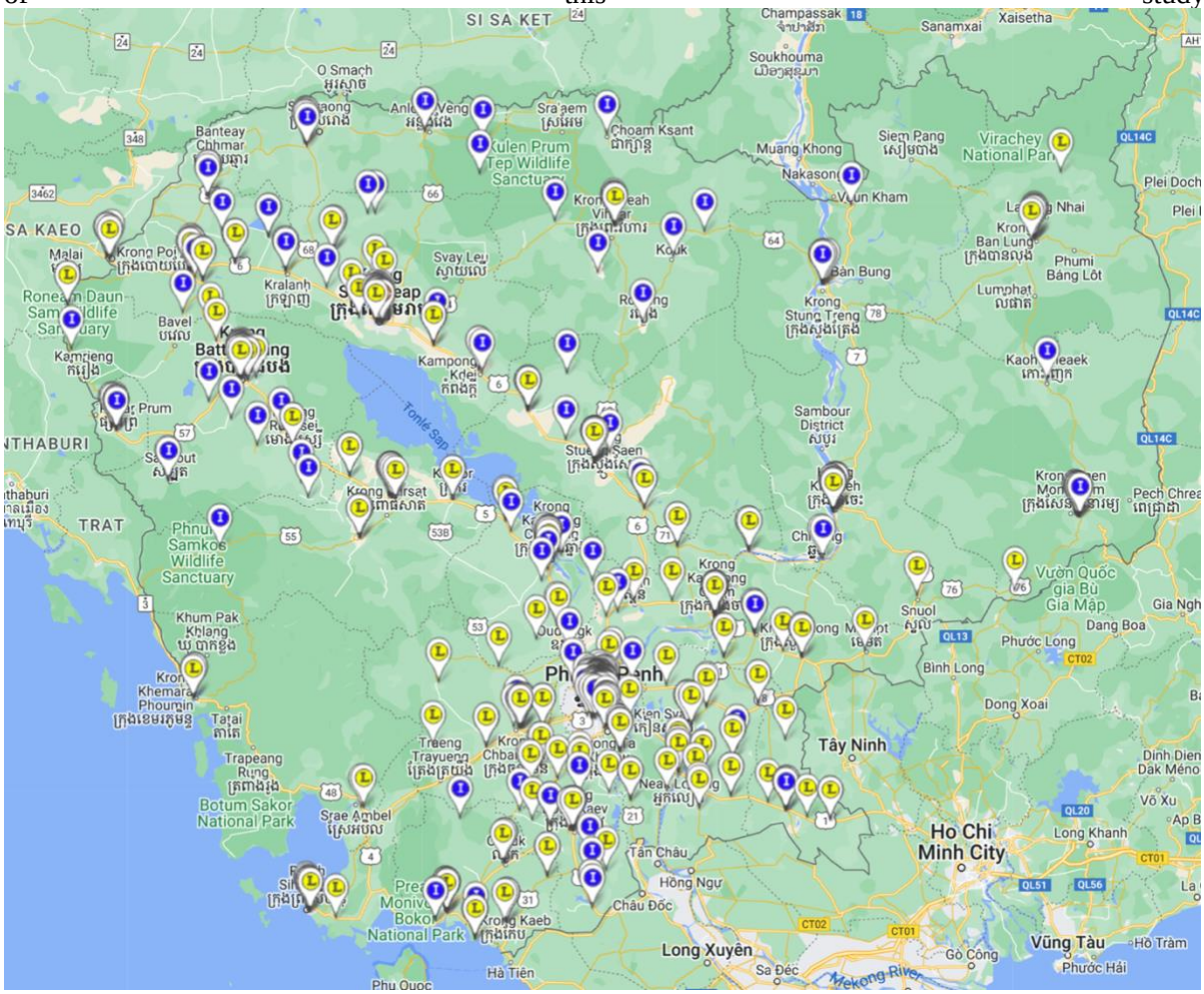


Figure 5: Map of International and Local Actors Active in Health Sector[18]

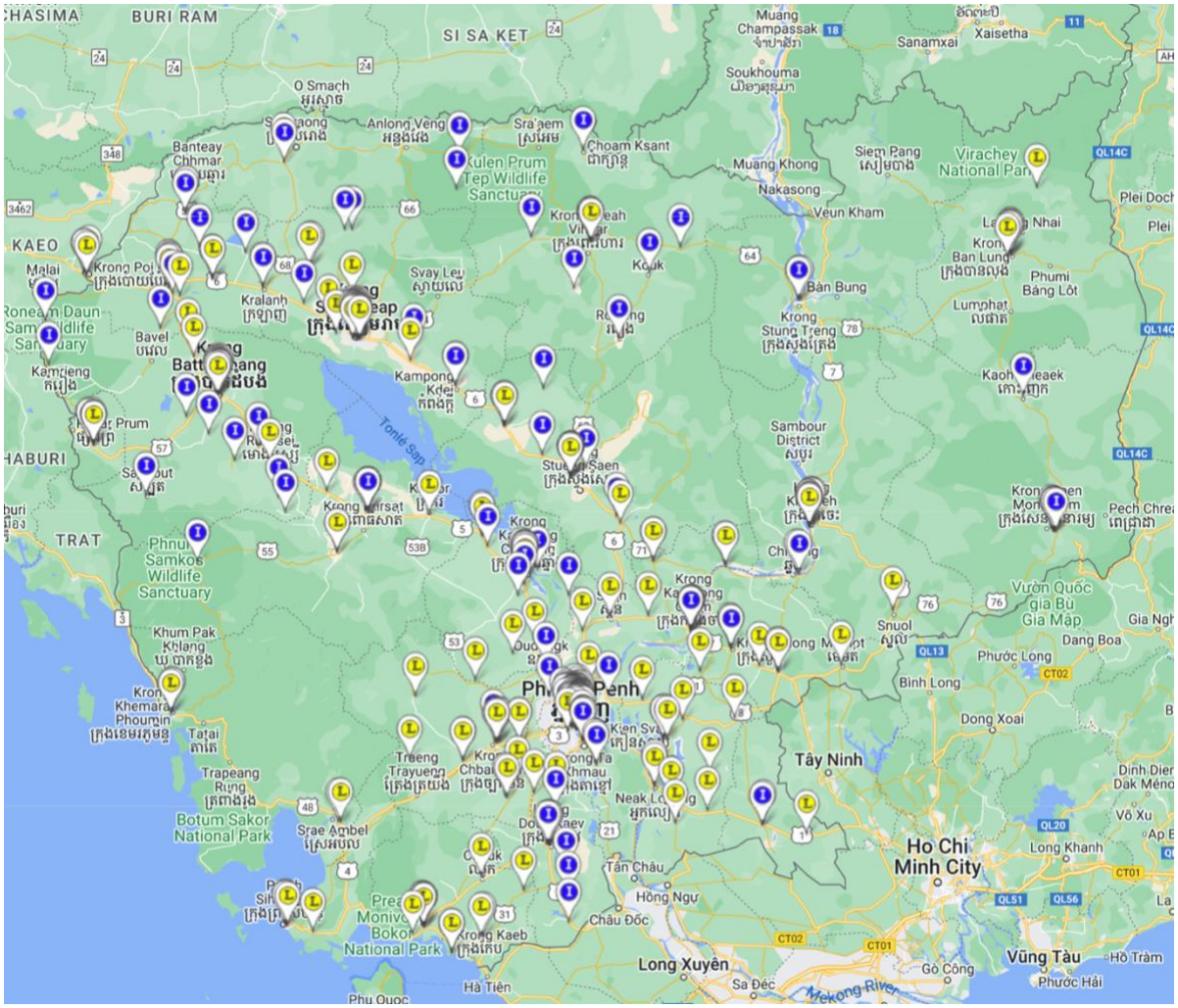


Figure 6: Map of International and Local Actors Active in MCH[19]

1.7.1. Innovation in MCH and Public Awareness

There are a few NGOs who are try to bring innovation to MCH in Cambodia. Among the interventions that international actors in the health sector tested are mainly distinguished innovative methods to disseminate information to the population.

In March 2023, the **National University of Singapore** launched the pilot project 'Innovation Mobile Technology for Maternal and Child Health Care in Cambodia (i-MoMCARE): A Cluster Randomized Controlled Trial', in partnership with the NMCHC. Its goal is to provide digital tools to empower Village Health Support Groups and health center staff, improving the delivery of essential health services. The project has the potential to improve the quality and accessibility of maternal and child healthcare in rural Cambodia, which could lead to significant improvements in health outcomes and quality of life for these communities.

In late 2022, **World Vision International** partnered with the NMCHC to launch a pilot of 8 'Baby-Friendly Health Centres' in Siem Reap. The programme is in line with the operational guidelines for the

[18] Ministry of Health Cambodia. Cambodia Health Information Systems [Internet]. Available from: https://www.dic.moh.gov.kh/map
[19] Ibid.

Baby-Friendly Hospital Initiatives (BFHI), first launched by the WHO and UNICEF in 1991. Within these Health Centres, World Vision Cambodia aims to improve the identification, referral and follow-up of children with acute malnutrition.

Since 2020, the **Ministry of Health** has been implementing programs such as 'The Smart Green Hospital Network' and more recently, 'Leveraging Technology to Upgrade Cambodian Healthcare'. These projects have made significant contributions to the growing importance of digitalizing Cambodia's healthcare system, focusing primarily on digitalizing patient healthcare records and building the capacity of healthcare professionals to use online systems. These shifts towards a digital healthcare system are supported by the recent Digital Health Strategy and related documents, including the Cambodia Digital Government Policy, and Digital Transformation in Social Protection Strategic Plan.

1.7.2. Initiatives of Donors, International Organisations and NGOs Promoting Birth Certificates

While the birth registration system is recognised as essential in view of child rights protection, the RGC received some technical and financial support in rolling out the system:

- UNICEF received funding from the Japan Committee to support seventy-four communes to strengthen the registration of vital events. As a result, since 2011 the parents of newborn babies in these communes have been issued birth certificates.
    - The support aims at increasing awareness with information and training of commune leaders and communities on the importance of birth registration, its mechanisms, procedures and timings. The communes are also assisted in promoting the importance of registering other vital events such as marriages and deaths.
    - In 2013, UNICEF supported an awareness campaign with radio spots and posters throughout the country to promote birth registration, among other things.
- Other NGOs assisted in community awareness, such as Save the children (not in Kampong Chhnang), Plan International (birth certificates as part of their early childhood programme (not in Kampong Chhnang)), Child Fund and World Vision.

1.7.3. Cooperation and Coordination Between the Various Organisations

The various organisations active in the health sector and in MCH and nutrition specifically adhere to the guidelines of MoH, however the cooperation among those actors is limited to information sharing rather than attempts to develop synergies in their programmes.

With regards to institutional cooperation, MCH is not only a focus of MoH, but other ministries who focus their interventions to support MCH.

- Ministry of Education, Youth and Sports, under the School Health Department, has contributed through child nutrition education and WASH projects.
- Ministry of Rural Development has promoted community hygiene and sanitation to reduce the morbidity and mortality of children.
- Ministry of Interior, under the decentralisation policy, has implemented a small fund to support the community maternal emergency referral system through Commune Council members.
- Ministry of Women's Affairs has contributed a small amount of funding to support community awareness raising pertaining to women's health rights and women's health.
- Ministry of Agriculture, Forestry and Fisheries has a significant focus on improving food security and food systems, which in turn supports better nutrition for households, including women and children.

It has been indicated that many of the players in MCH and nutrition use the same multiplayer community

extension mechanisms – MCHC, VHSG and MSG – as the Linkage Community Agents to connect the health system and people to promote community health awareness and support for any emergency referrals for women and children. In Kampong Chhnang, as will be further elaborated in Chapter 5, members of both MCHC and VHSG were part of the focus group discussions and confirmed that they are cooperating with various organisations in the province.

1.8. Concluding Remarks

This section outlines the structure of the health system in Cambodia and the roles health facilities at different levels have. The MoH is responsible for giving course to all health policies and governs both public, private and not-for-profit health facilities. The function of various health facilities in Cambodia is discussed in detail in Chapter 4.

Another part of this chapter lists the official government policies and regulations that have shaped the MCH to date. As can be seen, the process of reforming the health sector has achieved progress in MCH however, as discussed in section 1.3 of this chapter, maternal and child health remains a priority for the RGC. As the following chapters describe, progress has been made. However, child and especially infant mortality remains high.

The last part of this chapter gives an overview of the various organisations active in the health sector in Cambodia, including specific focus on MCH and malnutrition interventions, and in Kampong Chhnang in particular. Also, attention is given to innovative approaches in MCH that are brought forward by the various international organisations active in health. Although many of the NGOs aim at improving conditions for the population in various aspects, it has been observed that their cooperation is mainly on an information sharing level, and lacks potentially greater coordination of activities and their presence in Cambodia.

2. CURRENT STATUS OF MATERNAL HEALTH AND CHILD HEALTH IN CAMBODIA (PRIMARY DATA)

In the ever-evolving landscape of public health, timely and accurate data serve as vital signposts, guiding nations toward better healthcare outcomes. Drawing from the latest national data derived from the 2021-22 CDHS survey, this overview sheds light on Cambodia's healthcare journey. Encouragingly, neonatal mortality has shown a consistent decline, reaching 8 deaths per 1,000 live births in 2021-22. However, maternal mortality remains a concern, with 10.7% of deaths among women of reproductive age attributed to causes like hemorrhage and eclampsia. Infant mortality, while improving, reveals regional disparities. Child morbidity persists, largely due to chronic malnutrition. This introduction sets the stage for a comprehensive exploration of Cambodia's healthcare landscape.

2.1. Health Sector in Cambodia

Since the 1991 Paris Peace Accord, Cambodia's economy has made significant progress after more than two decades of political unrest. However, Cambodia still remains one of the poorest and least developed countries in Asia, with the gross domestic product per capita estimated at approximately $1,625 in 2021, according to the World Bank. Agriculture, mainly rice production, is still the main economic activity in Cambodia. Small-scale subsistence agriculture, such as fisheries, forestry and livestock, is another important sector. Garment factories and tourism services are also important components of foreign direct investments.

Over the past three decades, Cambodia has made significant gains in rebuilding its health system through an extended process of health reform beginning in the 1990s. This has helped the country to make impressive strides in improving health outcomes over the last decade. Between 2000 and 2021-22, the maternal mortality rate (MMR) dropped from 437 to 154 (per 100,000 live births) and the under-five (U5) mortality rate dropped from 124 to 16 (per 1,000 live births).[20]

Despite these achievements, several challenges persist and new ones are emerging. Notably, the progress in reducing malnutrition has been slow. Stunting showed a modest decline from 50% in 2000 to 22 % in 2021-22, as did underweight, dropping from 28% in 2005 and 2014 to 16% in 2021-22. However, wasting increased between 2005 and 2014 from 8% to 10%, and remained the same in 2021-22. In addition to these challenges of undernutrition, the double burden of overweight/obesity is an emerging problem, with 4% of children under 5 overweight in 2021-2022. Cambodia's maternal mortality rate is more than double the average for the Asia Pacific region, at 69 deaths per 100,000 live births.

A widely acknowledged limitation of the health system is the lack of well-trained, motivated and adequately compensated staff providing quality assured services. Although there has been a huge increase in the size of the workforce, health sector analyses in Cambodia point towards the need for improving governance and quality management of the health workforce at the CPA and MPA levels.[21]

Cambodia has one of the highest maternal mortality rates in South East Asia. However, it performs better than several countries in the region, including Indonesia, Myanmar and Lao PDR. (See Table 6).

Table 7: MMR in Southeast Asia[22]

Country	Maternal Mortality Rate	Number of Maternal Deaths (Annually)
Myanmar	250	1700
Lao PDR	185	210
Indonesia	177	7800

[20] CDHS 2000, 2014, 2021-22, Ministry of Health, Cambodia;
[21] WHO, Mid-Term Report 2015
[22] https://data.worldbank.org/indicator/SH.MMR.DTHS?locations=Z4

Cambodia	*154*	*710*
Timor Leste	142	67
Vietnam	43	190
Thailand	37	1800

Cambodia has made substantial progress in meeting the country's Sustainable Development Goal 3 targets. From 2014 to 2021-22:

- The maternal mortality rate decreased from 170 to 154 deaths per 100,000 live births;
- The neonatal mortality rate decreased from 18 to 8 deaths per 1,000 live births;
- The infant mortality rate decreased from 28 to 12 deaths per 1,000 live births;
- The under-five mortality rate decreased from 35 deaths per 1,000 live births to 16;
- Deliveries by skilled birth attendants increased from 85% to 98.7%;
- The number of women who have their needs for family planning satisfied with a modern method of contraception increased from 57 to 61%.

The indicators concerning neonatal, under five and maternal mortality have already surpassed the 2030 targets (note there is no CSDG target concerning infant mortality). There has been a significant increase in the availability and uptake of ANC. In 2021-22, 86% of pregnant women reported having at least four ANC visits. Nevertheless, significant challenges remain, including the quality of care, competency of health professionals and regulation of their practices, and the standards and regulation of pre-service health professional education, including for midwives. These challenges are heightened by significant differences in access to ANC visits in urban and rural areas, at 91 and 83%, respectively.

The Health Strategic Plan 2008-2015 (HSP2) and 2016-2020 (HSP3) recognised reproductive, maternal, newborn and child health as the most important priorities facing the health sector. Political commitment to maternal health was also reflected in the Ministry of Health's Fast Track Initiative Road Map for Reducing Maternal and Newborn Mortality 2010-2015 and 2016-2020, which set out the priority interventions in order to meet Cambodia's HSP3 goals and targets. There has been a remarkable improvement in indicators related to maternal and child health from 2010 to 2014 as noted above, however progress on childhood wasting stagnated in the period to 2021-22, while early initiation of breastfeeding and exclusive breastfeeding rates declined, and rates of overweight increased.[23, 24, 25]

MoH and UNFPA initiated the first Emergency Obstetric & Newborn Care (EmONC) assessment in 2009 to understand the availability and quality of EmONC signal functions at different levels of health facilities. The baseline study found that there were 1.6 EmONC and 0.9 Comprehensive EmONC (CEmONC) functional facilities per 500,000 of the population. Based on the results of the assessment, the first EmONC Improvement Plan 2010–2015 was developed with technical and financial support from UNFPA.

In 2015, the second assessment was conducted in order to monitor progress and identify gaps and challenges in implementing the EmONC Improvement Plan 2010–2015. The review in 2015 found that there were 2.35 EmONC facilities and 1.31 CEmONC facilities per 500,000 of the population. While there has been an improvement in coverage and the number of EmONC facilities meeting the UN standard, coverage still remains below the globally accepted minimum of at least five facilities per 500,000 of the population, and there are still facilities that need strengthening as they are not yet implementing all of the signal functions.

The EmONC Improvement Plan 2010-2015 was succeeded by the 2016-2020 plan, with the aim of addressing remaining needs and closing the remaining gaps in the indicated period. The 2020 review of

[23] Country Progress Report. UNFPA. 2016.

[24] UNICEF Cambodia. SITAN Cambodia 2023. 2023.

[25] Royal Government of Cambodia. CSDG Framework 2016-2023. 2016

this plan found that there were 2.62 EmONC facilities per 500,000 of the population, CEmONC facilities met the UN standard, and that there were 1.48 Basic EmONC (BEmONC) facilities per 500,000 of the population (data 3 months prior to assessment), which is a shortfall of the UN standard of 4. These shortfalls can be partially explained by the exclusion of private facilities providing maternity services, and the gap could be addressed by assessing CPA1 Referral Hospitals and Health Centres performing the 7 BEmONC signal functions over a 12-month timeframe, rather than 3. There is also a notable distribution problem, with almost 100% of EmONC facilities being national hospitals and CPA2 and CPA3 referral facilities at the top level of the health system. Cambodia is yet to formulate a follow up to the 2016-2020 plan.

Cambodia achieved most of its health-related Millennium Development Goals (CMDGs), noting underperformance in improving nutrition and eliminating stunting.[26] Notably, the percentage of the population living below the poverty line has fallen from 48% in 2007 to 16.6% in 2022, and the maternal mortality rate has halved since 2000. This set the stage for the Cambodia Sustainable Development Goals (CSDGs) 2016-2030, which are an expanded and more ambitious set of localized goals and targets. Table 7 indicates progress so far on a number of CSDG targets related to MCH.

Table 8: Health Sector Performance Against CSDG Targets[27]

Indicator	CSDG Target	Achievement (2021-2022)
Neonatal mortality rate per 1,000 live births	12	8
Under 5 mortality rate per 1,000 live births	25	16
Maternal mortality rate per 100,000 live births	70	154
% births attended by a skilled birth attendant	95	98.7
% married women aged 15-49 with their family planning needs satisfied	68	67

An MoH report from 2015 associates the decline in maternal mortality with the declining fertility rate, which fell from 6 to 2.3 between 1990 and 2021-22. This decline was attributed to higher birth intervals, reductions in births to very young and very old mothers, socioeconomic improvements, higher contraceptive prevalence, and improved availability of and demand for skilled maternity care.[28]

The proportion of women attending at least four antenatal care visits has significantly increased, alongside factors such as more of these visits being during early pregnancy and increased deliveries with a skilled birth attendant and at health facilities. There are also considerably more facilities able to provide basic and comprehensive EmONC.

The 2015 report also associates the reductions in under 5 child mortality, severe stunting and underweight with i) improved coverage of effective interventions to prevent or treat the most important causes of child mortality, in particular essential immunisations, malaria prevention and treatment, Vitamin A supplementation and early and exclusive breastfeeding, and ii) with improvements in socioeconomic conditions. The rate of decline in newborn mortality, which accounted for 50% of under 5 mortalities in 2010, has been considerably slower than that of under 5 mortality. Mortality declines are much slower among the poor, less educated and rural populations. This equity gap remains an important challenge in 2023, as evidenced in the 2021-22 CDHS results presented in Table 8.

Despite improvements, people living under or close to the poverty line and other vulnerable groups such

[26] Ibid.

[27] Ministry of Health and Ministry of Planning Cambodia. Cambodia Demographic and Health Survey 2021-22. 2022.

[28] Success Factors for Women's and Children's Health. Ministry of Health, Cambodia. WHO. 2015.

as persons with disabilities and older persons continue to have inadequate and unequal access to appropriate health services. Data from three DHS surveys in Cambodia between 2000 and 2021-22 was analysed, assessing the levels and trends of inequalities in maternal and child health and in service use referring to two measurements, the ratio between the wealthiest and the poorest, and the concentration index (the concentration index quantifies the degree of economic inequality and is a composite summary of inequality across the entire population). The results suggest considerable improvement in most health and healthcare indicators across the population between 2000 and 2021-22, from the poorest to the wealthiest. However, although Cambodia fares better than many other developing countries, there are still considerable differences between urban and rural and lowest and highest wealth quintile demographics across many indicators.

Table 9: Neonatal Mortality, Infant Mortality and Under 5 Mortality Disaggregated by Geography, Province, Mother's Education and Wealth Quintile[29]

Determinant	Neonatal Mortality Rate	Infant Mortality Rate	Under 5 Mortality Rate
Geography			
Urban	6	8	11
Rural	10	15	20
Province			
Banteay Meanchey	2	9	(17)
Battambang	20	27	28
Kampong Cham	13	22	28
Kampong Chhnang	*14*	*30*	*36*
Kampong Speu	10	15	20
Kampong Thom	9	10	10
Kampot	7	18	(35)
Kandal	5	10	12
Koh Kong	9	14	16
Kratie	5	12	14
Mondulkiri	13	33	41
Phnom Penh	4	5	5
Preah Vihear	12	31	36
Prey Veng	12	12	26
Pursat	(16)	(16)	(18)
Ratanakiri	15	39	43
Siem Reap	9	10	12
Preah Sihanouk	8	13	15
Stung Treng	11	18	20
Svay Rieng	20	27	34
Takeo	2	10	14
Otdar Meanchey	12	20	22
Kep	3	8	11
Pailin	6	16	23
Tboung Khmum	6	10	18
Mother's education			
No education	17	33	40
Primary	8	13	17
Secondary	9	13	15
More than secondary	0	2	(5)
Wealth quintile			
Lowest	12	22	28
Second	8	14	17
Middle	12	19	25

[29] CDHS 2021-22, Ministry of Health, Cambodia 2022

Fourth	10	14	18
Highest	5	6	7

Note: Figures in parentheses are based on 250–499 unweighted person-years of exposure to the risk of death. Mortality rates are per 1,000 live births.

Structural and technical quality of public health services has improved. These improvements have contributed to reduced maternal and child mortalities and reduced the burden of communicable diseases. However, quality of health services does not necessarily meet the needs and expectations of the population. Resource constraints have been important impediments to improving the quality of health services. This has resulted in a mismatch between the clinical best practices outlined in national clinical practice guidelines and protocols, and delivered services. Effectively addressing these challenges, together with more investment in the competency-based education of health professionals and allied professionals, will improve quality of health care in both the public and private sector.[30]

Among health outcomes, the infant mortality rate and under-five mortality rate are the least equitable indicators. In 2021-22, the poorest 20% of the population suffered infant and under-five mortality rates of at least three times higher than the wealthiest 20 percent. This was also true to a smaller degree for child stunting and underweight.

Inequalities are decreasing for five indicators of key maternal and health services: any antenatal care visit, four or more antenatal care visits, skilled birth attendants, facility delivery, and contraceptive prevalence rate. Contraceptive prevalence demonstrates the least inequality.

2.2. Indicators of Mothers' and Children's Health and Nutritional Status

There have been improvements in the rates of stunting in children, particularly in severe stunting. The proportion of Cambodian households using iodized salt was 83% in 2010 and 49% in 2021-22, however 66% of children were still found to have insufficient urinary iodine concentration in 2014.

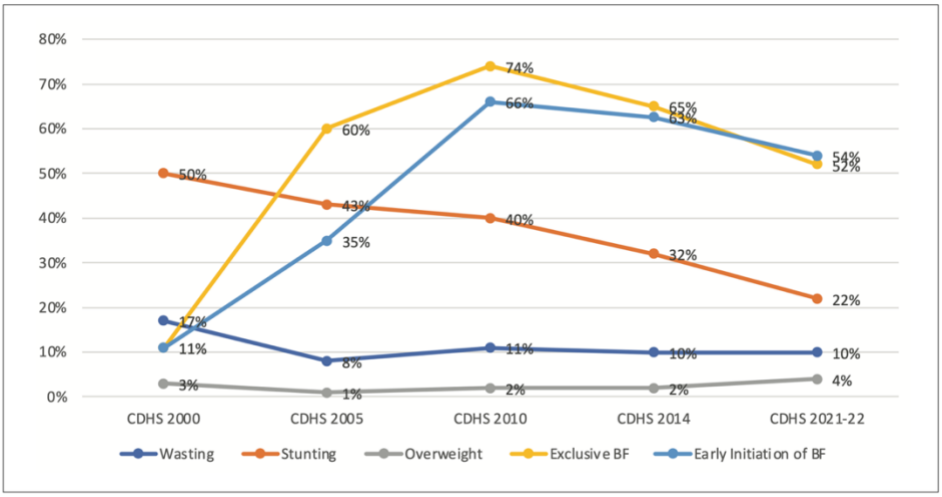


Figure 7: Trends in Child Undernutrition 2000-2021-2[31]

Trends in children's nutritional status for the period 2000 to 2021-22 are shown in Figure 7. It shows that there have been improvements in the nutritional status of children in the past 22 years, however there are also still significant challenges. The percentage of children stunted fell consistently, from 50% in 2000 to 22% in 2021-22. The percentage of children wasted declined from 17% in 2000 to 8% in

[30] Health Sector Review Plan 2016. Ministry of Health.
[31] UNICEF Cambodia. SITAN Cambodia 2023. 2023.

2005, before increasing to 11% in 2010 and subsequently dropping slightly to 10% in 2014, where it has remained unchanged to 2021-22. Underweight declined from 39% in 2000 to 28% in 2005 and 2010, and then decreased to 24 % in 2014 and 16% in 2021-22. Concerningly, the rate of overweight has doubled since 2014, to 4% in 2021-22. Although there have been improvements in the nutritional status of Cambodian children in the past decade and a half, there is still a need for more intensive interventions.

The prevalence of anaemia in children aged 6-59 months declined from 63.4% (2000) to 49% (2019), which was only a 1% decrease in the most recent 4 years.[32] The prevalence of anaemia in pregnant women declined from 66.4% in 2000 to 52.7% in 2010 and 47% in 2019.[33] A national micronutrient survey in 2000 reported a Vitamin A deficiency prevalence of 22% among children 6-59 months of age, while a study conducted among young children in Svay Rieng health district between 2008 and 2010 reported a vitamin A deficiency prevalence of less than 3.5% at any time point.

A number of nutrition-related policies are regularly revised and updated. The Cambodia Nutrition Investment Plan (2016-2020) addressed the high rates of malnutrition and micronutrient deficiencies through line ministries and relevant stakeholders. The National Policy on Infant and Young Child Feeding (2002, 2008) linked with maternal and child health programming. The Strategic Framework for Food Security and Nutrition (2008-2012) and the National Nutrition Strategy (2009-2015) established clear targets, indicators, and strategic areas of focus. The current National Strategy for Food Security and Nutrition is one of the major guiding documents for the sector. However, there are a number of nutrition policies that have expired in recent years and are yet to be updated, including the National Nutrition Strategy and Health Strategic Plan.

Policies make links with agriculture, water and sanitation, elimination of open defecation, lack of education, poverty reduction and health. The 2003 Sub-decree No. 69 on the Management of Iodized Salt Exploitation intended to increase salt consumption and reduce iodine deficiency disorders. The 2007 National Guidelines for the Use of Iron Folate Supplementation to Prevent and Treat Anaemia in Pregnant Women targeted the prevention and treatment of anaemia in pregnant and postpartum women. National Vitamin A policies initiated twice-yearly Vitamin A supplementation for children under 5 years through outreach services.

The government's commitment to enhance food security for all Cambodians at all levels was confirmed. The Resolution (Circular No. 5) of the 2nd National Seminar on Food Security outlines government recommendations and priorities in fields related to health, nutrition, education, irrigation, land issues, agriculture and rural development. Food security is integrated as a cross-cutting issue in the National Poverty Reduction Strategy, and the 3rd National Strategy for Food Security and Nutrition (2019-2023) outlines the government's approach to improving food security. A National Program of Food Security helps poor farmers to improve their food security and income generation options, supported through projects that support home farming and the diversification of agricultural production. The Council for Agriculture and Rural Development (CARD) facilitates regular meetings of the Food Security Forum, offering an opportunity for all stakeholders engaging in food security (line ministries, donors, UN agencies, NGOs, research institutions) to come together, share and learn from each other's experiences.

Although the health-related indicators on maternal and child health, as well as nutrition, have seen some improvement, as can be seen in Table 9, problems still persist. This includes the decline in early initiation of breastfeeding and exclusive breastfeeding, stagnation of the decline in stunting, increase in prevalence of overweight, decrease in postnatal visits, slow increase in child vaccination, marked differences between urban and rural communities, lack of nutritious foods in some rural communities, lack of health infrastructure and equipment, and limited skills in saving lives for mothers and neonates during pregnancy, delivery and post-delivery.

Birth weight is one of the major determinants of infant and child health and mortality. Children whose

[32] World Bank. Maternal mortality ratio (modeled estimate, per 100,000 live births) - Cambodia [Internet]. Available from: https://data.worldbank.org/indicator/SH.MMR.DTHS?locations=Z4

[33] World Bank. Children with stunted growth (% of children under 5) - Cambodia [Internet]. Available from: https://data.worldbank.org/indicator/SH.ANM.CHLD.ZS?locations=KH

birth weight is less than 2.5 kilograms, or children reported to be 'very small' or 'smaller than average', are considered to have a higher-than-average risk of early childhood death. According to CDHS 2021-22, 6% of children were classified as low birth weight (less than 2.5 kilograms at birth), which is a decline from 14.8% in 2014 and 2010.

Breastfeeding is also one of the key determinants contributing to child mortality. Based on CDHS 2021-22, 52% of children less than 6 months are exclusively breastfed, are 54% are breastfed within the first hour after birth. These rates have declined from 65% and 64.6%, respectively, in 2014. Based on the CDHS 2021-22, 22% of children under 5 are stunted (height for age), 10% are wasted (height for weight), 16% are underweight, and 4 percent are overweight. While stunting rates have declined since 2014, wasting has remained the same and overweight has doubled from 2%. Chronic malnutrition remains an issue that is clearly contributing to child morbidity and mortality, and the double burden of underweight and overweight is growing.

Malnutrition in Cambodia causes approximately 4,500 child deaths annually, which accounts for roughly one third of all child deaths in the country.[34] 58% of children aged 6 to 24 months, and about 65% of children aged 6 to 8 months, do not consume the daily minimum acceptable diet. Disparities exist here, with children from the poorest families being half as likely to receive a minimum acceptable diet than children from the wealthiest families, and children living in rural areas 20% less likely to do so than those living in urban areas.

Table 10: Country Data on Maternal and Child Health[35]

Indicator	Progress	
	2014	2021-22
Maternal mortality rate	170/100,000 LB	154/100,000 LB
Infant mortality rate	28/1,000 LB	12/1,000 LB
Under five mortality rate	35/1,000 LB	16/1,000 LB
Neonatal mortality rate	18/1,000 LB	8/1,000 LB
% of pregnant women who attend at least 4 antenatal care visits	66.5%	86.3%
% of safe deliveries (attended by trained birth attendant)	85%	98.7%
% of C-sections	5.37%	17.8%
Proportion of exclusive breastfeeding within first hour after birth	63%	54%
Proportion of birth spacing needs met among women of reproductive age	22%	23.8%
Vaccination rate among children 12-23 months	65.3%	67%
% of postnatal visits within 2 days after birth	90.3%	85%
% of wasting among children under 5 years	10%	10%
% of stunting among children under 5 years	32%	22%
Incidence of diarrheal diseases among children under 5 years	13%	6%
Incidence of respiratory tract infection among children under 5 years	6%	1%
Incidence of malaria among children under 5 years	2%	2%
% of population who have access to improved water source (dry season)	64.5%	91%
% of population with improved sanitation facilities	48.1%	89.2%

[34] Integrated Early Childhood Development, UNICEF Country Programme 2016-2018
[35] CDHS 2014 and 2021-22.

Table 10 shows the percentage of children under 5 classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics as per the CDHS 2021-22.

Table 11: Nutrition Status of Children Disaggregated by Geography, Province, Mother's Education and Wealth Quintile

Determinant	Height-for-age (Stunting)[1]			Weight-for-height (Wasting)				Weight-for-age			
	% below -3 SD	% below -2 SD[2]	Mean Z-Score (SD)	% below -3 SD	% below -2 SD[2]	% above +2 SD	Mean Z-score (SD)	% below -3 SD	% below -2 SD[2]	Mean Z-score (SD)	Number of children
Geography											
Urban	5.1	16.8	-0.8	1.6	8.4	5.8	-0.3	2.2	12.2	-0.7	1,504
Rural	6.2	24.7	-1.2	2.7	10.3	3.2	-0.6	3.4	18.6	-1.1	2,729
Province											
Banteay Meanchey	1.1	15.6	-0.8	3.4	8.8	3.4	-0.6	1.4	12.5	-1.0	180
Battambang	1.9	17.6	-1.1	0.4	9.3	1.9	-0.5	0.9	15.4	-1.0	317
Kampong Cham	4.0	22.8	-1.1	5.5	6.6	1.7	-0.6	4.4	18.0	-1.0	255
Kampong Chhnang	*4.3*	*19.1*	*-0.9*	*8.7*	*30.3*	*1.4*	*-1.4*	*10.8*	*35.1*	*-1.5*	*157*
Kampong Speu	7.9	24.9	-1.1	3.4	11.0	9.3	-0.3	4.6	17.7	-0.9	240
Kampong Thom	10.3	26.5	-1.2	1.1	8.9	2.5	-0.4	2.9	15.4	-1.0	198
Kampot	5.7	28.4	-1.2	3.6	9.6	4.3	-0.4	2.4	16.4	-0.9	160
Kandal	2.0	15.0	-0.8	3.9	10.3	2.8	-0.5	3.9	14.1	-0.8	312
Koh Kong	9.0	22.5	-1.0	3.8	10.2	9.6	-0.2	1.6	12.4	-0.7	34
Kratie	5.9	21.8	-1.3	0.0	2.6	5.4	-0.4	1.8	15.5	-1.0	112
Mondulkiri	7.5	29.4	-1.4	1.9	13.6	1.9	-0.7	2.9	22.7	-1.3	27
Phnom Penh	5.1	15.3	-0.8	0.0	6.1	5.8	-0.1	0.4	9.7	-0.5	498
Preah Vihear	5.7	26.3	-1.4	0.0	7.4	4.1	-0.6	1.3	17.1	-1.2	81
Prey Veng	5.0	22.1	-1.1	1.3	7.3	2.5	-0.4	2.1	12.9	-0.9	319
Pursat	11.6	32.9	-1.3	1.4	8.9	4.3	-0.3	2.4	18.0	-1.0	110
Ratanakiri	19.0	39.1	-1.5	6.5	14.9	8.7	-0.5	13.2	28.5	-1.3	64
Siem Reap	7.3	25.7	-1.1	2.0	12.8	0.5	-0.9	4.6	24.5	-1.3	316
Preah Sihanouk	12.1	24.2	-1.1	0.0	6.1	8.5	-0.1	2.1	14.3	-0.8	52
Stung Treng	3.7	29.1	-1.3	0.4	7.5	0.3	-0.7	2.0	22.4	-1.2	53
Svay Rieng	3.9	17.9	-0.9	2.9	10.4	5.0	-0.6	2.2	15.2	-0.9	187
Takeo	8.8	25.9	-1.2	1.0	5.9	7.1	-0.2	2.7	13.6	-0.8	270
Otdar Meanchey	6.3	23.4	-1.0	2.1	7.2	7.2	-0.4	0.9	9.8	-0.9	61

Kep	14.9	27.7	-0.9	8.4	21.8	9.0	-0.3	2.8	13.6	-0.7	11
Pailin	6.0	22.6	-1.0	3.3	6.8	3.2	-0.5	4.5	13.5	-0.9	21
Tboung Khmum	7.1	24.1	-0.9	3.5	12.8	6.5	-0.5	2.5	17.5	-1.0	198
Mother's education[3]											
No education	8.6	27.9	-1.2	5.2	16.7	3.1	-0.8	6.6	28.6	-1.4	397
Primary	5.4	25.3	-1.1	2.4	11.0	2.2	-0.6	3.5	19.2	-1.1	1,581
Secondary	4.3	17.0	-0.9	1.9	7.5	6.0	-0.3	1.7	12.3	-0.7	1,586
More than secondary	7.5	17.0	-1.0	0.5	6.3	7.4	-0.1	3.2	6.8	-0.7	247
Wealth quintile											
Lowest	8.9	30.3	-1.4	3.6	12.4	2.9	-0.7	5.6	24.0	-1.3	979
Second	5.3	23.0	-1.1	2.4	10.0	3.0	-0.5	2.1	17.5	-1.0	859
Middle	4.4	22.5	-1.1	2.2	7.6	3.4	-0.5	2.4	14.7	-0.9	874
Fourth	4.6	18.3	-0.9	1.6	9.7	5.1	-0.4	2.9	15.3	-0.8	823
Highest	5.3	12.5	-0.6	1.6	7.8	6.9	-0.1	1.1	7.2	-0.5	698
Total	5.8	21.9	-1.0	2.4	9.6	4.1	-0.5	3.0	16.3	-0.9	4,234

[1] Recumbent length is measured for children under age 2; standing height is measured for all other children
[2] Includes children who are below −3 SD from the WHO Growth Standards population median
[3] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

As can be seen in Table 10, the statement regarding the disparities between urban and rural areas are supported by the CDHS survey and confirmed by the UNICEF report from 2023 as a continuous issue. Stunting jeopardizes child survival and development by contributing to child mortality, morbidity, and disability, including impaired or non-optimal physical growth and cognitive development. In recent years, the global nutrition community has increased its focus on stunting. Developments in science have supported the causal relationship between stunting and short-term childhood development, as well as long-term intergenerational effects on families. These relationships highlight the critical importance of nutrition during the first 1,000 days between a woman's pregnancy and her child's second birthday, a period associated with risks of irreversible effects.[36] Cambodia has seen a decline in stunting of 28 percentage points over the last 23 years, but still has a high burden—the most recent figures show a stunting prevalence of 12% in 2021-22. According to the latest CDHS, the highest rate was observed in the provinces of Ratanakiri (39.1%), Pursat (32.9%), Stung Treng (29.1%), Mondulkiri (29.4%) and Kampot (28.4%). International researchers accept that stunting is attributed to poor health, poor Water, Sanitation and Hygiene (WASH), as well as insufficient nutrition intake.

2.3. Concluding Remarks

The most recent data available at the national level draws on the 2021-22 CDHS survey. It can be concluded that the general trend of neonatal mortality is a decline to 8 deaths per 1,000 live births in the year 2021-22. Maternal mortality is reported as the cause of death for 10.7% of all deaths among women of reproductive age, with the main causes identified hemorrhage, eclampsia problems, septicemia and cardiopathies. The number of women giving birth with skilled attendants has reached 99%, and the number of women giving birth at home is as low as 2%.

Infant mortality in Cambodia has declined steadily and is now at 12 deaths per 1,000 live births (6%), with the highest provinces at 39 in Ratanakiri, 33 in Mondulkiri, 31 in Preah Vihear and 30 in Kampong Chhnang (CDHS 2021-22). The major factors contributing to infant and child mortality are low birth weight and lack of breastfeeding. As indicated above, children reported to be 'very small' or 'smaller than average' (less than 2.5 kg) are considered to have a higher-than-average risk of early childhood death. The child mortality rate has improved greatly, with the highest rates being 13 deaths per 1,000 live births in Prey Veng and 8 in Mondulkiri and Tboung Khmum, based on the CDHS 2021-22.

Chronic malnutrition remains high compared to other factors that are clearly contributing to child morbidity and mortality. As stated above, UNICEF reported in 2016 that malnutrition causes approximately 4,500 child deaths annually, with more 60% of these among children aged 6 to 24 months. For that reason, as will be seen in Chapter 4, nutrition remains one of the key priorities of the RGC, with policies on MCH linked to agriculture, water and sanitation, elimination of open defecation, raising of education, poverty reduction and health.

[36] Reducing Stunting in Children Under Five Years of Age: A Comprehensive Evaluation of UNICEF's Strategies and Programme Performance. Cambodia Country Case Study. Evaluation Office. April 2017. UNICEF.

3. SYSTEM OF SETTING UP AND FUNCTIONING OF SOCIAL AND HEALTH INSURANCE

Chapter 3 provides insights into Cambodia's evolving social and health insurance landscape, exploring both existing and emerging government-led healthcare systems. Notably, the chapter underscores the significance of the IDPoor system, serving as a gateway to the Health Equity Fund (HEF) for those outside formal insurance schemes. The HEF, heavily subsidized by the government, plays a growing role in cost coverage. High out-of-pocket healthcare expenses persist, but the chapter details cost waivers and post-identification processes. Informal sector workers not covered by insurance contribute both formally and informally. While minorities lack specific insurance, ethnic populations often access HEF through the IDPoor system.

3.1. Current Social and Health Insurance Schemes

3.1.1 Social and Health Insurance Schemes Supported by the RGC

As of 2020, only approximately one-fifth of Cambodians have social health insurance and many households fall into poverty due to the health-related expenditures. In 2000, the RGC embarked on a journey to develop a health insurance system to reduce the impact of health-related expenditures on households.[37] This has made significant progress towards universal coverage and poverty prevention/reduction. Policy guidelines and approaches have been elaborated in the Master Plan for Social Health Insurance launched in March 2005 (however not operational until 2015), the Guidelines for the Implementation of Community-Based Health Insurance in 2006, and in the new National Social Protection Policy Framework (SPPF) for the period 2016-2025. The current social protection system and the SPPF roadmap are summarised in the following figures.

Figure 8 illustrates the Master Plan for Social Health Insurance, including the identification of the respective ministries responsible for activities under each scheme:

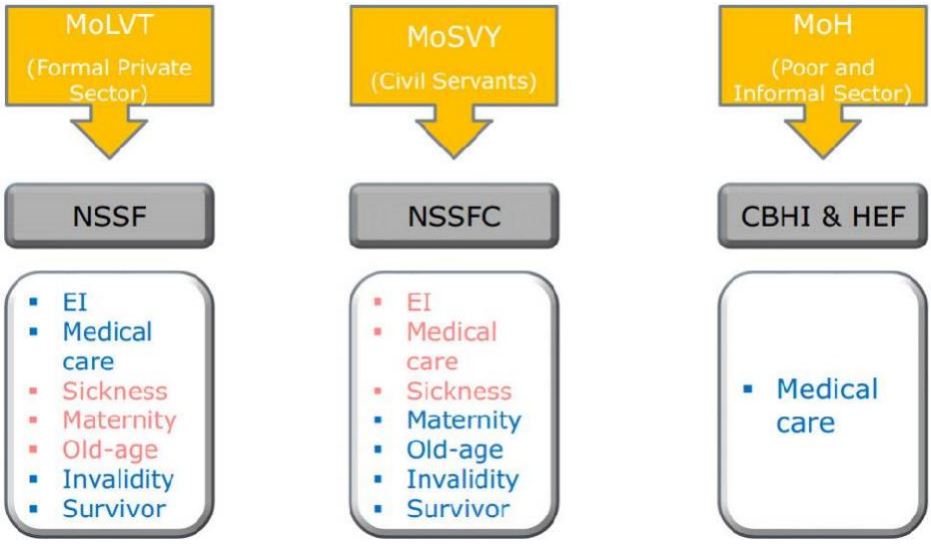


Figure 8: Line Ministry Responsibilities in the Master Plan for Social Health Insurance Cambodia[38]

[37] Guideline for the Implementation of Community-Based Health Insurance. Department of Planning and Health Information in Collaboration with World Health Organization and GTZ. Ministry of Health. June 2006.

[38] NSSF, Cambodia. Social Security in Cambodia, Employment Injury Insurance - EII Presentation by Mr. Cheak Lymeng, Deputy Director of Policy Division.

The vision of the RGC with the SPPF roadmap is to simplify the management of the social protection system by establishing the National Social Protection Council (NSPC), with the purpose of integrating all social security operators (NSSF, NSSFC, NFV, PWDF) into a single operator that focuses on two main pillars, namely Social Assistance and Social Security.[39] The new social protection system is illustrated in Figure 9.

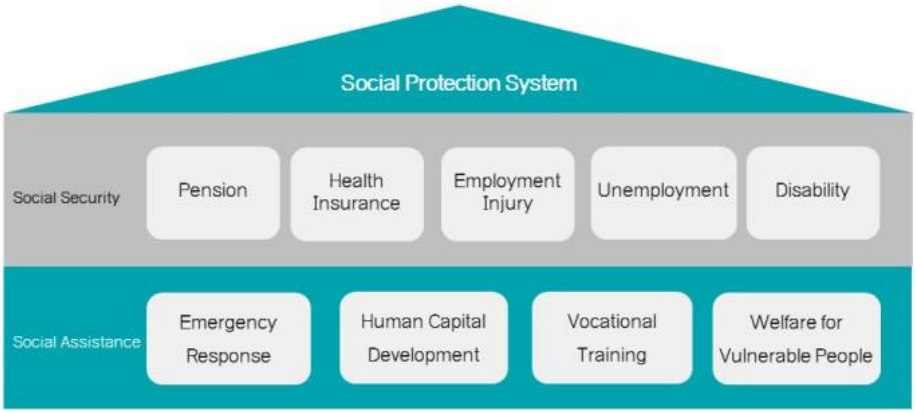


Figure 9: Social Protection System Planned Under the NSSP[40]

The SPPF is structured around two main pillars, the Social Assistance pillar and the Social Security pillar. The SPPF was developed under the leadership of Ministry of Economy and Finance (MEF), in consultation with the Ministry of Social Affairs, Veterans and Youth Rehabilitation (MoSAVY), the Ministry of Labour and Vocational Training (MoLVT), the Ministry of Health (MoH), the Ministry of Civil Service (MoCS), the Ministry of Planning (MoP), the Ministry of National Defence (MoND), the Ministry of Interior (MoI), the Ministry of Justice (MoJ), the Ministry of Education, Youth and Sport (MoEYS) and the Council for Agricultural and Rural Development (CARD).[41]

With roughly a fifth of the population estimated as living in poverty, there is a continued need in Cambodia for a focus on social protection as a means to reduce poverty, support the poorest, and address vulnerability to crises. Existing social assistance interventions include the Health Equity Fund, school feeding and scholarship programmes, and the Emergency Food Assistance programme. The social protection system also includes the National Social Security Fund for Civil Servants and the National Fund for Veterans. The scope of these programmes is limited, however, and the coverage fragmented. Many poor and vulnerable households in rural and urban areas remain outside the reach of social assistance, and there is a need to ensure the coverage of social protection for the large number of internal migrants in Cambodia (roughly 3.1 million people), the majority of whom are youth.[42]

Fragmentation, limited coverage and lack of complementarity of existing interventions pose challenges to Cambodia's social protection system, as observed by the National Social Protection Strategy for the Poor and Vulnerable (2011-2015). There is a need to improve the targeting of social protection interventions through strengthened analysis of data on region, gender, age, income and other variables to identify and respond to trends in social and economic vulnerability – including in the context of the IDPoor targeting mechanism. In the NSDP 2014-2018, the RGC committed itself to strengthening the availability of data, improving the collection of reliable evidence required for decision-making through the national M&E system.

3.1.1. Management and Governance Structure of Health Insurance Schemes

[39] Royal Government of Cambodia. National Social Protection Policy Framework 2016 -2025. March 2017
[40] Ibid.
[41] Ibid.
[42] National Institute of Statistics, Cambodia. General Population Census 2019. 2019.

The HEF is under the supervision of MoH, with support from different development partners and NGOs who act as operators and currently function as the promoters of the HEF. It is financed by the RGC with a contribution from donor partners. On the other hand, the Community-Based Health Insurance schemes were and are under the management of NGOs and are either financially supported by donor partners or partially covered by the HEF, and combine promotion activities of HEF with CBHI.

It has been stated that the management fragmentation has generated high operational costs, inconsistencies in terms of allowances and benefits, different criteria and options for members, and differences in terms of priorities. The NSSPF is therefore a roadmap for the HEF to be fully governed by the RGC in the future, while the future of CBHI or other microcredit insurance initiatives and private insurances is to be promoted otherwise. Figure 10 below shows the previous governing structure of the NHEF, while the following Figure 11 illustrates the NSSPF management structure for the healthcare system.

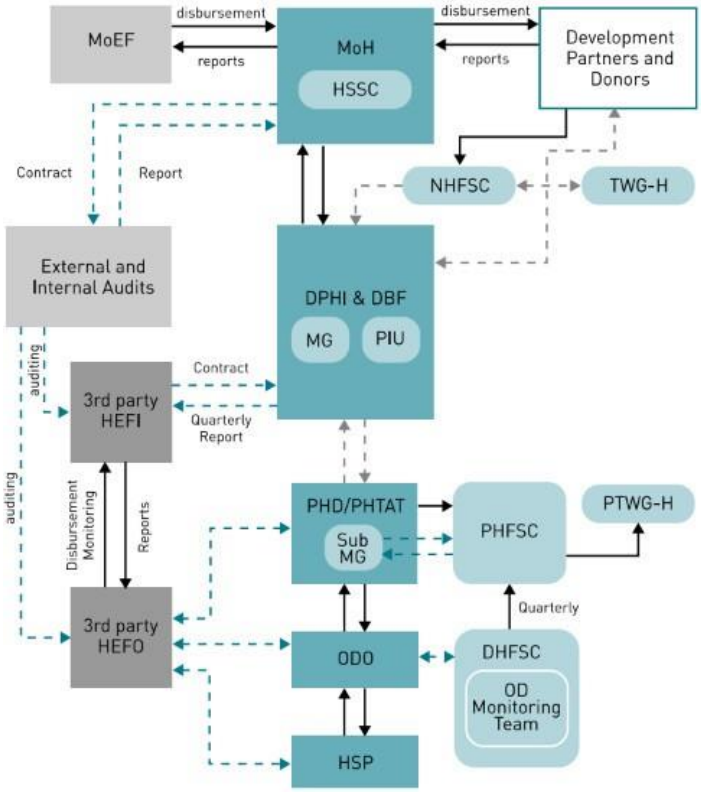


Figure 10: Management. Structure of the Healthcare System[43]

Legend

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; SSC, 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.

[43] The Kingdom of Cambodia Health System Review. Health Systems in Transition. Vol. 5 No. 2. 2015. WHO 2015.

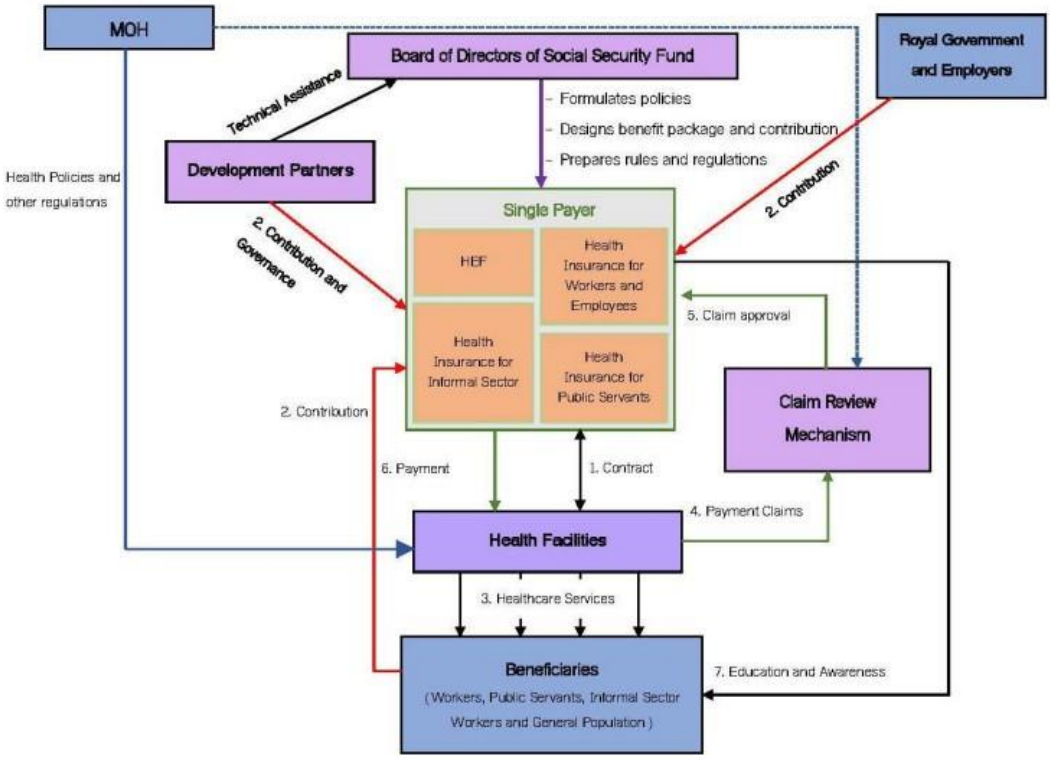


Figure 11: Management Structure of the Healthcare System[44]

3.2. Health Insurance Types

The RGC recognises the potential of social health insurance as a major health care financing method to reach a more adequate, stable and efficient health care financing system that will promote improvement in quality in the delivery of an appropriate volume and mix of health services and remove financial barriers when seeking healthcare.[45] To reach universal health insurance coverage in Cambodia, a parallel and pluralistic approach from the RGC addressed the following:

- **Compulsory social health insurance** through a social security framework for the public and private salaried sector workers and their dependents, through the addition of healthcare to the Social Security Law passed in 2002 and administered by the National Social Security Fund.
- **Voluntary insurance** through the development of CBHI schemes sponsored by different development partners, national non-government organisations and health care providers for non-salaried workers' families that are contributed to on a regular basis. Social health insurance for this population sector includes all family members registered in the Cambodian Family Book.
- **Private health insurance** plans, which are considered to be in the very early development stage. Private insurances in Cambodia cover less than 5% of the total population and are mainly available in urban areas and target the middle class. Companies are also operating as insurers when NGOs and private companies offer a health insurance package to their staff. According to the SPPF report, by the end of 2015, there were only 8 insurance companies. The premium collected was US$9.2 million, an equivalent of 10.8% of the total insurance market.
- Social assistance through the use of **Health Equity Funds** and later, government funds to purchase a health insurance for non-economically active and vulnerable populations.

[44] Ibid.
[45] Master Plan for Social Health Insurance in Cambodia. Ministry of Health. December 2005.

3.2.1. Community-based Health Insurance

The CBHI Implementation Guidelines shall apply to all CBHI schemes partnering with public and not-for-profit private health facilities in Cambodia.[46] The Ministry of Health also encourages experimentation of alternative implementation designs (provided that a project proposal is submitted to the MoH for appraisal and approval). The Ministry of Health will conduct an evaluation of the implementation of CBHI guidelines implementation to identify recommendations in further policy making on CBHI in Cambodia.

The following stakeholders play a crucial role in the implementation and coordination of CBHI schemes:

- Ministry of Health: Bureau of Health Economics and Financing (BHEF), Department of Planning and Health Information (DPHI)
- Social Health Insurance Committee (SHIC)
- Provincial Health Department and Operational District
- Health Care Providers (HCP): National Hospitals, Referral Hospitals, Health Centres
- CBHI Consultative Committee, including consumer and patients' associations and representatives of the population
- CBHI Steering Committee
- CBHI Implementers
- CBHI scheme supporters/funders

The guidelines should facilitate the implementation of CBHI schemes as a means of achieving universal coverage in the long run. They intend to implement a network of CBHI schemes with the same core principles, which will allow merger and increase risk-pooling, leading to universal coverage. The four guiding principles focus on i) administrative prerequisites, ii) technical requirements, iii) general recommendations, and iv) aspirations at the same purpose.

Community Based Health Insurance Schemes were operated by a number of NGOs in 7 provinces and in Phnom Penh for the citizens working in the informal sector. According to the NSPPF, as of the end of 2015, 148,418 people joined these schemes.[47] Their funding is based on the contributions of their members and subsidies from development partners. The operation of the schemes is seen as a potential trend for the future development of social health insurance of the informal sector, however the findings from the implementing NGOs as well as the donor partners supporting the scheme point towards an unsustainable modality which is subsidy dependent at this point.

3.2.2. Health Equity Fund

The purpose of the Health Equity Fund is to fund user fee exemptions for public health facility services. The HEF scheme objective is to enable the pre-identified poor population (identified as IDPoor) to access services at Health Centres and Referral Hospitals, and if needed they can be referred to a higher level of services. Besides health services, the HEF can cover transport costs, food and funeral expenses.[48] According to the Health Financing Profile from May 2016, the MoH seems to be considering expansion of HEF to vulnerable groups other than the poor, such as the elderly, people with disabilities, and children under five.[49] As of 2023, the implementation of this expansion is yet to be seen. HEFs in 25 of

[46] Guideline for the Implementation of Community-Based Health Insurance. Department of Planning and Health Information in Collaboration with World Health Organization and GTZ. Ministry of Health. June 2006.
[47] Royal Government of Cambodia. National Social Protection Policy Framework 2016 -2025. March 2017.
[48] The Kingdom of Cambodia Health System Review. Health Systems in Transition. Vol. 5 No. 2. 2015. WHO 2015.
[49] Health Policy Project. Cambodia Health Equity Funds: Improving Health for the Poor [PDF]. Available from: https://www.healthpolicyproject.com/pubs/7887/Cambodia_HFP.pdf

Cambodia's 76 Operational Districts supported 20% of all hospitalizations in the public health system. More than 70% of women covered by HEFs delivered their babies at hospitals or health centers, compared with 40% of women in areas without HEF coverage.[50]

Figure 12 outlines the relationship between HEF, beneficiaries and contracted health care providers, and Figure 13 demonstrates the functioning mechanisms of the HEF.

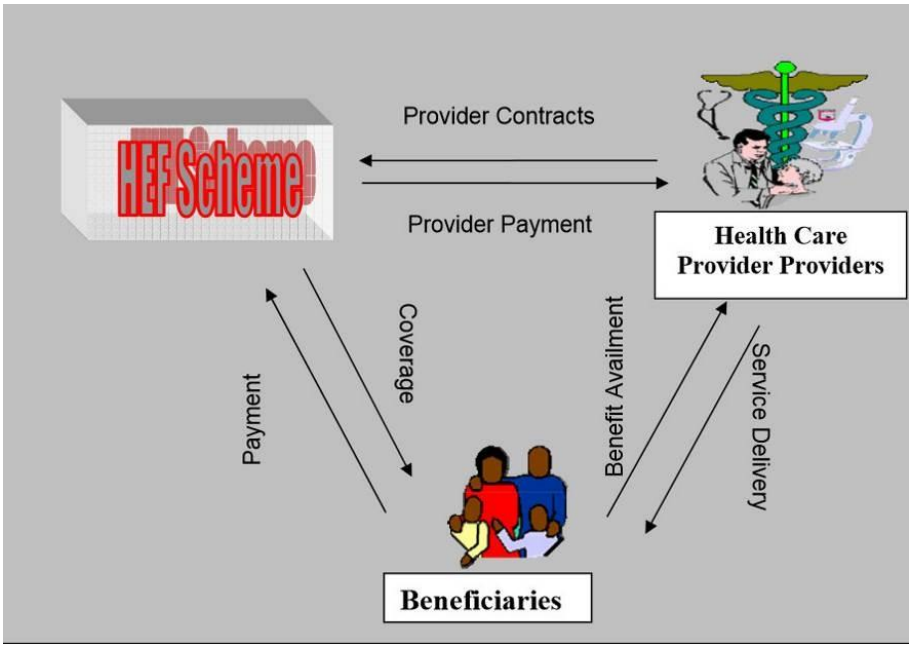


Figure 12: Relationship Between HEF, Beneficiaries and Health Care Providers[51]

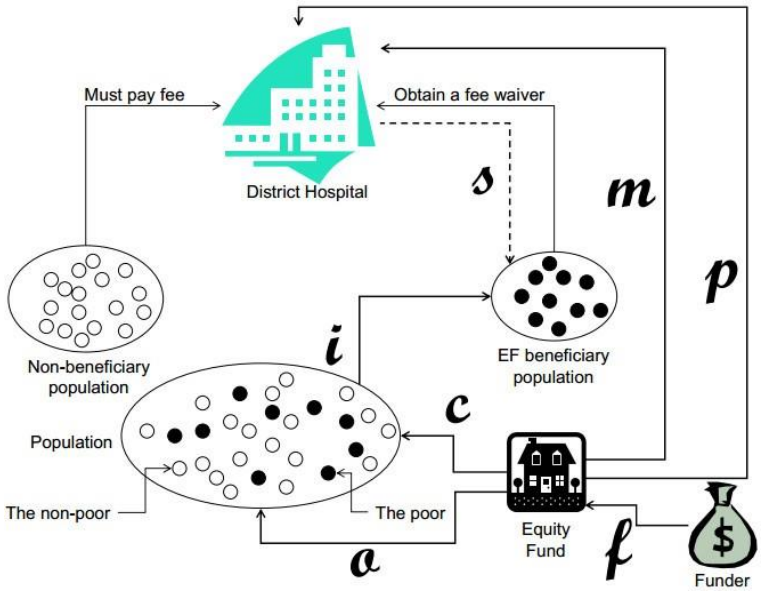


Figure 13: HEF Functioning Mechanisms

[50] University Research Co., LLC (URC). Cambodia Health Equity Funds [Internet]. Available from: https://www.urc-chs.com/projects/cambodia-health-equity-funds/

[51] Implementation of the Health Equity Funds: Guideline. Ministry of Health. January 2009.

The HEF scheme acts as a financial intermediary for the provision of accessible, affordable health services to its members. The 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 omitted from the IDPoor survey, HEF operators carry out their own pre-identification survey for the facilities. Services are provided free to beneficiaries and the HEFs directly reimburse the cost to the facility.

3.3. IDPoor mechanism Governing Access to HEF

IDPoor is a standardised process of identifying poor households, which was established in 2006 by the MoP. The aim of the programme is "to more efficiently achieve poverty reduction by providing a national, standardised mechanism for identifying poor households in need of assistance and encouraging the equitable distribution of resources to priority regions".[52]

In 2011 the RGC issued Sub-decree No. 291 on Identification of Poor Households that formalised MoP as the agency responsible for identification of poor households, and decreed IDPoor as the source for providing assistance to those households.

The IDPoor data is used for various social protection processes:[53]

- Free or discounted medical services (through HEF)
- Scholarships, waiving of tuition fees, and support to poor children for general education and vocational training
- Distribution of agricultural inputs (seeds, livestock, etc.) and training on agricultural and animal husbandry techniques
- Allocation of social concession land
- Distribution of free food and basic necessities
- Food- or cash-for-work schemes
- Cash transfer programmes (e.g., to improve maternal and child nutrition, health and education)
- A wide range of other activities targeted to poor communities and households by NGOs, pagoda committees, charities, etc.

In terms of management structure there is a cascade of national, sub-national and community structures involved in IDPoor management, visualized in Figure 14.

[52] Ministry of Planning, Royal Government of Cambodia. Identification of Poor Households: Results from Data Collection Round 4 (2010) and Round 5 (2011). 2012.
[53] Ibid.

Figure 14: Cascade of National, Sub-National and Community Structure Involved in IDPoor Management

According to Article 13 of Sub-decree No. 291, the identification of poor household must be based on interviewing households using the questionnaires prepared by MoP. The poverty indicators are:[54]

- Housing condition, which includes roof, wall, area, house quality, and specification of whether it is owned or rented
- Size of legally owned residential land and productive agricultural land
- Main source of income from growing crops, fishing, or other activities
- Animal raising (such as raising fish for sale)
- Ability to meet food requirements
- Number of household members unable to earn an income, relative to the total number of household members
- Material goods and equipment
- Means of transportation
- Unexpected problems or serious crises that have caused the household to lose income, experience food shortages, sell property, or go into debt
- Number of children aged 6 to 11 years who missed school, and the reasons
- Situations that have caused deterioration of the household's living conditions, such as the head of household (husband or wife) suffering from serious disability or chronic disease, households consisting exclusively of elderly members, households with orphans living with them, female-headed households with many young children, or households with no members with the capacity to work
- Situations which improve the household's living conditions, such as assistance from relatives or other income sources

3.3.1. HEF Funding Source

The total HEF expenditure in 2019 was US$20.6 million.[55] The funding came from the government and international donors. According to the NSSPF report, as of 2017, around two million poor Cambodians have been receiving financial risk protection through the HEF when using healthcare services at public health facilities (Health Centres and Referral Hospitals) nationwide.

The HEF is meant to support the poor population (holders of the IDPoor) and refunds the user fees for the healthcare services to health facilities on their behalf. The scheme covers both out-patient services (including birth delivery) and in-patient services (including surgeries). In addition to this, the HEF also covers the cost of referring the patients to hospitals, food allowances, one caregiver in case the patient needs to stay in the hospital, and funeral allowance.[56] Besides the HEF scheme, the RGC has been contributing to the Kantha Bopha Hospital Fund on an annual basis to support the provision of free out-patient and in-patient services to children nationwide. According to the foundation's 2019 annual report, the Government's subsidy to the Kantha Bopha Hospital Fund increased to roughly US$36.7 million US-Dollars.[57]

Until mid-2017, the MoH in collaboration with URC managed the HEF. The MoH acted as a supervisor of the eleven NGO operators and the payment system, while the URC provided the main administrative infrastructure and the monitoring and auditing of HEF.

3.3.2. Social and Health Insurance Schemes Supported by Donors, and International Organisations

[54] Royal Government of Cambodia. Sub-decree No. 291 on Identification of Poor Households, December 2011.
[55] Ministry of Health, Cambodia. Annual Report 2019.
[56] Royal Government of Cambodia. National Social Protection Policy Framework 2016 -2025. March 2017.
[57] Cambodia Kantha Bopha Foundation. 2019 Annual Report. 2019.

A social health protection project of the MoH was commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) for the period 2021-2024, succeeding similar projects from 2019-2021 and 2009-2018. The current project provides national level policy advice on how to make the social protection system shock-responsive and inclusive, supporting the National Social Protection Council (NSPC). It also provides technical support to the digital transformation of the social protection system, and the further development of the IDPoor system.

In 2018, GRET launched a three-year project, supporting the National Social Security Fund (NSSF) to extend the health insurance scheme to tuk tuk drivers and domestic workers. This followed on from their 2016 project that supported the implementation of the first private health insurance package for staff in the private informal sector.

Table 11 presents an overview of provider payment mechanisms by service and insurance providers.

Table 12: Provider Payment Mechanisms by Service and Insurance Provider[58]

Health Provider	MoH	SOA	NSSF (Work-place Injury)	HEF	CBHI	Voucher	Private Insurance	OOP Cost Sharing
National Hospital	Budget line item		Fee-for-service	Case-based	Fee-for-service and case-based		Fee-for-service	Fee-for-service
Provincial Hospital	Budget line item	Service Delivery Grant and PBF	Fee-for-service	Case-based	Fee-for-service and case-based	Fee-for-service		Fee-for-service
Referral Hospital	Budget line item	Service Delivery Grant and PBF	Fee-for-service	Case-based	Fee-for-service and case-based	Fee-for-service		Fee-for-service
Health Centre	Budget line item	Service Delivery Grant and PBF	Fee-for-service	Case-based	Capitation and fee-for-service	Fee-for-service		Fee-for-service
Private Provider			Fee-for-service			Fee-for-service	Fee-for-service	Fee-for-service
Pharmacy								Fee-for-service
Charitable Hospital								Fee-for-service
NGO Facility								Fee-for-service

3.3.3. NGOs and other Actors Contributing to Social and Health Insurance Schemes

As already described in the previous, chapter there are various partners active in the social and health insurance schemes: the RGC, donors, the private sector, voluntary contributions and the HEF. Since the notion of any insurance is relatively new to the Cambodian population, there are a number of stakeholders working to increase the population's awareness about insurance.

One of the non-governmental initiatives is the Social Health Protection Association (SHPA), which was a member-owned umbrella organisation established with the aim of providing a collective voice for

[58] The Kingdom of Cambodia Health System Review. Health Systems in Transition. Vol. 5 No. 2. 2015. WHO 2015.

social health protection and micro-insurance schemes and to steer discussions on the policy development and guidelines and standards for schemes.[59]

According to the MoH, alongside the private sector and government-led HEF, there are a few local NGOs who have been engaged the provision of insurances schemes. An overview of the organisation contributing to health insurance schemes can be found in Table 12.

Table 13: NGOs Engaged in the Provision of Insurance Schemes

Name of the NGO	Type of Insurance	Partner Organisations	Target Provinces
Action for Health (AFH)	HEF	MoH[64] USAID GIZ	Kampong Cham, Kampong Thom
Buddhism for Health (BFH)	Community Managed Health Equity Funds (CMHEFs) National Health Equity Fund (NHEF) Community Based Health Insurance (CBHI) Social Accountability in Health	URC (USAID funded) GIZ MoH KOICA UNFPA UNICEF WB MoH (HSSP2)	Banteay Meanchey, Pailin, Battambang, Kampong Chan, Thong Khmum, Kampong Speu, Kampot, Takeo, Kep, Sihanouk, Pursat, Siem Reap, Prey Veng
Family Health Development (FHD)	Health Equity Fund SKY[63] insurance, which was integrated into HEF	MoH (HEF) SKY	Phnom Penh

In addition to these organisations listed in the MoH policy, there are a number of other organisations engaged, such as the above mentioned GRET, who focus on reaching tuk tuk drivers and domestic workers.

3.4. Health Insurance Schemes in Kampong Chhnang

According to the PHD, no community health insurance scheme is currently implemented in Kampong Chhnang. Local NGOs who have implemented CBHI under the previous system have confirmed that no CBHI was accessible to the population.

Kampong Chhnang has approximately 10 garment factories, which means that there is a health insurance provided to the workers of these factories under the government social health insurance scheme.

The HEF is utilised by the hospitals and is based on IDPoor households. In case a health service seeker does not have an IDPoor card and cannot afford the treatment, the hospital still accepts the patient and conducts a post-identification of the IDPoor card. The percentage of poor households in Kampong Chhnang based on the IDPoor website differs across the province. Table 13 shows the categorisation of poor households by district in Kampong Chhnang. The poverty rate and subsequent rate of IDPoor 1 and 2 households in the province is high, with Krong Kampong Chhnang, the most urban area of the province, having the highest rate.

[59] Full members are: Action for Health (AFH), Action for Health Development (AHEAD), Buddhism for Health (BfH), Centre d'Etude et de Développement Agricole Cambodgien (CEDAC), Cambodian Health Committee (CHC), Cambodian Health Organization (CHO), Family Health Development (FHD), Patient Information Centre (MoPoTsyo), Pursat Community Health Support Fund Association (PCHSFA), Poor Family Development (PFD), Reproductive Health Association of Cambodia (RHAC). SHSFO. Angkor Chum OD Cooperative Health Insurance (STSA). Associate members are: Catholic Relief Services (CRS), Groupe de Recherche et d'Echanges Technologiques (GRET), Malteser International (MI), Women Organization for Modern Economy and Nursing (WOMEN)

Table 14: Categorisation of Poor Households by District in Kampong Chhnang[60]

District	Total Households in Coverage Area	Poverty Rate (%)	Poor Households by Poverty Category					
			Poor Level 1		Poor Level 2		Total	
			Number	%	Number	%	Number	%
Boribour	15,241	17.7	1,196	7.85	1,513	9.93	2,709	17.77
Chol Kiri	8,235	19.22	649	7.88	934	11.34	1,583	19.22
Krong Kampong Chhnang	9,148	23.75	1,020	11.15	1,153	12.60	2,173	23.75
Kampong Leaeng	12,709	22.24	1,421	11.18	1,405	11.06	2,826	22.24
Kampong Tralach	25,355	16.7	1,925	7.59	2,310	9.11	4,235	16.7
Rolea B'ier	29,132	19.55	2,440	8.38	3,256	11.18	5,696	19.55
Sameakki Mean Chey	21,394	19.6	1,494	6.98	2,700	12.62	4,194	19.6
Teuk Phos	17,670	20.51	1,392	7.88	2,233	12.64	3,625	20.51
Total	**138,884**	**19.47**	**11,537**	**8.31**	**15,504**	**11.16**	**27,041**	**19.47**

During the 2017 FGDs with hospital employees, the study team observed that the level of awareness about CBHI or insurances among employees is low or non-existent. When discussing the notion of insurance in general with the staff at the Health Centres or community council level, it was apparent that the knowledge or awareness varies or is also non-existent.

3.5. Concluding Remarks

In Chapter 3, social and health insurance schemes are presented. Given that there is a shift towards a more comprehensive model provided by the Government, both the 'old' and the 'new' systems are described, outlining the types of social and health insurance available to the population. The new system was developed by the government with technical assistance provided from GIZ, who has sound experience with health insurance, in particular CBHI, in Cambodia.

Given the fact that for a large number of the population, health services remain expensive as an out of pocket expenditure, special attention in this chapter was also given to the IDPoor system. An IDPoor registration mechanism is a precondition for people to make use of the HEF when seeking medical care in case they do not fall under any health insurance. In these cases, the Government takes on the responsibility of covering their medical costs. An overview of the various mechanisms covering medical costs is presented in Table 11. It is worth mentioning that the HEF is a highly subsidised form of a cost-covering mechanism in which the Government assumes a bigger role each year.

In general, there are high out of pocket expenditures for health services. However, all persons seeking help will be attended. In case a person is not a holder of an IDPoor card they still will be attended to at the hospital and a cost waiver will apply to them, and post-identification will take place. In the case that a person does not fall under any of the health insurance systems, for example residents working in the informal sector (grey economy), who do not fall into the IDPoor category, they have to pay formal and often also informal contributions to health facilities.

There is no specific social and health insurance designed for minorities. However, most ethnic populations, for example in Mondulkiri and Ratanakiri, are classified as the poorer population, so in general they will be holders of the IDPoor card and their medical expenses will be covered by HEF.

[60] Government of Cambodia. IDPoor - Public Data Query [Internet]. Available from: https://app.idpoor.gov.kh/public-data-query#publichouseholddata

4. OPERATION AND THE ROLE OF INDIVIDUAL HEALTH FACILITIES (HEALTH CENTERS, REFERRAL HOSPITALS) IN MCH AND CHILD MALNUTRITION

The roles and functions of the various levels of individual health facilities is described in detail in Chapter 1. In this chapter, the report describes in further detail the various Complementary Packages of Activities delivered by individual health facilities. In Chapter 5, this information based on the MoH regulations for hospitals and their respective CPA level will be further assessed against the level of met requirements in Kampong Chhnang.

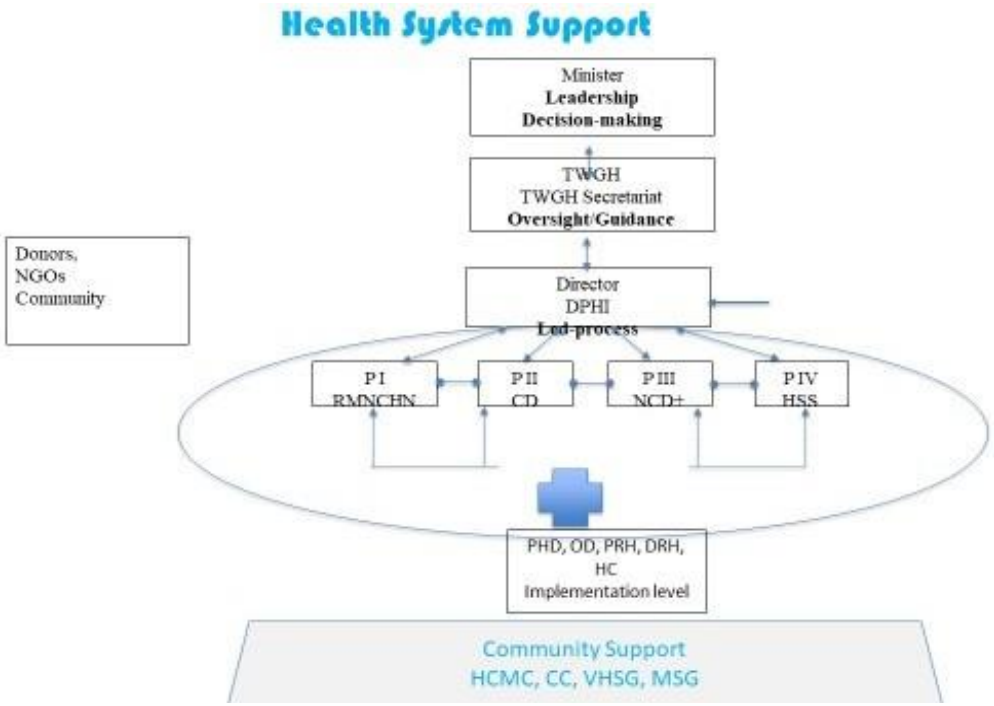


Figure 15: Organisational Structure and Responsibilities of the Key Health Actors

4.1. Roles and Functions of the MoH and National Programmes

4.1.1. Ministry of Health

The overall role of the Ministry of Health can be summarised as following. To:

- Define health policy
- Develop planning and strategy for the health sector
- Develop regulations/guidelines to maximize the quality of health services in the public and private sectors
- Monitor, control and evaluate the administrative and technical work of institutes subordinate to the MoH
- Research how to develop the health sector
- Manage resources (human, material, financial and information) at central, provincial, municipal, district, khan, commune and sangkat levels
- Organize preventive programs and nursing care to decrease the incidence of disease
- Coordinate other resources

- Oversee production, trade and distribution of drugs, medical equipment and paramedical equipment in all public and private health facilities
- Control food safety

4.1.2. Municipal and Provincial Health Departments

As of December 2015, there are 25 Municipal/Provincial Health Departments (M/PHD) and 25 Municipal/Provincial Referral Hospitals that are under direct administration of the M/PHDs (one in each province). The municipal/provincial level is the interface between the central and Operational District level.

The main role of the M/PHDs is to link the MoH and ODs through:

- Interpretation, dissemination and implementing national health policies and health strategic plans through annual planning and budgeting
- Supporting the development of ODs by regular supportive supervision and monitoring and evaluation
- Ensuring equitable distribution and effective utilization of available financial and human resources
- Mobilizing additional resources
- Providing continuing education to health personnel in the province
- Performing delegated regulatory functions of private health providers and pharmaceutical products
- Promoting coordination and collaboration with relevant stakeholders, including local administrations

4.1.3. Operational Districts

As of December 2015, there are 94 OD offices covering 197 administrative districts/khans. The Operational District is the most peripheral sub-unit within the health system, closest to the population, and composed of HCs/HPs and RHs.

Its main role is to implement the Operational District health objectives through:

- Interpreting, disseminating and implementing national policies
- Maintaining effective, efficient and comprehensive health services (promotion, prevention, curing, rehabilitation) according the national clinical practice guidelines/protocols
- Ensuring equitable distribution and effective utilization of available financial and human resources
- Mobilizing additional resources for district health services
- Providing in-service training to hospital and health center staff
- Providing support to HCs/HPs and RHs through supportive supervision, monitoring and evaluation
- Promoting coordination and collaboration with relevant stakeholders, including local administrations

4.1.4. Referral Hospitals (National, Provincial and District Hospitals)

As of December 2015, there are 102 Referral Hospitals, including 9 National Hospitals, 25 Municipal and Provincial Referral Hospitals, and 68 district-based Referral Hospitals. Referral hospital services are distinct and complementary to those delivered by Health Centres. The type of health services delivered by RHs is defined by the MoH's National Guidelines on Complementary Package of Activities (CPA) for Referral Hospital Development, which includes 3 levels of CPA: CPA1, CPA2 and CPA3. The RHs are foreseen to cover the optimal size of population of 100,000, however they cover a population ranging between 80,000 to 200,000 and are located in populated areas reachable within a two-hour drive or boat journey, and in rural areas not more than a three-hour drive or boat journey.

The main roles of RHs are:

- Providing health services that cannot be delivered by health centers, which includes specialized services, diagnosis, follow-up and treatment for management of complex health problems
- Supporting the Health Centres in their respective OD through clinical training
- Conducting supportive supervision/clinical monitoring of respective HCs

4.1.5. Health Centres

As of December 2015, there are 1,141 HCs and 107 Health Posts, which covered 1,633 Communes/Sangkats. HCs are foreseen to cover the optimal population size of 10,000, however they cover a population ranging between 8,000 to 12,000 and are located in populated areas to be reachable within 10km or two hours maximum walk for the catchment area population.

Health centers deliver basic health care services as defined in the MoH's Guidelines on Minimum Package of Activities (MPA) for Health Centre Development:

- MPA services
- Close contact with the catchment area population
- Efficient and affordable (financially and functionally)
- Provide integrated and high quality promotive, preventive and basic curative services
- Ensure financial, geographical and culturally appropriate accessibility
- Encourage community participation in health

4.1.6. Health Posts

Health Posts are intended as public health services providers for distant communes or villages for which the nearest HC is more than 15km away, and where there are possible geographical barriers (rivers, mountains or poor roads). Their range is a population of 2,000 to 3,000.

Activities performed include:

- Refer any severe cases to HC or RH
- Provided simple services such as vaccination, health education, ANC, family planning, delivery, PNC and treatment of simple diseases

4.2. Explanatory Notes to the Complementary Package of Activities (CPA)

- The Operational District is the lowest administrative unit, with two levels of health services
- The first contact level for the public is the HC, which provides the Minimum Package of Activities (MPA).
- The second level is the Referral Hospital, providing a Complementary Package of Activities (CPA).
- A Provincial Hospital has a special status as it plays the role of both a Referral Hospital for the OD in which it is located, and also for other ODs within the province.
- Referral hospitals (RH) are classified into three categories (CPA1, CPA2, CPA3), based on the number of staff including physicians, number of beds, drugs and medical equipment, and clinical activities

Box 5: Summary of CPA Categories

CPA1	Lowest hospital level 40–60 beds Basic obstetric care, no major surgery (no general anaesthesia), no blood deposit or bank
CPA2	60–100 beds CPA1 services plus emergency care major surgery Other specialized services such as blood transfusion
CPA3	100–250 beds

Major surgery and more activities than CPA2 including various specialized services
All eight National Hospitals in Phnom Penh, and 21 of 24 Provincial Hospitals are CPA3 hospitals

Table 15: CPA Services[61]

Clinical Services	CPA1	CPA2	CPA3
Medical			
OPD and triage	X	X	X
Emergency care	X	X	X
General medicine (adults)	X	X	X
Surgery		X	X
Obstetrics and gynaecology department	10 beds	20 beds	25-30 beds
Paediatrics	17 standard beds	27 standard beds for 0-16 years	27 standard beds for 0-16 years
Surgery/operation/ICU	X	X	X
Tuberculosis	X	X	X
Ophthalmology			X
Mouth and dental service	X	X	X
Mental service	X	X	X
Infectious diseases: AIDS, malaria	X	X	X
Para-clinic service			
Laboratory	X	X	X
Blood bank		X	X
Blood depot		X	
Imaging service (X-Ray, ultrasound, ECG, fibroscopy, scanner)	X	X	X
Pharmacy	X	X	X
Administration and Finance			
Finance/accounting section	X	X	X
Administration/personnel	X	X	X
Transportation, ambulance, security	X	X	X
Management of medical equipment	X	X	X
Warehouse for equipment and materials	X	X	X
Sanitation, waste management, and morgue	X	X	X
Laundry and canteen	X	X	X

Table 16: CPA Human Resources

Role	CPA1	CPA2	CPA3
Medical doctors/medical assistants	5-7	11-14	23-40
Pharmacists	1-2	2-3	6-8
Dentists	2	2	2-3
Specialised nurses/nurses/PNs	15-22	22-32	86-132
Specialised MWs/MWs	6-8	7-10	16-22
Lab technician	3	3-5	8-10
Imaging technicians	2	3	3
Physiotherapists	1-2	2-3	3-4

[61] National Guidelines on Complementary Package of Activities for Referral Hospital Development from 2006 to 2010. Ministry of Health. Second Version. 15 December 2006.

Equipment/Building Technicians	2-3	3-5	5-7
Cleaners	2-3	3-4	10-20
Laundry staff	1-2	2-3	3-4
Kitchen worker	1-2	2-3	3-4
Drivers	1	1-2	1-2
Order-administrators	2-5	3-4	4-6
Accountant	1	1	2-4
IT	1-2	1-2	2-4
Receptionist	1	2	2-3
Security	2	2	2
Total Staff	**47-65**	**68-96**	**155-212**
Total Beds	**40-60 beds**	**60-100 beds**	**100-250 beds**

4.3. Requirements Specific to MCH

Based on the standards established by MoH in Tables 14 and 15, the specifics are described below for each CPA level hospital with regard to MCH, therefore focusing on the details for the Obstetrics & Gynaecology Department, and Paediatrics.

4.3.1. CPA1

CPA1 is equipped for an estimated 1,000 deliveries per year. Ambulance access should be provided. This department ensures 24-hour service. The delivery rooms practice aseptic procedures and should be next to the labour and recovery rooms, with direct access to the newborn care unit. This service should be separate from gynaecology. It has easy access to the operating theatre and intensive care unit (surgery), a newborn care unit, neonatal resuscitation equipment, weighing equipment and measures. Also, easy access to X-ray, echography and ECG. Antenatal policy in outpatients. Delivery rooms should have walls and floors resistant to chemical attack.

CPA1 must have an examination room of $12m^2$, a consultation room for family planning, hygiene, nutrition and counselling of $12m^2$, a midwife duty room of $20m^2$, and a labour room of $20m^2$. At a CPA1 hospital there is no requirement to have a neonatal care room, but it is required to have emergency neonate equipment.

4.3.2. CPA2

CPA2 is equipped for an estimated 2,000 deliveries per year. Ambulance access should be provided. This department ensures 24-hour service. The delivery rooms practice aseptic procedures and should be next to the labour and recovery rooms, with direct access to the newborn care unit. This service should be separate from gynaecology. It has easy access to the operating theatre and intensive care unit (surgery), a newborn care unit, neonatal resuscitation equipment, weighing equipment and measures. Also, easy access to X-ray, echography and ECG. Antenatal policy in outpatients. Delivery rooms should have walls and floors resistant to chemical attack.

4.3.3. CPA3

CPA3 is equipped for an estimated 2,000 deliveries per year. Ambulance access should be provided. This department ensures 24-hour service. The delivery rooms practice aseptic procedures and should be next to the labour and recovery rooms, with direct access to the newborn care unit. This service should be separate from gynaecology. It has easy access to the operating theatre and intensive care unit (surgery), a newborn care unit, neonatal resuscitation equipment, weighing equipment and measures. Also, easy access to X-ray, echography and ECG. Antenatal policy in outpatients. Delivery rooms should have walls and floors resistant to chemical attack.

CPA3 should also have a clean delivery room of $50m^2$, a sterilisation room of $15m^2$, a neonatal examination room of $15m^2$, a recovery room of $12m^2$, a maternity ward of $80m^2$, a waiting room for family members of $12m^2$. There should also be a toilet and shower for staff and a separate one for

patients, as well as a baby bath. CPA3 should have a neonate room with 2-5 beds in a room of 10-20m^2 with a sanitary toilet and sanitary unit.

4.4. Financial Resources

Currently, the Ministry of Health operates the health system by using the government budget that is financed through the Ministry of Economy and Finance. In addition to this, another portion of external funding comes from the H-EQIP pooled resource, which is contributed from partner donors.

This government and external funding are allocated to the human resource salary, incentive, monitoring and capacity building, and a small amount is contributed to the renovation or construction of health infrastructure.

Despite this financing input to the overall health system, it is reported by stakeholders and service providers at the provincial level that additional financial resources are required for the renovation of some health infrastructure and equipment, and community health activities.

4.5. Human Resources

Since 2009, with UNFPA financial support, the Department of Human Resource Development of the MoH and the Cambodia Midwives Council (CMC) have made significant progress in improving midwives' skills to ensure sufficiently trained midwives who can be mobilised to public health facilities. Significant investment has been made by UNFPA and MoH to improve the quality of midwifery pre-service education and developing and updating the curriculum. However, there is a lack of quality assurance monitoring or skilled practice of midwifery in the education system to ensure that all graduates have the required standard quality of skills, with full competency. The quality of teaching in those schools varies to some extent, and there is a lack of quality assurance in place in order to ensure the teaching standards.[62]

In addition, the MoH is shifting its focus away from the short-term strategy of having primary midwives with minimal training skills who initially filled human resource gaps, to a longer-term strategy to provide quality midwives who have completed an education that meets the WHO standard.

4.6. MCH Services Provided by the Private Sector

The private sector has been enlarging its service delivery role over the years. Currently, there are private hospitals, clinics and NGO clinics that provide MCH services, however most of them are located in urban areas.

In Phnom Penh and Siem Reap there are Kantha Bopha Hospital and Angkor Hospital for Children, offering child health services.

The NGO RHAC provides reproductive health services to the general population, with a total of with 15 clinics in 8 provinces, partnerships with 64 government health facilities in 4 provinces, and 10 mobile outreach clinics in 10 provinces. The reproductive services on offer include family planning, antenatal care, abortion care, postnatal care and vaccination. It also provides care for STIs and HIV counselling and testing.

On the community level, NGOs (such as RACHA, World Vision and People in Need) carry out community-based MCH interventions and health education.

4.7. Concluding Remarks

In Chapter 4 the health care delivery system is described, comprising the organisational structure and responsibilities of public services providers and their links to the management levels. The MoH is the main responsible body for coordinating healthcare providers, however other private and not-for-profit

[62] Country Progress Report. UNFPA. 2016.

health facilities are available.

Each public health facility is obliged to have a standard protocol for the provision of service, infrastructure, medical equipment, medicine and personnel classification allocation as indicated in Tables 14 and 15.

For healthcare provided by Health Centres, the services provided are in accordance with the MPA at the primary level of the health system. MPA services include vaccination, outpatient treatment of simple diseases, ANC, delivery, PNC, family planning, child disease treatment and health education.

In addition to the MPA services, a Health Centre is the first level of screening for child malnutrition, screening for underweight, stunting and wasting. In cases of mild malnutrition, the health center is allowed to monitor and treat the child, however in case of severe malnutrition, those cases need to be referred to higher Referral Hospitals for malnutrition treatment and follow-up.

When it comes to access, there are certain parameters that are considered when establishing a Health Centre, such as the catchment area for a population of 10,000 and their reachability to be within 10km or 2 hours walk. Similar requirements regarding catchment and reachability apply to each public health facility, as outlined in section 4.1. The consequences related to barriers to access due to costs are described in detail in Chapter 3.

PART II

5. NEEDS OF LOCAL COMMUNITIES IN THE AREA OF MOTHER AND CHILD CARE

During the initial study, the Czech Development Agency that focus would be given to Kampong Chhnang province. This remains true in the 2023 revisal of the study. In this section, the general needs of the population in Cambodia are outlined, and later on a specific lens with a focus on MCH is applied to Kampong Chhnang.

5.1. Needs and Priorities of Communities in MCH

Tables 16 and 17 depict the age distribution and household characteristics of the Cambodian population.

Table 17: Age Distribution of the Cambodian Population[63]

Age Group	Percentage of Population
<5	9.3%
0-14	29.4%
5-14	20.1%
15-64	64.8%
65 +	5.9%
Women 15-49 (WRA)	26.9%
Total Population	**15.6 M**

The persons living in the household do not necessarily comprise a nuclear family. Family members registered in the official Family Record Book in Cambodia may include dependent elderly parents, orphans of deceased siblings, or relatives from other parts of the country.

Table 18: Household Information

Characteristic	Urban	Rural	Total
Total number of regular households	1,328,501	2,224,520	3,553,021
Mean size of households	4.5	4.2	5.1
Percentage of female headed households			25.6%

88% of households have access to improved toilet facilities, and 90% of households have access to an improved source of drinking water in dry season, increasing 93% in rainy season. 92% of households have access to electricity. Despite high levels of access to sanitation and electricity, disparities persist in living conditions between rural and urban areas.

Key MCH and nutrition gaps identified by the Health Sector Review included:

- Maternal and child mortality, especially neonatal mortality, remain relatively high compared to other countries in the region. In addition, inequities in health outcomes across socio-economic groups persist.
- Malnutrition (acute and chronic) among women and children remains stubbornly high, severely impacting their health and development of cognitive abilities.

[63] National Institute of Statistics, Cambodia. General Population Census 2019. 2019.

- Effective delivery of quality health services is constrained by inadequate resources, mainly under-staffing, limited diagnostic capacity, and insufficient supply of medicines, health commodities and appropriate infrastructure.
- Competency, skills and a complementary skill mix of health workers remain limited. The shortage of health workers has implications for the efficient delivery of health services at various levels and different facilities within the health system.
- Inappropriate healthcare seeking of the population, especially in rural/remote areas is persistent, i.e., delay in seeking care, self-medicating.[64]

At 2.62 facilities per 500,000 of the population, Cambodia still has approximately half of the recommended number of EmONC facilities for the country (5 for every 500,000 of the population), and EmONC facilities are still largely concentrated at the hospital level and in urban areas. The needs of newborns with complications are also being insufficiently met, and deserve additional attention in the future. The key remaining challenges are:

- Only 80 facilities (of 181) are fully functional as EmONC, with a large deficit in BEmONC compared to expected numbers according to the UN standards.
- Facilities providing EmONC are not equitably distributed across the country, and remain clustered in urban areas.
- EmONC services are still under-utilised and there is a strong unmet need for these services, including specific signal functions such as manual vacuum extraction, anticonvulsants, manual vacuum aspiration, and newborn resuscitation. They are underused compared to expected complications needing these interventions.
- The needs of newborns with complications are being insufficiently met and deserve particular attention.
- The proportion of births by cesarean section is improving but remains below international standards (except in Phnom Penh), and availability of blood transfusion is still insufficient.
- The quality of EmONC services is still poor. It requires more training, coaching, staff skills refreshing and continued supportive supervision.
- Standards for EmONC procedures, although published and available, are not universally followed.
- Many patients still suffer delays in referral and treatment.
- Some financial barriers remain, particularly among the near-poor, the recent poor and marginalised groups.
- Private facilities are excluded from the EmONC network across Cambodia, which contributes to not meeting the UN standards of coverage.

5.2. Current Situation of MCH and Child Nutrition in Kampong Chhnang Province

Kampong Chhnang province is located in around 95km from the capital of Cambodia, Phnom Penh. It has an estimated population of 527,027, with approximately 49,014 children under 5 living in 126,299 households.[65] Around 50,000 factory workers are working in approximately 10 garment factories. A portion of the population is migrating to work outside their province, although the exact numbers could not be traced.

The province contains 8 administrative districts, 70 communes, and 569 villages. The health system is

[64] The Third Health Strategic Plan 2016-2020 (HSP3): "Quality, Effective and Equitable Health Services." Department of Planning & Health Information. May 2016.

[65] National Institute of Statistics, Cambodia. General Population Census 2019. 2019.

supported by one Provincial Referral Hospital (CPA3) and 2 District Referral Hospitals – Kampong Tralach and Boribo – (CPA1), 44 Health Centres (MPA) and 2 health posts. There are a total of 307 hospital beds across the PRH, DRHs and HCs, and a bed occupancy rate of 90% in 2022.

Table 18 shows a comparison of recent data on key health indicators in Kampong Chhnang.

Table 19: Key Health Indicators in Kampong Chhnang Province[66]

Key Health Indicators	2015	2016	2022
Percentage of delivery by trained skilled midwives	70%	65%	85.9%
Percentage of ANC4			54. 2%
Percentage of birth spacing	22%	20%	
Percentage of C-Section at the PRH	3.84%	3.73%	4.1%
Percentage of Post-natal care 2nd visit	52.70%	43.66%	
Percentage of OPD Under 5 years per Years	1.24%	1.10%	1.36%
Number of Dengue Fever among Children	411	408	
Number of Acute Diarrhoea	8,121	7,986	
Number of Acute Respiratory Infections	16,121	15,143	
Number of Diabetes	1.644	2.070	
Number of Traffic accident with head injury	602	734	879
Number of Traffic accident without head injury	1.877	2.229	2,010
Number of TB Positive	300	494	1,213
Number of Malaria Positive	891	634	116

5.2.1. Observations from the Provincial Health Department

According to the 2022 Kampong Chhnang Provincial Health Department Report, specific points regarding the situation and maternal and child health and nutrition needs and care include the following:

- The provinces have adequate infrastructure to provide the necessary services.
- Most Health Centres have at least two midwives and there is good cooperation between Health Centre midwives and hospital midwives to improve delivery in health facilities.
- There is training available to increase the knowledge of staff, particularly for staff at the local lever, and there are capacity building visits to support the activities of the OD, RHs and Health Centres.
- There is significant involvement and support from local administrations at all levels, and for VHVs and residents.
- Employee incentives through the provision of birthing allowances for midwives increase the number and quality of deliveries in health facilities.
- Previous years have seen increased immunization coverage and follow up on children in vulnerable villages.
- There has been successful integration of ophthalmology into primary health care in health facilities.

While there have been improvements and successes, the PHD reports the following challenges in maternal health and obstetric care in the province:

- Insufficient budget as planned.
- Some people migrate to cities and abroad for work, especially women of childbearing age to garment factories, creating challenges in child feeding and care.
- There is a lack of human resources for remote Health Centres and along the Tonle Sap, especially midwives, who are often responsible for the bulk of the work and are unable to visit

[66] Kampong Chhnang Provincial Health Department. Annual Report. 2022

their base often.
- Some women and people are still confused about how to use modern contraceptives, and use private services without registration.
- Provincial Referral Hospital lacks sufficient room for patients, and Health Centres lack waiting rooms and space for postpartum care.
- Insufficient medical equipment.
- Lack of availability of drugs from the Central Pharmacy.

The PHD also reports the following MCH priorities in the province for 2023 and beyond:
- Increase antenatal and postnatal care by skilled midwives, particularly micronutrient supplementation.
- Strengthen emergency maternity and basic infant care services at HCs, and comprehensive infant care services at RHs.
- Expand the provision of contraceptive services and means in health facilities and in the community, as well as continue the education campaign on the use of contraceptives.
- Improve the quality of paediatric care and treatment through the integrated paediatric treatment strategy.
- Continue to install waiting rooms for childbirth in HCs that do not yet have them.
- Train health facility staff and village health support workers to disseminate more health information to the community.
- Increase coverage of all types of vaccines, including further strengthening vaccine management, equipment and storage systems.
- Expand non-communicable disease (NCD) screening services (diabetes, hypertension, cervical cancer).

While the 2023 update to the study did not undertake any fieldwork, the Consultant met with the Director of the Kampong Chhnang PHD via phone to discuss how the MCH situation in the province has evolved since the 2017 situation described above. Notable progress and improvements include:

- Building renovations in many health facilities, which have improved the standards of facilities and therefore the capacity for health staff to provide quality service delivery.
- Through capacity building and training, the capacity of midwives and doctors has improved.
- Infection prevention and control (IPC) has greatly improved in recent years. As the capacity of staff in this area has grown, so too has their interest in engaging with IPC, leading them to continue coming up with new ideas to even further improve the situation.
- Management of waste and wastewater from health facilities has been significantly improved, and there is now much safer infrastructure and systems for management and dirty water storage.

The Director of the PHD in Kampong Chhnang noted that while the Embassy of Czech Republic has so far made excellent contributions to MCH in the province, there is still significant room for improvement. The Director highlighted four key areas he feels are most in need of support, with a focus on Health Centres and Provincial Referral Hospitals for improved delivery of CPA1 and CPA3:

1. While the previous project assisted in infrastructure development, there still remains a gap in the availability of beds for maternal care. Buildings currently do not have a lot of space and beds are in greater demand than what is available. The Director requested more support for new buildings for maternal and newborn care, and noted that building renovations/expansions are helpful, but it would be a more sustainable use of funds to build entire **new buildings** where necessary.
2. When there are more patients, there is more demand for equipment, and subsequently the lifespan of equipment is getting shorter as it is being used increasingly frequently. Specifically, the Director noted a significant need for **equipment for births and immediate newborn care**, especially complicated births.
3. As there is significant rotation of healthcare staff, there is an ongoing need for support in terms of **staff training and capacity building,** particularly among new staff who may not have been present for previous iterations of training delivery. The Director reported much higher job

satisfaction among staff who received regular training, as well as longer employment durations. Staff also respond well to incentives.

4. There is a persistent need for **behaviour change activities** among the community to encourage healthcare seeking behaviours. The Director also felt that community participation from VHSGs, CCWC, Commune Councilors, etc., was key in improving people's engagement with the health system.

In addition to these four key areas, funding remains an ongoing issue, and the PHD has a preference for longer-term projects that have greater implementation periods and are therefore much more impactful.

5.2.2. Observations from the Foreign Development Cooperation of the Czech Republic

Based on the 2023 field visit of the Programme of Foreign Development Cooperation of the Czech Republic to health facilities in Kampong Chhnang, further successes and challenges were identified:

Successes

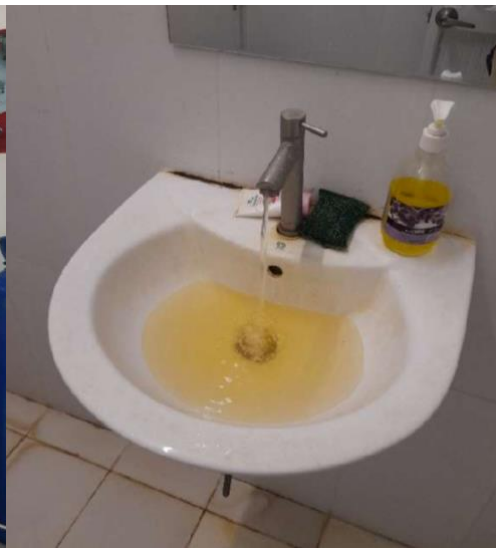
- Cooperation with the Ministry of Health (MoH) at all levels, local authorities, and development partners.
- All health facilities provide abortion services. Almost all Health Centres have waiting rooms for delivery, and some delivery rooms are equipped with air-conditioners.
- The majority of Health Centres are equipped with emergency equipment for life-saving interventions for both mothers and children. They also offer counseling services for the prevention of mother-to-child transmission of HIV.
- There is effective cooperation between the MoH National Program, Sub-national Program, and the Ministry of Women's Affairs to conduct educational promotions on the rights of mothers and children, reducing violence, and reporting child deaths.
- A committee has been established to investigate cases of child deaths in the community.
- All health facilities have sufficient skills to provide treatment for children with malnutrition.
- Community assessments are conducted to identify and provide treatment for children with malnutrition.
- Almost all health workers at health facilities have received training on outpatient consultations based on the Standard Protocol for the integration of child care treatment.
- Community events are organized to improve the performance of health facilities.

Challenges

- Limited knowledge and skills among midwives to provide abortion services at some facilities, as well as a lack of equipment for these services.
- Newly hired health staff lack training and experience in counseling and service provision, leading to a lack of trust from clients.
- Some committees responsible for investigating maternal mortality cases do not take their tasks seriously and have no documentation of investigation reports or reference documents.
- The identification, diagnosis, and treatment of severely malnourished children have not been taken seriously.
- Some referral systems from the community to health facilities for malnourished children are still limited.
- There is still a limited budget for community outreach activities.

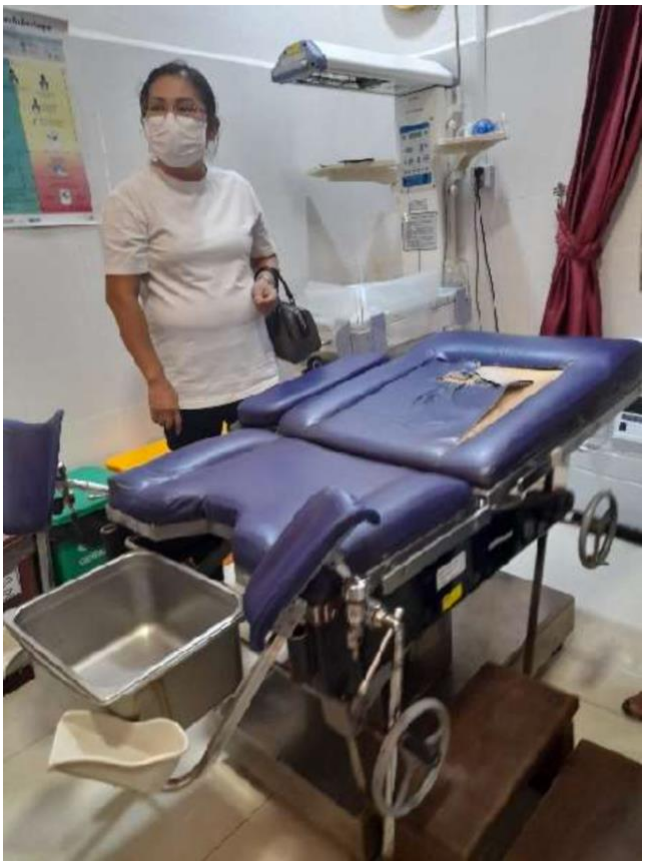
[84] According to the MPA standard, each Health Centre should have two secondary midwives



Pictures from Boribo Referral Hospital demonstrating issues with wste management, hygiene, and the lack of appriopriate equipment in the facility.

Delivery and hygiene/sanitation facilities in Kampong Tralach Referral Hospital.



Photos from Kampong Chhnang Provincial Hospital displaying the lack of adequate space for mothers and newborns, and the poor state of some equipment.

5.3. Capacity of Health Facilities for MCH Service Provision in Kampong Chhnang

Based on the 2023 field visit of the Programme of Foreign Development Cooperation of the Czech Republic to Health Facilities in Kampong Chhnang, the following describes the capacity of these facilities in a number of areas.

Technical staff capacity in MCH
Based on the evaluation visit to Kampong Chhnang, it was observed that the staff generally appear to be capable and skilled in the provision of maternal care. However, their primary needs are more training and better equipment. Training should be viewed as an ongoing process that responds to evolving needs. Currently, there is a lack of training, and it appears to be conducted in an unsustainable manner. This observation was echoed by both the Provincial Health Department (PHD) and the staff themselves. Specific training needs were identified, including training on postpartum hemorrhaging, resuscitation of babies, the use of an ambu bag, heart and body massage, techniques for warming newborns, and the proper use of a suction pump.

Equipment needs
There is a need for recommended basic equipment at each level of health facility. Additionally, there should be a shift in approach towards equipment maintenance to ensure it remains in working order and remains sustainable. Women often visit private clinics for ultrasounds, as they are unavailable in public facilities.

Infrastructure capacity in MCH, nutrition, sanitation and hygiene
During the visit, the team observed that both CPA1 and CPA3 hospitals were better equipped than before, particularly in terms of appropriate standard sanitary latrines reserved for mothers and other child patients. However, some issues with water quality and latrine quality still persisted, and hygiene standards varied among facilities. There was also a shortage of space to accommodate all patients, leading to newborns being placed in corridors. The need for new delivery beds is evident.

Community support in MCH
Existing community agents, including VHSG and HCMC members, have received training in health education from NGOs and the MoH. However, there are still limited referral systems and constrained budgets for community outreach.

Table 20: Human Resources in Kampong Chhnang DRHs and PRH

Human Resource	CPA1 Requirement	Kampong Tralach (CPA1)	Boribo RH (CPA1)	CPA2 Requirement	CPA3 Requirement	PRH KC (CPA3)
Medical doctors/ medical assistants	5-7	9	5	11-14	23-40	33
Pharmacists	1-2	1	0	2-3	6-8	9
Dentists	2	1	1	2	2-3	2
Specialised nurses/ nurses/PNs	15-22	N - 39 PN -5	SN - 1 N - 11	22-32	86-132	93
Specialised MWs/MWs/ PMWs	6-8	MW- 11 PMW-2	SMW - 1 MW - 8 PMW - 1	7-10	16-22	41
Lab technician	3	5	7	3-5	8-10	13

Imaging technicians	2	1	0	3	3	3
Physio-therapists	1-2	1	0	2-3	3-4	2
Equipment/ building technicians	2-3	Unavailable	Unavailable	3-5	5-7	
Cleaners	2-3	Unavailable	Unavailable	3-4	10-20	
Laundry staff	1-2	Unavailable	Unavailable	2-3	3-4	
Kitchen workers	1-2	Unavailable	Unavailable	2-3	3-4	
Drivers	1	Unavailable	Unavailable	1-2	1-2	
Order-administrators	2-5	Unavailable	Unavailable	3-4	4-6	
Accountant	1	0	0	1	2-4	2
IT	1-2	1	0	1-2	2-4	1
Receptionist	1	Unavailable	Unavailable	2	2-3	
Security	2	Unavailable	Unavailable	2	2	
Other non-health skills		1	0			
Total staff	**47-65**	**77**	**35**	**68-96**	**155-212**	**205**
Total beds	**40-60 beds**	**77 beds (between both)**		**60-100 beds**	**100-250 beds**	**198 beds**

The field visit drew the following conclusions on the health facilities in Kampong Chhnang:

- **PRH**
  - Issues with renovation of waste pipes after the realization of the project
  - Issues with sustainability of use of medical equipment
  - Insufficient training for staff, particularly on cardiotocography equipment received in the previous project
  - Inadequate space in the neonatology department, with only two incubators and babies in the corridor
- **RH Kampong Tralach**
  - Need for new delivery beds
  - Lack of equipment for pre-term birth care
  - Issues with electricity supply to the facility
- **RH Boribo**
  - Unclean water in the well and water system (red colour), used for drinking in some places where filters are used
  - Medical incinerator broken and not repaired. Another incinerator (from another donor) also broken
  - Toilets not in good condition
  - Interest in training from staff

5.4. Concluding Remarks

Chapter 5 summarises the outcome of the 2023 field visit of the Programme of Foreign Development Cooperation of the Czech Republic to health facilities in Kampong Chhnang to evaluate the previous development project implemented in the province. The section also provides an update on the findings of that fieldwork based on the 2022 Kampong Chhnang PHD Report and a 2023 phone interview with the Director of PHD to understand the successes, needs and challenges of MCH in the province.

The findings are grouped by mother and child nutrition needs in the province, and the capacity of MCH service provision in different health facilities. This is in terms of building space and equipment; however, it was also identified that boosting the human recourse capacity, and increasing healthcare seeking behaviours in the community needs special attention. Overall, there has been significant progress in the years prior to upgrade the health facilities and capacity of staff, however numerous issues still persist.

6. STAKEHOLDER ANALYSIS

The following stakeholder analysis includes the organisational structure, financial resources, human resources, development potential and specific activities related to MCH.

6.1. Organisational Structure and Responsibilities

Figure 16 shows that the MoH is mandated by the RC to lead and manage the entire health sector, including the public and private sector.

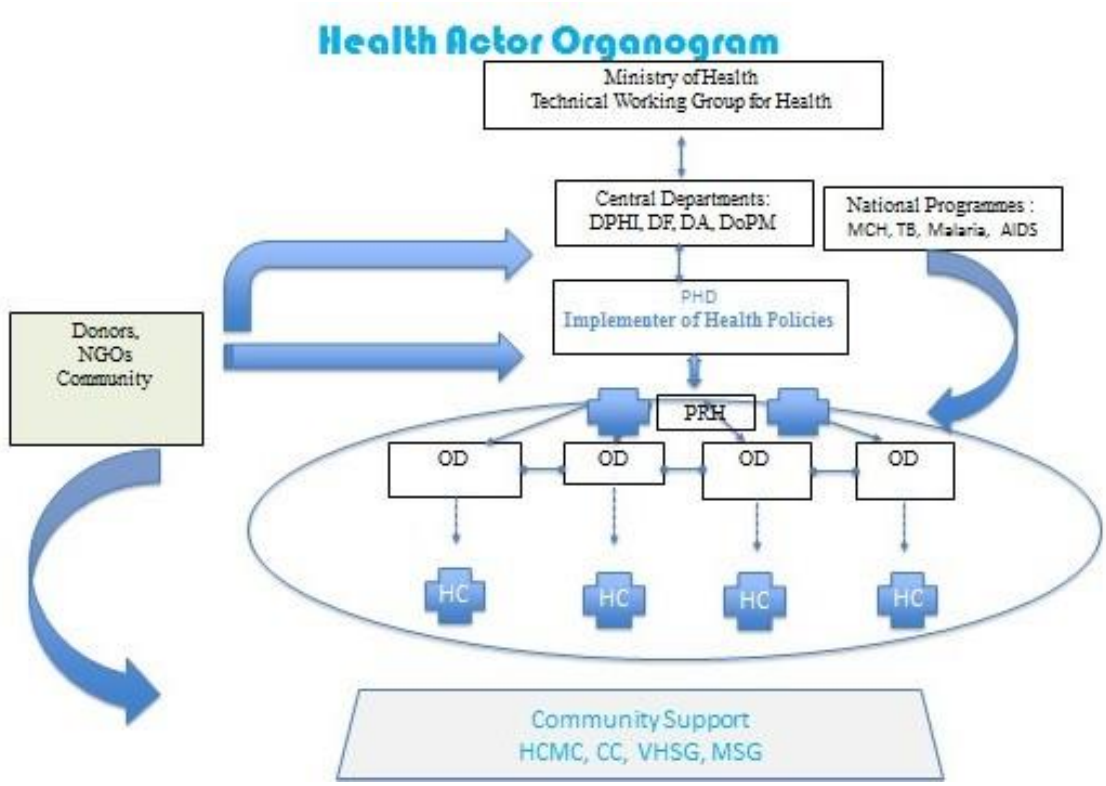


Figure 16: Health Actor Organogram

The health system is operating in a complex environment, given the diverse social determinants of health and interrelations between health and economic development. The Cambodian health system comprises both the public and private sector (including for-profit and non-for-profit health organizations). The public sector is the dominant provider of preventive services and inpatient admissions, whereas the private sector tends to dominate provision of outpatient curative consultations.[67]

[67] The Third Health Strategic Plan 2016-2020 (HSP3): "Quality, Effective and Equitable Health Services." Department of Planning & Health Information. May 2016.

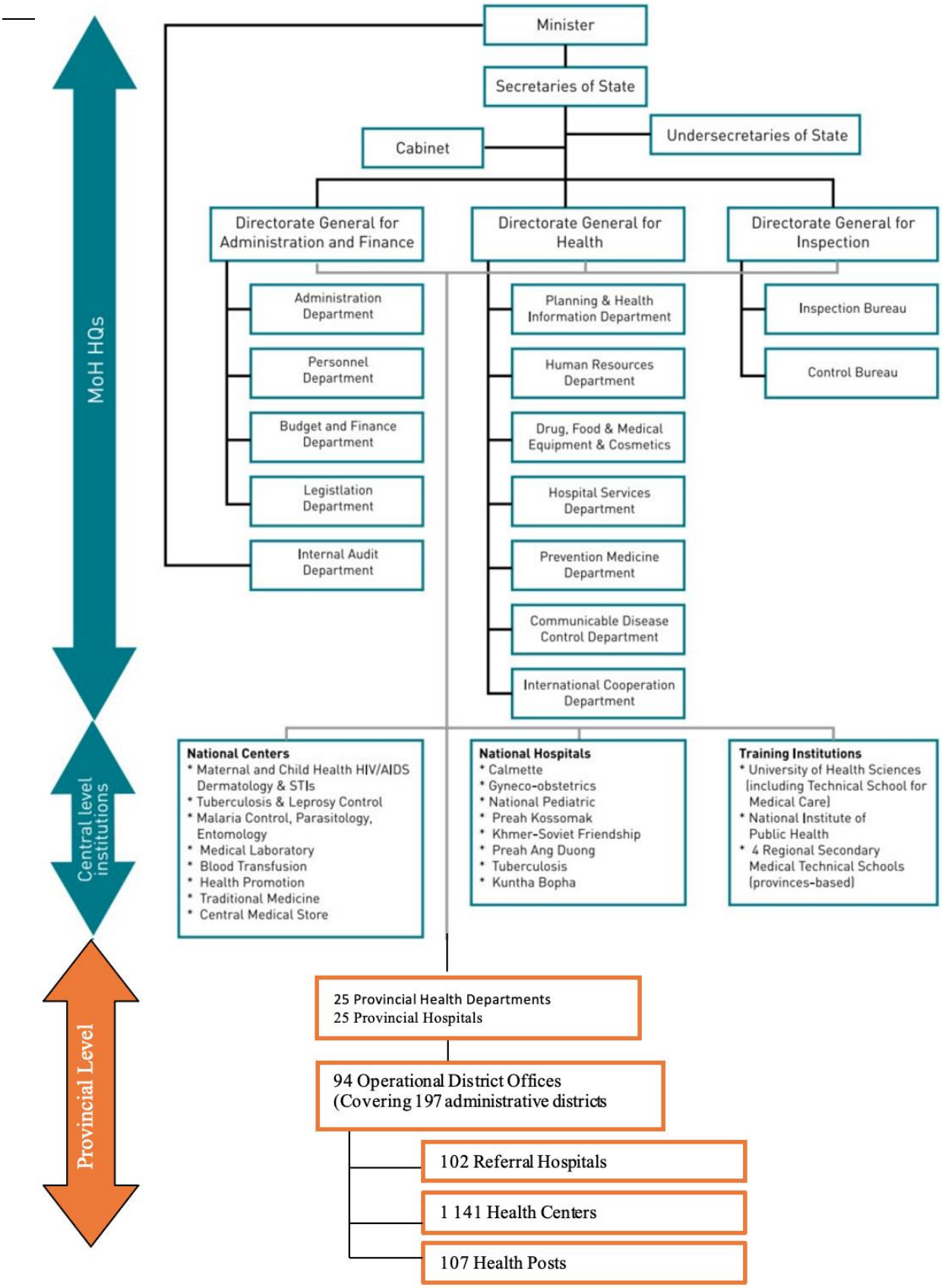


Figure 17: Organisation Structure of the Health System[68]

[68] The Kingdom of Cambodia Health System Review. Health Systems in Transition. Vol. 5 No. 2. 2015. WHO 2015.

6.1.1. Private Sector

The private sector has been enlarging its service delivery role over the years. Currently there are private hospitals, clinics and NGO clinics which provide MCH services, however most of them are located in urban areas.

6.1.2. Private Not-for-profit Sector

The private not-for-profit sector plays an important role in health service delivery in Cambodia through national and international non-governmental organisations. Most of them work at district and community levels in collaboration with PHDs and ODs (including RHs and HCs), providing a range of services such as support of service delivery, community-based health networks, health education and promotion activities, encouragement of community participation in health, etc. The operators of the Health Equity Funds and Community-Based Health Insurance schemes are national NGOs. As of December 2015, there were over 180 NGOs working in the health sector.

In Phnom Penh and Siem Reap there are also hospitals run and owned by NGOs: Kantha Bopha and Angkor Hospital for Children, offering child health services.

RHAC also provides reproductive services to the general population, with 15 clinics in 8 provinces, partnerships with 64 government health facilities in 4 provinces, and 10 mobile outreach clinics in 10 provinces. The reproductive services include family planning, antenatal care, abortion care, postnatal care and vaccination. It also provides care for STIs and HIV counselling and testing.

On the community level, NGOs such as RACHA, World Vision and People in Need carry out community based MCH interventions and health education.

6.1.3. Private For-profit Sector

The private for-profit sector is an important provider of health services and has grown rapidly. While it is mainly concentrated in urban and economically advantaged areas, it is also becoming pervasive in rural areas. As of December 2015, there were 8,488 formal private providers/facilities (excluding 2,156 pharmacies and depot pharmacies), providing services including nursing care, pregnancy care, physiotherapy, and consultation cabinet to clinic, polyclinic and hospital. Private healthcare is predominantly used for ambulatory treatment of illnesses, and is less dominant for inpatient treatments and limited in the delivery of preventive health services. This sector accounts for the largest share of total health care spending.[69]

[69] The Third Health Strategic Plan 2016-2020 (HSP3): "Quality, Effective and Equitable Health Services." Department of Planning & Health Information. May 2016.

6.2. Overview of Programmes of Donors, NGOs and International Organisations

Table 21: NGOs Active in MCH and Child Nutrition in Cambodia

Organisation	Intervention Related to MCH	Interventions Related to malnutrition
Donors		
FAO		School food nutrition guidelines and standards for safeguarding children and adolescents' right to food, gender equality and the empowerment of women in agriculture, food security and nutrition, school feeding programs, healthy snack behaviours
Germany/GIZ	Improving social protection and health care in Cambodia, iimproving public service delivery for citizens in Cambodia, identification of poor households (IDPoor)	More fish and income from sustainable fisheries and aquaculture, improvement of livelihood and food security of formerly landless and land poor households in Cambodia, GMP
UNFPA	Family planning, sexual and reproductive health, maternal health, midwifery training, youth health	
UNICEF	Improved health services, improved access to healthcare, EMONC, technical training for health staff,	Community health and nutrition sessions, community engagement and behaviour change, iodised salt provision, data collection and monitoring, governance, GMP, WASH
USAID	Maternal and neonatal interventions targeting vulnerable populations, good governance	Agricultural and food security activities that work alongside MCH interventions
WB	Cambodia Health Equity and Quality Improvement Project (H-EQIP)	Cambodia Nutrition Project
WFP		School feeding programs, food systems, crisis food relief and cash based transfers, technical assistance to government, fortified foods
WHO	Leadership for public health programs, increasing universal health coverage, strengthening health security	
NGOs		
ADRA	Maternal nutrition, nutrition in the first 1,000 days, micronutrient supplementation	Food security value chains and market growth, GMP
Angkor Hospital for Children	Pediatric teaching hospital, health worker training	Caregiver education
Cambodian Children's Fund	Free healthcare, early childhood care and development	School feeding and nutrition programs, WASH, SBCC, education
FHI360/Alive&Thrive	USAID Enhancing Quality of Health Care (EQHA) for improving quality of health services, functioning of health systems, medical education and use of health services, first 1,000 days, early newborn care, maternal health, policy support and advocacy, SBCC, building capacity of health providers	
FIDR	Pediatric surgery	Nutrition education, school feeding and nutrition, food security,

		fortified foods, healthy snack behaviours
FH Cambodia	Breastfeeding support and counselling	Farming for food security, livelihoods, child feeding
HKI	Breastfeeding support, maternal and child health, first 1,000 days, advocacy and governance, protecting against harmful marketing, ANC/PNC	Home farming, child feeding support, healthy snack behaviours
IIRR		School feeding programs, home farming programs
Johanniter International Assistance		Sustainable and climate resistant agriculture, WASH
Kantha Bopha Hospitals	Service delivery, healthcare staff training	
Khmer Community Development	Health and nutrition services and education (focused on ethnic minorities)	Healthy eating workshops, organic farming
Plan International	Nurturing care practices, maternal, newborn and child health, early childhood care and development, child protection	Child nutrition, WASH SBCC, nutrition education
Pour un Sourired' Enfant	Child health clinics, school health clinics, breastfeeding support, child feeding support, social protection	School feeding programs, nutrition centre
RACHA	Maternal and newborn health, family planning and reproductive health, child health, nutrition, infectious disease, immunization, health system strengthening, community health mobilization, drug management, community resource development, emergency obstetric care	Management of acute malnutrition, micronutrient supplementation, baby friendly communities, safe drinking water, WASH SBCC, GMP
Samaritan's Purse	Obstetric care, nutrition education, increasing access to healthcare	Food security and livelihoods, agriculture, WASH
Save the Children	Early childhood care and development, SBCC, ANC/PNC, nutrition counselling	Improved nutrition, stunting prevention, GMP, cash transfers to support child health, food safety, deworming
Save Vulnerable Cambodians		Family gardening, household nutrition, WASH (focus on ethnic minorities and people with disabilities)
SHARE	Women's health education, health in the first 1,000 days, health education training, ANC/PNC, micronutrient supplementation	Child feeding education, health education, social protection, GMP
SNV		Food safety, WASH
SOS Children's Villages	Health care support and provision	Nutrition and child care training
WorldFish		Nutrition-sensitive aquaculture, food security, child feeding support
World Vision	Training and support of community health workers, health systems strengthening, post-natal care	Community and child nutrition, child feeding
Private sector		

DCF/Vissot		Fortified foods and snacks for children
Popok	Community health education	Fortified foods and snacks for children

6.3. Concluding Remarks

Chapter 6 presents the main stakeholders on the side of government institutions and their health facility roles, as well as the role of the private for-profit sector and the private not-for-profit sector in health sector MCH specifically, in Cambodia. There is also an overview of international donors and organisations included in this chapter, with a brief description of their activities provided in Table 20. This list is not exhaustive, and the actors active in Kampong Chhnang are presented in Chapter 1 and elaborated on with a full list of current interventions in Annex 3.

7. CONCLUSIONS, PRIORITIES AND OPTIONS FOR THE USE OF THE CZDA FUNDS

7.1. Conclusions

Chapter One provides an overview of Cambodia's healthcare system, highlighting the roles of health facilities at different levels. The MoH governs public, private, and not-for-profit health facilities. The chapter also discusses government policies related to MCH and outlines the presence of various organizations in the health sector, including those focused on MCH in Kampong Chhnang.

Chapter Two presents recent data on neonatal, maternal, infant, and child mortality rates in Cambodia. The data shows progress in reducing neonatal and maternal mortality but notes persistent challenges, particularly in the case of infant mortality. Chronic malnutrition remains a significant concern. This chapter emphasizes the government's commitment to addressing MCH issues, with policies linked to various sectors, including agriculture, water, sanitation, education, and poverty reduction.

Chapter Three delves into social and health insurance schemes, discussing both old and new systems. It highlights the importance of IDPoor registration to access healthcare services, especially for those without health insurance. The chapter emphasizes the government's increasing role in covering medical costs for the population and the high out-of-pocket expenses for healthcare services.

Chapter Four describes the healthcare delivery system, including the organizational structure and responsibilities of public service providers. The Ministry of Health plays a central role in coordinating healthcare providers, and various health facilities are available, including private and not-for-profit ones. Health Centres offer a range of services, including vaccination, outpatient treatment, maternal and child health services, family planning, and health education. The chapter also outlines parameters for establishing health centers and the importance of accessibility.

Chapter Five summarizes the findings from a 2023 field visit to health facilities in Kampong Chhnang and provides updates from the Kampong Chhnang Provincial Health Department's 2022 report. The findings are grouped into mother and child nutrition needs and the capacity of MCH service provision. Despite significant progress in upgrading health facilities and staff capacity, challenges persist.

Chapter Six highlights key stakeholders in the government, private for-profit, and private not-for-profit sectors in Cambodia's MCH sector. It also provides an overview of international donors and organizations involved in MCH activities. The chapter offers insights into the diverse range of actors contributing to MCH efforts in the country.

In conclusion, this study has provided a comprehensive overview of the state of maternal and child health in Cambodia, with a specific focus on Kampong Chhnang. While significant progress has been made in reducing neonatal and maternal mortality, challenges persist in addressing infant and child mortality, chronic malnutrition, and healthcare accessibility. The government's commitment to MCH is evident through various policies linked to multiple sectors.

Efforts to improve the healthcare system, including the expansion of health insurance coverage, have been instrumental in addressing some of these challenges. However, the study findings highlight the importance of continued coordination among stakeholders, both domestic and international, to ensure sustained progress in MCH in Cambodia. The findings from field visits and reports have highlighted the need for ongoing investments in healthcare infrastructure, human resources, and community education.

The culmination of this research, encompassing findings from Chapter 5 and analyses from Chapter 6, has led to the formulation of recommendations for potential interventions. These recommendations, presented in Table 21, align with the study's framework and offer indicative pathways for addressing

MCH challenges. Importantly, many of these interventions can be integrated with other sectors, including water and sanitation promotion, health education, awareness campaigns focusing on MCH, birth certificates, and Water, Sanitation, and Hygiene (WASH) initiatives. The multifaceted nature of these interventions underscores the interconnectedness of factors influencing MCH outcomes in Cambodia.

In closing, Cambodia's journey towards improving maternal and child health is ongoing, marked by achievements, yet underscored by challenges. The commitment of both the government and international partners to MCH remains steadfast. The path ahead necessitates continued collaboration, strategic investments, and innovative approaches to ensure a healthier future for mothers and children in the nation. By addressing the multifaceted challenges outlined in this research, Cambodia can move closer to its goal of achieving better MCH outcomes for all its citizens.

7.2. Priorities and Options for the Use of the CzDA Funds

This section presents the areas for which funding from the 2024-2028 Bilateral Programme of the CzDA. These options are derived from the framework set by the CzDA and the current situation within this framework in the country, and in Kampong Chhnang specifically, as outlined in the previous chapters. Additional funding can be of added value for these intervention areas, however to varying degrees.

In addition to the background chapters, a brief analysis of the strengths, weaknesses, opportunities, and threats (SWOT) of these possible options (not of the current situation in KC) is presented in Table 21 below. Strategic interventions are listed next to the intervention areas in order to allow an understanding of the possible or likely nature of work. A minimum amount of funding per year is roughly estimated. It presents the minimum amount required to allow for a meaningful intervention.

In some of the intervention areas the weaknesses and threats appear to outweigh the opportunities. Nevertheless, they are listed because they were identified in the framework to be of interest for the CzDA and it is up to the reader of this paper to make the final decision.

Still, a specific point to be taken into consideration about maternal and infant/neonatal health is that the area has received substantial attention by the RGC over a long period, with large support from international development partners. Significant progress has been achieved, as outlined above. While the MMR is still high in comparison to neighbouring countries, additional funding would have a rather small added value for the further – surely needed – progress. However, infant health and especially neonatal mortality require more than the current attention in implementation, considering that 52% of deaths among children under 1 year of age are due to newborn deaths (mainly pre-term deliveries outside of the PRH).[70] Given the geographic focus and expected funding volume, possible interventions in neonatal health appear to have a higher added value, both on the supply as well as demand side, i.e. the neonatal care given by health services as well as the habits and practices of pregnant women and their families during pregnancies, delivery and post-partum. Therefore, the following addresses (within MCH) rather neonatal health and does not include further maternal health.

On the other side, additional funds could be targeted to upcoming health conditions. Non-communicable diseases are rising and will see a sharp increase over the coming years due to the economic growth of the country and the associated change in lifestyle, including eating habits. Hypertension/cardiovascular diseases and diabetes are chronic health conditions which require other responses than non-chronic and non-communicable health problems. Chronic diseases require special strategies that involve the active participation of the individual/communities as well as the health services in:

- Prevention (health education and behaviour change)
- Early detection (screening methods)
- Early treatment (early detection/diagnosis, patient involvement, treatment, patient guidance/education)

[70] Verbal information by GIZ/GFA 17-11-2017

- Regular follow-up (screening for complications, treatment adjustments, treatment of complications, patient involvement, mental and educative support/peer support)
- Secondary and tertiary prevention of complications (heath education, behaviour change, screening and early treatment of complications)
- Capacity building of health human resources in health, village, commune and district administration to be dealt with as a cross-cutting topic integrated under the respective headings

Table 22: SWOT Analysis of Scenarios/Options

Priority Area	Requirements	Strengths	Weaknesses	Opportunities	Threats
Programmes					
Neonatal care	• Create a brief training manual for health staff on maternal and neonatal care skills • Train high-level trainers • Regular coaching of health staff by trainers • Ongoing supervision and support of trainers **Minimum 200,000 in 1st year, subsequent 100,000/ year**	• High impact • Improves quality of care • Empowers health workers as trainers and promotes ownership	• Long timeframe required • High cost	• Capacity building • Regular monitoring for sustainability	• Trainers may not stay in province • Requires buy-in from MoH to create and implement a training manual • High initial time demand to train staff, and gives trainers an additional duty
	Possible approach (through NGO): 1. Develop a standardised training manual that can be used by trainers to conduct training, and as an ongoing reference document for health staff (particularly on topics such as the need to have the necessary medications and infusions ready and to know when it is necessary to transport women to the hospital, resuscitation of newborns after birth, especially the use of an ambuvac, heart and body massage, warming beds or other ways to warm a baby, how to use a suction pump, and the importance of breastfeeding) 2. Identify 3-4 trainers from central and Provincial level 3. Provide training of trainers on coaching techniques and skills, updated neonatal care techniques and full use of all relevant equipment (especially postpartum haemorrhage and resuscitation of the baby) 4. Organise and finance a regular training schedule for health staff at provincial, district and HC level (HC level especially important). Provide manuals for all health facilities. Consider incentivized training 5. Organise and finance a regular schedule for trainers to visit health facilities and conduct responsive follow-up on implementation of training knowledge and quality of care				
	• Neonatologist training (in Czech Republic, regional or PP) • Posting of neonatologist in Kampong Chhnang PRH	• High impact • Improves quality of care	• High cost	• Potential multiplier effect to OD level • Skill sharing by health staff who receive training	• Neonatologist may not stay in the province or in the public sector

	Minimum cost depends on training location				
	Possible approach (through NGO): 1. Identify 1 pediatrician to be trained as a neonatologist to be posted in Kampong Chhnang 2. Identify location for specialised training on updated neonatal care techniques 3. Send for training 4. Post to PRH as neonatologist, also to train and coach staff				
Non-communicable diseases	• Train of high-level trainers • Coach health staff and community health workers (VHSG, CCWC, etc.) • Create peer support groups **Minimum 200,000 in 1st year, subsequent 100,000/ year**	• High impact • Improves quality of care • Not yet a supported area of work • Increases demand for health services • Empowers health workers and the community	• Less attention from the national level • Long timeframe required • High cost	• Capacity building • Reaching minority and ethnic groups • Changing healthcare seeking behaviours • Regular monitoring for sustainability	• Trainers may not stay in the province • The health system and policies are not yet fully committed to by the government • High initial time demand to train staff and community health workers, and gives trainers an additional duty
	Possible approach (through NGO): 1. Identify 3-4 trainers from central and possibly Provincial level 2. Provide training of trainers on coaching techniques and skills, updated NCD prevention, early detection, diagnosis, treatment and follow up, and child care topics such as GMP, child feeding, and when and how to seek medical care 3. Organise and finance a regular training schedule for health staff at provincial, district and HC level (HC level especially important) and community health workers, paying particular attention to reaching minority and ethnic groups. Consider incentivized training 4. Organise and finance a regular schedule for trainers to visit health facilities and the community and follow-up on implementation of training knowledge and quality of care				
Health financing					
Social and health insurance	• SHI skilled implementing partner (GIZ) • High number of trained staff **Minimum 200,000/year**	• High long-term impact	• High cost • Communities not directly impacted by this scheme (at least in the short/medium term) • Low visibility of CzDA	• Contribution to an ongoing process • Increase access to healthcare services	• Funds less visible if absorbed in the wider context • Funds lost if there is a policy change • Contributes on the short/ medium term only to labourers and civil

					servants, not to the community
	Possible approach (through GIZ): 1. Liaise with GIZ to form a partnership 2. Elaborate with a cooperation agreement/MoU for implementation in Kampong Chhnang 3. (Co)finance the extension of GIZ project to improve social protection and health in Kampong Chhnang				
Community-based health insurance	• CBHI skilled NGO • High number of trained staff **Minimum 200,000/year**	• Strong community engagement • Strong impact on communities/near poor population	• Limited risk share	• Potential safeguard against catastrophic expenditures	• Unsustainable overhead costs
	Since the CBHI would not be financially sustainable it is recommended not to get involved with CBHI. However, in case it is a desired option, a possible approach could be: 1. Liaise with or tender for a CBHI offering partner NGO 2. Contract and monitor CBHI through the partner NGO				
Human resources					
Designation and training of equipment/ facility maintenance specialists	• Creation of an equipment maintenance and problem management manual • Training of staff at provincial and district level on routine equipment maintenance and troubleshooting **Minimum 20,000/year**	• High impact • Improves availability of working equipment • Improves hygiene and sanitation standards throughout health facilities • Improves life of equipment and impact of funds	• Requires budget for maintenance work	• Capacity building • Regular monitoring for sustainability	• Trained persons may not stay in province • High initial time demand to train staff, and gives those trained an additional duty
	Possible approach: 1. Develop a training manual detailing equipment and facility maintenance procedures and troubleshooting processes, including key contact persons/companies for further support 2. Select 3-4 staff at provincial and district level to provide training on routine equipment and facility maintenance and troubleshooting of equipment, according to the manual. 3. Share contact details and procedure for when equipment/facility maintenance is scheduled with all health facilities 4. Organise and finance a regular schedule of equipment and facility maintenance checks, ensuring the persons trained are following the manual developed and overseeing other staff responsible for maintenance (such as building, grounds, cleaning, etc.)				
Financial management	• Training of staff at provincial and district	• High impact • Improves sustainability	• Doesn't provide training at all levels	• Capacity building • Improved sustainability	• Trained persons may not stay in province

training	level on budget management **Minimum 20,000/year**	of program activities and equipment • Low-cost activity		• Improves use of funds and management of health facilities	• High initial time demand to train staff, and gives those trained an additional duty
	Possible approach: 1. Select 2-3 staff at provincial and district level to provide training on financial/budget management for health facilities 2. Organise and finance a regular schedule of visits to provincial, district and HC facilities to monitor budgets and spending, particularly financial needs for optimal health facility operation				
Community					
Nutrition	• Recruitment/training of community engagement workers • Create a management and guidance system for community engagement • Conduct community campaigns/health promotion initiatives **Minimum 100,000/year**	• Strong community engagement • Potential for behaviour change in child feeding/ cooking habits and other areas	• Behaviour change is a slow process • Impact is not likely to be seen in the short/medium term	• Potential for linkages to other community programs (e.g., community garden, school nutrition)	• Trained persons may not stay in province • Stakeholders may not stay committed if no short-term impact is seen
	Possible approach (through NGO): 1. Recruit, guide, monitor, and follow up 5-10 community engagement workers/communication staff 2. Elaborate an extension network with community members through existing forums (VHSG and similar) to reach individual households 3. Implement a range of communication techniques (community campaigns/health promotion, cooking classes, house visits, etc.) 4. Establish an M&E system				
	• Training and posting of a nutritionist in Kampong Chhnang PRH **Minimum cost depends on training location**	• High impact • Improves quality of care	• High cost	• Potential multiplier effect to OD level • Capacity building • Regular monitoring for sustainability	• Nutritionist may not stay in the province or in the public sector • High initial time demand to train nutritionist, and provides them an additional duty
	Possible approach (through NGO): 1. Identify 1 nutritionist to be trained and posted in Kampong Chhnang 2. If required, identify a location in Phnom Penh for ongoing training/updates on nutrition				

	3. Conduct training 4. Post nutritionist to PRH to train and coach other health workers				
WASH	• Community engagement (proper use of WASH facilities) • Village/OD based slab production if necessary **Minimum 100,000/year**	• Strong community engagement • Linking health sector, • environment and community • High impact	• Behaviour change is a slow process	• Long-term sustainability • Improvement in a number of sectors beyond WASH • Economic benefit to engaging local vendors	• Risk of dispute over ownership and distribution of slab production • Ongoing maintenance of facilities required
	Possible approach (through NGO): 1. Link with nutrition community engagement to expand and include WASH in community engagement 2. Assessment and provision of necessary WASH facilities through local vendors				
Infrastructure/equipment					
Upgrading	• Physical upgrades/renovations to facilities • New small-scale constructions (mothers' waiting room, neonatal room in PHD, latrines for maternity ward) **Minimum cost depends on upgrade (can vary from cost of latrine up to cost of new wards)**	• Reduction of physical distance to equipped health facilities • Long-term impact	• Time consuming activity • Potentially high cost	• Component is expandable and reducible according to budget • Training on appropriate maintenance for sustainability	• Finding construction workers who are willing to live and work in remote areas • Requires increased staff to operate expanded facilities • Disputes over where to implement due to demand across almost all health facilities • Incorrect/inappropriate use of facilities
	Possible approach (through NGO): 1. In close cooperation with PHD/OD investigate the actual needs for upgrading and/or renovation of facilities (not earlier than 3 months before planned works) 2. Review planned works financed through the pool or other sources 3. In close cooperation with PHD/ODO identify actual gaps 4. Based on allocated budget, recent, updated gap analyses, and in close cooperation with PHD/ODO, set priority list 5. Tender, contract, and follow-up on works 6. Ensure health workers have the correct training to operate new facilities				
Equipment provision (neonatal care)	• Incubators • Ultrasound machines • Neonatal care	• Neonatal care is currently under-equipped (not available,	• No maintenance system currently in place (see human resources	• Increased acceptance of the NGO (provided NGO is the chosen	• Short lifespan of equipment if not properly maintained

	equipment **Minimum cost depends on equipment provided**	not functional) • Desirable among both health staff and patients	• activity above) • Number and capacity of staff to operate and maintain equipment • Potentially high cost	modality) by health staff and patients • Better informed patient care with ultrasounds available • Increased utilization of public health system	• Initial training on new equipment required
	Possible approach (through NGO): 1. In close cooperation with PHD/OD investigate the actual needs for equipment (not earlier than 3 months before planned provision) 2. Review equipment financed through the pool or other sources 3. In close cooperation with PHD/ODO identify actual gaps 4. Based on allocated budget, recent, updated gap analyses, and in close cooperation with PHD/ODO, set priority list 5. Tender, contract, and follow-up on provision 6. Ensure health workers have the correct training to operate and maintain new equipment				

8. ANNEXES

8.1. Annex 1: Country Map

Figure 18: Map of Cambodia[71]

[71] https://en.wikipedia.org/wiki/List_of_cities_and_towns_in_Cambodia

8.2. Annex 2: Map of Kampong Chhnang

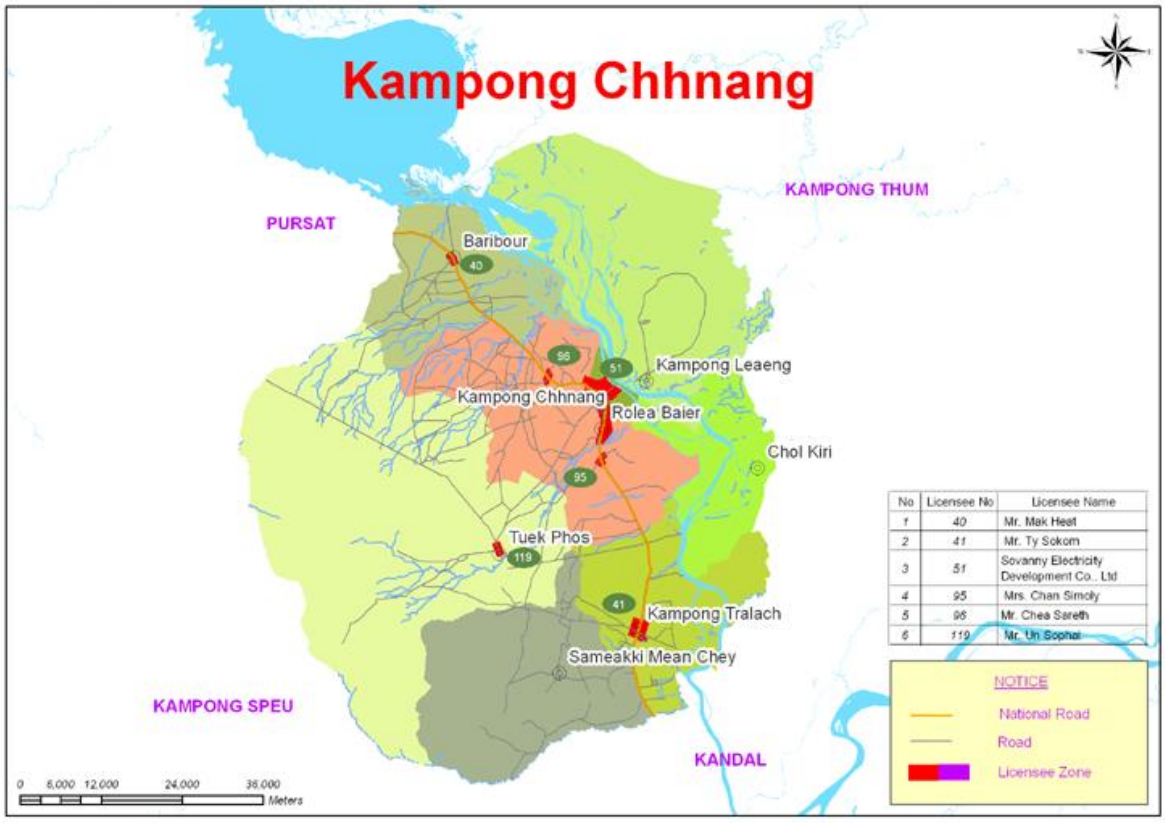


Figure 19: Map of Kampong Chhnang[72]

[72] https://angkorfocus.com/kampong-chhnang-tourist-attractions/kampong-chhnang-geography.html

8.3. Annex 3: MCH and Child Nutrition Projects in Cambodia

Table 23: List of Interventions in Maternal and Child Health Sector in Cambodia

Organisation	Type	Project
Build Your Future Today Centre (BFT Centre) Siem Reap	L-NGO	1. Clean Water and Community Hygiene Project date: 2020-02-01 to 2023-02-01 2. Reinforcing Community Nutrition Project date: 2020-02-01 to 2023-02-01
Clinton Health Access Initiative (CHAI) Phnom Penh	I-NGO	1. Determining and Filling the ap of Malaria Elimination Surveillance Needs for Cambodia Project date: 2020-02-15 to 2023-02-13 2. Program Management Technical Assistance to CNM Project date: 2020-02-15 to 2023-02-13 3. VivAccess: Introducing P.vivax Radical Cure Project date: 2020-02-15 to 2023-02-13 4. Strengthening the Service Delivery of Sexual and Reproductive Healthcare Project date: 2020-02-15 to 2023-02-13
Korean Missionary Society (Komiso) Phnom Penh	I-NGO	1. KOMISO Medical Centre Project date: 2023-07-01 to 2024-11-08
Reproductive And Child Health Alliance (RACHA) Phnom Penh	L-NGO	1. Engaging Citizens to Improve Service Delivery (WV-C) Project date: 2020-07-01 to 2023-02-28 2. CBCC for Garment Factory Workers Project date: 2020-07-01 to 2023-02-28 3. Supporting Equitable Access to COVID- 19 Vaccination Through Strengthened RCCE Project date: 2020-07-01 to 2023-02-28
Reproductive Health Association of Cambodia (RHAC) Phnom Penh	L-NGO	1. Improving Family Health by Implementing Sexual and Reproductive Health, Maternal Health, HIV/AIDS and Other Infectious Disease Intervention Project date: 2021-01-01 to 2023-12-31
The Lake Clinic Cambodia (TLC) Siem Reap	L-NGO	1. Health Care Services on the Shoreline of Tonle Sap Lake and Stung Sen river Project date: 2021-01-01 to 2023-12-31
Caritas Cambodia (CARITAS) Phnom Penh	I-NGO	1. Mother and Child Health Care Project Project date: 2022-01-01 to 2024-01-24 2. Prison Health Project Project date: 2022-01-01 to 2024-01-24

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50.4. Annex 5: List of Persons/Organisations Met/Contacted

Name	Position	Date/s
Phnom Penh		
Long Leng	AFH, Director	24-10-2017 16-11-2017
Yang Sopheap	AFH	16-11-2017
Heng Bunsieth	CHC, Executive director	16-11-2017
Mrs. Kunthea Chao	FHD, Executive director	16-11-2017
Hok Chuon	FHD, SKY Project Officer	16-11-2017
Sok Sokun	UNFPA, MCH Manager	
Bernd Appelt	GIZ Social Health Protection Project, Project Manager	17-11-2017
Bart Jacobs	GIZ Social Health Protection Project, Policy Advisor	17-11-2017
Kelvin Hui	GIZ Social Health Protection Project, Team Leader and Health Systems Financing Policy Advisor	17-11-2017
Mary Mohan	GIZ/GFA Muskoka Project, Team Leader	17-11-2017
Wolfgang Weber	GIZ/GFA Multi-Sectoral Food and Nutrition Project, Team Lleader	18-11-2017
David Raminashvili	World Vision, Technical Lead for Nutrition, Health and WASH	22-11-2017
Arnaud Laillou	UNICEF, Nutrition Specialist	22-11-2017
Lucie Chudá	Embassy of the Czech Republic, Head of Development	23-11-2017
Paul Robyn	World Bank, Senior Health Specialist	08-06-2023
Selamawit Negash	UNICEF, Nutrition Specialist	19-07-2023
Dr. Kim Rattana	NMCHC, Director	27-07-2023
Kampong Chhnang		
HE Prak Vonn	Kampong Chhnang PHD, Director	25-10-2017 20-11-2017 20-07-2023
Ker Chanthearith	Kampong Chhnang, Vice-chief of Technical Bureau	25-10-2017 20-11-2017
Un Sopheap	Kampong Chhnang, Birth Certificate Bureau Chief	
Som Mesa	Kampong Chhnang PHD; Chief of MCH	20-11-2017
Sorith Thearavuthy	Kampong Chhnang Provincial Hospital, Director	20-11-2017
Meas Duth Ty	Kampong Chhnang Provincial Hospital, Chief of Technical Bureau	20-11-2017
Yim Phalla	Kampong Chhnang Provincial Hospital, Medical Assistant	20-11-2017
Kang Borann	Kampong Chhnang Provincial Hospital, Midwife	20-11-2017
Sok Kong	Kampong Chhnang Provincial Hospital, Paediatrician	20-11-2017
Un Sopheap	Kampong Chhnang Provincial Chief of Bureau of Birth Certification	20-11-2017
Chtuna Buntha	Boribo OD, Director	26-10-2017 21-11-2017
Seung Samnang	Boribo OD, Referral Hospital Director	26-10-2017 21-11-2017
Chhorn Samnang	Boribo OD, Referral Hospital Doctor	21-11-2017
Leng Sophorn	Boribo OD, Referral Hospital Technical Bureau chief	21-11-2017
Seth Someun	Boribo OD, Referral Hospital Midwife	21-11-2017
Bo Neath	Boribo OD, Referral Hospital Doctor	21-11-2017
Meung Theara	Boribo OD, Referral Hospital, Midwife	21-11-2017
Toch Chanthea	Boribo OD, Referral Hospital, Midwife	21-11-2017
Hy Channa	Boribo OD, Referral Hospital, Midwife	21-11-2017
Cheng Sopheap	Boribo OD, Referral Hospital, Midwife	21-11-2017
Lek Phearum	Boribo OD, Referral Hospital, Midwife	21-11-2017
Phin Channy	Boribo OD, Referral Hospital, Midwife	21-11-2017
Chhem Thary	Boribo OD, Referral Hospital, Nurse	21-11-2017

Chantheng	Boribo OD, Referral Hospital Director	21-11-2017
Seung Khath	Trapeang Chan HC, Chief	21-11-2017
Pom Kim	Trapeang Chan HC, Midwife	21-11.2017
Prak Sovann	Trapeang Chan HC, Midwife	21-11-2017
Khut Vanthon	Trapeang Chan HC, Midwife	21-11-2017
Ek Sameun	Trapeang Chan HC, Nurse	21-11-2017
Thai Sithon	Trapeang Chan HC, Nurse	21-11-2017
Chuon Sokhun	Kampong Tralach OD, Director	27-10-2017 21-11-2017
Mom Sieng Heng	Kampong Tralach OD, Referral Hospital Director	27-10-2017
Ke Vanna	Kampong Tralach OD, Referral Hospital Deputy Director	21-11-2017
Pok Phalla	Kampong Tralach OD, Referral Hospital Deputy Director and Chief of Obstetrics	21-11-2017
Bunna Line	Kampong Tralach OD, Referral Hospital Obstetrics Director	21-11-2017
Thun Sophea	Lung Vek Chief	21-11-2017
Nhem Sarann	Lung Vek HC, Midwife	21-11-2017
HCMC/VHSG	FGD Members	30-10-2017
HCMC/VHSG	Lung Vek HC HCMC/VHSG Members	21-11-2017
HCMC/VHSG	Trapeang Chan HC HCMC/VHSG Members	21-11-2017
HCMC/VHSG	Prey Khmer HC HCMC/VHSG Members	21-11-2017
Czech Republic		
Lucie Jungwiertová	Czech Development Agency	26-07-2023

50.5. Annex 6: Summary of the Terms of Reference for the Initial Study (2017)

The justification for the call for services:

Czech Development Agency (CzDA) is participating in developing the Bileteral Cooperation Program between the Czech Republic and Cambodia for the period 2018 - 2023, which will include inclusive social development among which the healthcare sector and a specific emphasis on the area of mother and child healthcare. For developing the program effectively, it is necessary to elaborate the initial studies analysing the current situation of healthcare in Cambodia. The results of the study will provide the contracting authority with a comprehensive overview of the status, the functioning of the Royal Government of Cambodia healthcare system including health insurance. In addition, the needs of the local communities in the healthcare sector - mother and child health and nutrition specifically - will be analysed.

Requested services:

The subject of this call for services is to provide analysis of the current status of the health system in Cambodia with the focus on mothers and child health. The study will be based on the analysis of relevant documents (statistics, government programs and strategy of the Ministry of Health, Ministry of Planning and the Ministry of Interior and other relevant actors, reports of foreign donors and international organisations), as well as incorporating data from field visits.

The study will focus on the analysis of the following areas:

1. legislative regulations and programs focusing on mothers and child health and child malnutrition: A) overview of government programs of individual ministries; B) overview of programs of foreign donors, NGOs and international organisations;C) geographic focus of the programs referred to in paragraphs A) and B). (for this particular issue questions are available in the Appendix no. 1 of the call for services,
2. Obtaining and processing data (baseline data) in healthcare for the area of the study (mothers and childcare) (for this particular issue questions are available in the Appendix no. 1 of the call for services
3. The system of setting up and functioning of health insurance (analysis of current government and non-governmental, international health insurance programs: IDPoor, NSSF, SHPP and others). ((for this particular issue questions are available in the Appendix no. 1 of the call for services
4. Access to a health-care facility for children and orphans and for ethnic minorities (for this particular issue questions are available in the Appendix no. 1 of the call for services
5. The operation and the role of individual health facilities (Health Centre, Referral Hospital) in the area of care of mother and childcare and child malnutrition. (for this particular issue questions are available in the Appendix no. 1 of the call for services
6. Analyse the needs of local communities in the area of the mother and childcare. In this framework, the contractortogether with other relevant actors will define the priorities of local communities in thefield ofmother and childcare. (with the focus on reducing motherly and child mortality, child malnutrition, the technical capacity of Health Centres (Health Centre Referral hospital) and professional capacity medical staff and experts from the state administration (ministries, municipalities)
7. Stakeholders analysis. Under this point, the contractor itemises stakeholder analysis in health care about the care of the mother and childcare and child malnutrition. The stakeholder analysis will include the organisational structure, financial resources, human resources, development potential and specific activities in the care of mother and child.

Duration and schedule for the study:

Expert work to develop the study will run from September to end of November 2017. Within the implementation, studies are required two trips to Cambodia, together with the maximum range of 25 days.

Questions from ToR (Annex 1)

1) Legislations etc

1. How it works on different levels of the Ministry of Health? Who is responsible for what? (Ministry, PHD - Provincial Health Department, the Community - Operational Health District).
2. What official government documents (regulations, standards, etc.) does each Ministry in Cambodia concerning the care of mother and child have?
3. What are the current priorities of the Royal Government of Cambodia (RGoC) in the area of mother and child heathcare (MCH) (reducing child and maternal mortality, child malnutrition)?
4. What are the relevant strategies of the the different RGoC Ministries for reducing child and maternal mortality?
5. What kind of foreign donors are active in the health sector? What is their focus (briefly in points). Which ones are active MCH and child malnutrition? What specific activities are implemented? How do the international organizations cooperate in this field? What local and foreign NGOs are active in this field?
6. Who from foreign donors / international organizations / NGOs uses within the MCH, pregnant women, new mothers and child malnutrition innovative intervention such as system of voice / text / picture messages? In what geographical areas? Is there any cooperation among the various organisation in this area? If so, in what form?

2) Acquisition and processing of basic data (baseline data) for the care of the mother and child:

1. What was the maternal mortality rate in Cambodia (in the years 2014, 2015, 2016)? In which regions was the rate the highest (give at least 5 regions)? How many % of women being born in health facilities and at home much (in the years 2014, 2015, 2016)?
2. What was the infant mortality rate in Cambodia? (In the years 2014, 2015, 2016)? What was the proportion of neonatal mortality during home births in those years? In which provinces was registered the highest infant mortality rate?
3. What was the infant mortality rate (children under 5 years old) in Cambodia? (In the years 2014, 2015, 2016)? In which regions was registered the highest infant mortality rate (give at least 5 regions)?
4. What was the situation in Cambodia on child malnutrition among children under five years old, children under 18 years old? (In 2014, 2015.2016). In which regions was the situation the worst? Doe sthe population in those areas have access to potable water/sanitation facilities?

3) The system setup and operation of health insurance (analysis of current governmental and non- governmental, international health insurance programs: IDPoor, NSSF, SHPP and others).

1. Which programs concerning social and health insurance in Cambodia are there? Which of them are supported by the government, which by foreign donors and international organisations? If more players contribute to the fund, make a break down of the proportion that each contributes to. What rules and conditions of each health insurance system exist?
2. How does the poor ID program work? From what sources is it funded? How is IDPoor involved in the functioning of the Ministry of Health? Do residents receive medical treatment free of charge or do they have to contribute to the health care costs? How much is this contribution?
3. How is dealt with health care for residents who do not fall under any of the health insurance system? For example, residents working in the informal sector (grey economy) and the ones who do not fall under the IDPoor program?

4) Access to health care for children and people without birth certificates and for ethnic groups (minorities)

1. How does a child receive a birth certificate? What are the documents needed for requesting a birth certificate?
2. How is guaranteed/paid health care for residents without a birth certificate and with any health insurance? In the case of a pregnant women, can they give birth in a health facility even if they do not have a birth certificate and, if so, under what conditions?
3. Do medical facilities have a program for residents of villages/cities to inform them how they can apply for a birth certificate?
4. How is the health insurance for children / residents who do not have birth certificates? What is the proportion of such people in the population?
5. Is there some type of health insurance for members of other ethnic groups living in the North of Cambodia? (E.g. Mondulkiri, Ratanakiri).
6. What are the activities of other donors / international organizations / NGOs in this area?
7. In the north of the country is a large percentage of ethnic groups (minorities). How does issuing of birth certificates and health care provision work for these groups?
8. Is there any program that keeps track of these ethnic groups (minorities)? How many? How many men, women, children under 5 years of age and children below 18 years? What are the main healthcare challenges that these groups face?

5) The operation and the role of individual medical devices

1. What are the standards for the health care provided in different health centers (eg. Medication that the center can provide to patients, number of doctors, nurses, required qualifications, rules regarding the equipment / instruments etc.)? How many residents / villages covered under individual health centers? Are there are regional disparities in the distribution Health centers? Which regions are facing shortages?
2. What type of health care centers provide?
3. Do health centers have special programs and / or procedures to fight child malnutrition?
4. How often are pregnant women attending health centers before and after birth?
5. Which criteria must a village / community meet to have a health center based there. Who decides and who financed it?
6. What is the difference in caring for residents registered in the ID program poor and for those who are not registered in the IDPoor Program?
7. What type of care is provided by Referral hospital? Do they have some type of program and / or practice in the area of MCH? How many residents / villages are covered by an individual Referral hospital?
8. Do Referral Hospitals have some standards that must be fulfilled regarding the capacity of medical personnel, equipment / devices, drugs?

50.6. Annex 7: Summary of the Terms of Reference for the Study Update (2023)

The Embassy of the Czech Republic in the Kingdom of Cambodia is searching for a consultant to provide technical assistance in identifying new priority activities for an upcoming revision of the bilateral development cooperation programme. The current framework was established for the period 2018-2023, based on the relevant SDGs. Czech development cooperation is implemented through the Czech Development Agency, a government agency that issues public calls for proposals under various programmes and instruments. The implementers on the ground are Czech institutions in cooperation with their Cambodian partners. Activities in the health sector fall under the Inclusive Social Development programme pillar and are currently defined as focusing on healthy life, reducing maternal, neonatal and child mortality.

1. THE BACKGROUND
History of development cooperation of the Czech Republic to Cambodia

The Czech Republic has been active in the health sector in Cambodia since 1993. The early years were marked by the Medical Humanitarian Programme (MEDEVAC), which in its first phase aimed to evacuate patients to the Czech Republic for medical treatment, and later developed into a programme of sending Czech medical teams abroad. During this period, 8 patients were arrangead and transported by Calmette hospital to a medical facility in the Czech Republic and 13 children were operated on by a Czech team in Calmette hospital, Cambodia. Since 2015, MEDEVAC has provided training for foreign medical staff in the Czech Republic, as well as rebuilding health infrastructure.

So it was only natural that the first Czech Development Cooperation Strategy 2010- 2017 included the health sector among its priorities, with Takeo province as a priority. The first project, Capacity Building Development for three Hospital Management Teams (2015 - 2017), was implemented by Caritas Czech Republic in cooperation with Caritas Cambodia and aimed to increase the effectiveness/efficiency of management systems in three target hospitals to ensure cost-effective and quality health services by strengthening key management competencies of senior management. This project received the Order of Chivalry.

The first *Bilateral Development Cooperation Programme of the Czech Republic to Cambodia (2018–2023)* based its pillar priorities on the SDG3: GOOD HEALTH AND WELL-BEING: Reduce preventable neonatal mortality and mortality in children under five years of age, reduce maternal mortality in selected locations in the target province This involves developing the capacities of healthcare professionals, delivering equipment to selected healthcare facilities, and organising public awareness campaigns in target areas. Improved health care (equipment and qualified staff) and health awareness will help reduce malnutrition rates.

Outcome 2: End preventable deaths of newborns and children under 5 years age and reduce maternal mortality in selected areas (SDG 3.1. + 3.2.)	Percentage of neonatal, infant and under 5 mortality rates in selected areas
Output 2.1: Proportion of births attended by skilled health personnel in selected areas increased	**2.1** Maternal mortality ratio and rate
Output 2.2: Improved access to antenatal and postnatal care services in selected areas	**2.2** Percentage of mothers accessing the antenatal and postnatal care services
Output 2.3: Improved access to medical care for children (under 5)	**2.3** Percentage of children using medical care
Output 2.4: Rates of undernourishment (stunting and wasting) of children under 5 and pregnant and lactating women decreased	**2.4** Prevalence of undernourishment in under 5 children, pregnant and lactating women

Picture no. 1: *Priorities from the Bilateral Development Cooperation Programme of the Czech Republic to Cambodia (2018–2023)*

The first intervention under the new bilateral programme was Improving the quality of maternal and child health services in three hospitals in Kampong Chhnang province, also implemented by Caritas Czech Republic in cooperation with Caritas Cambodia in close collaboration with the Ministry of Health, in particular the National Maternal and Child Health Centre in Phnom Penh (NMCHC) in Kampong Chhnang Provincial Hospital (CPA3) and two referral hospitals (CPA1). The objectives of the project were to increase the effectiveness and efficiency of management systems in the three target hospitals, to ensure cost-effective and quality health services by strengthening key management skills, and to assess financial procedures and establish a software data management system. The project was also part of a study report: Costing of Health Centre and Hospital Services in Kampong Chhnang Province in collaboration with GIZ and National Institute of Public Health (NIPH). The quality of maternal and child care was improved by providing capacity building for medical staff, renovating the premises of the antenatal and postnatal department at the provincial hospital, and training midwives in neonatal and maternal care. Other outputs included establishing basic hygiene and sanitation standards, ensuring access to safe drinking water and improving medical and non-medical waste management in 3 target hospitals.

Current activities

In terms of recent projects, the new phase of cooperation began with the establishment of a long-term partnership with the National Paediatric Hospital in Phnom Penh (NPH). Following an expert identification mission, a needs assessment was carried out and the preliminary findings led to the formulation of a project called "Development of the Neonatology Department, National Paediatric Hospital". This intervention consisted of soft training activities and the supply of medical and training equipment. Working with Czech experts, the neonatal unit staff improved their neonatal care skills and the newly delivered medical equipment increased the capacity of Cambodian neonatologists on new training equipment. Activities included the development of methodological guidelines, the establishment of a neonatal training centre with spill- over potential to the provinces, training of medical staff in the maintenance of the equipment supplied, work placements for selected medical staff and hospital management at the Gynaecology and Obstetrics Department of the General University Hospital in Prague.

After visiting the perinatology centre in Prague, the NPH team expressed interest in building a similar concept in Cambodia. Obstetric care in the Czech Republic is among the best in the world, based on objective assessment criteria, the most important of which are perinatal, maternal and neonatal mortality. The foundation for the current state of care in the Czech Republic was laid in 1983 with a

nationwide project to collect selected aggregate data on perinatal care in the then Czechoslovakia through so-called regional perinatologists. The overall objective of the current project, in line with the SDGs and Cambodia's national strategy in this area, is to contribute to the reduction of neonatal, under-five and maternal mortality by improving access to antenatal and postnatal care services and qualified medical staff. As part of this project, a Czech expatriate physician is permanently based at NPH, and missions of top Czech specialists in a given field come to Cambodia to provide training and assess the needs of the beneficiaries. In 2022, a team of experts worked on educational materials and data collection mechanisms to be further evaluated and implemented in the next intervention. At the same time, the situation of transport and referral system was further assessed and a set of recommendations for these areas was prepared.

Timeline of most recent activities

2017 - Expert Research Study On The Current State Situation and Needs in the Health Sector in Cambodia With the Focus On Mother and Child Care

2018 - Assessment expert mission to Cambodia

2019 - Mission of NPH medical and management staff to Prague (General University Hospital), Delivery of medical equipment to NPH

2020 - Delivery of training centre equipment to NPH

2021 - Launch of the project *Improving capacity of maternal and child care in a newly built perinatal care center* (2021 – 2023)

2. EXPECTED OUTCOMES FROM THE CONSULTANT

A consultant is asked to work on points a) to e) specified below.

a. Revise sectoral priorities within the current Bilateral Programme and draft relevant baselines and indicators for the new phase 2024 – 2028.
b. Update information from a study carried out in 2017 by Czech Development Agency called *Expert Research Study On The Current State Situation and Needs in the Health Sector in Cambodia With the Focus On Mother and Child Care*2. This study is to serve as the implementation tool of the Bilateral Programme mentioned above.
c. Evaluate results of currently ongoing project in the context of other donors interventions and governmental priorities and draft possible complementary follow-up activities. Draft outcomes for upcoming calls for proposals.
d. Mapping of other donors' training and data management activities in the maternal and child sub-sector, as well as relevant government policies in this field.
e. Stakeholder mapping and drafting of institutional sustainability

3. REQUIREMENTS

- Minimum **3** years experience working in the Health sector in Cambodia and demonstrated ability to carry out assessment study of similar scope
- Good understanding of governmental strategies and health policies in the Mother and Child Care subsector

- Good understanding Cambodia's health administrative structures how are connected each other.
- Knowledge of data collection practices in Mother and Child sector
- Both candidates international and Khmer are encouraged to apply
- Good overview of current developments in the Mother and Child sector

Relevant documentation and contact details will be provided to the selected candidate.

4. CONCLUDING PROVISIONS

Final documentation elaborated by the expert (minimum of 15 pages) should be handed over both hard copy to the Embassy of the Czech Republic in Phnom Penh (the iCON Building (5th floor), 216 Norodom Boulevard) and soft copy via email to the Development Section of the Embassy of the Czech Republic in Phnom Penh (development_phnompenh@mzv.cz).