Kingdom of Cambodia
Nation Religion King

Ministry of Health

National Institute of Public Health

National Agenda for Health Systems Research 2024 - 2030

January 2025

PREFACE

The development of a National Agenda for Health Systems Research (NAHSR) has been recommended by the World Health Organization (WHO), for it is essential for each country to leverage their national research for health priority to attain the potent advancement for the progress in achieving the Universal Health Coverage (UHC) and Sustainable Development Goals (SDGs) 3 for health. Therefore, with the permission of Cambodia's Ministry of Health, under the proactive leadership and long-term vision and wise decisions of **His Excellency Professor CHHEANG Ra, Minister of Health,** the National Institute of Public Health (NIPH) has initiated to establish this national agenda, which could represent a significant milestone in Cambodia's commitment to achieving universal health coverage and resilient health systems by 2030.

This NAHSR has been formulated to prioritize health systems research (HSR) systematically within a specific area, which would lead to the improvement of Cambodian people's health outcomes. Indeed, it is a result of dedicated efforts through an inclusive consultative process by engaging a wide range of relevant stakeholders, including policymakers, public health professionals, researchers, and representatives from various departments of the Ministry of Health, non-governmental organizations, and various development partners in Cambodia. This collaboration has enhanced this national agenda, making it a reflection of shared goals and a comprehensive guide to address key areas in the health systems. In line with the country's health goals and the adapted framework of the WHO's six building blocks of health systems, this agenda has identified the priority research areas, which are health workforce, health financing, medical products and technologies, health information system, leadership and governance, service delivery, and two other emerging research areas, health improvement and health security.

NAHSR is a living document, and it will be recommending research priorities aligning with Cambodia's national health strategies. Additionally, this NAHSR also illustrates a governance framework for the National Ethics Committee for Health Research (NECHR) to regulate the alignment and the necessity of the health system research and for the NIPH's Center for Health Research and Policy Support (CHER) to coordinate the implementation and evaluation of the research to be conducted in Cambodia. Finally, this NAHSR will serve as a framework for facilitating health systems research in Cambodia for the Ministry of Health, relevant stakeholders, the private sector, and NGOs to design the correspondence research and projects to the country's needs. By fostering a focused and coordinated approach to health systems research, NAHSR will contribute to strengthening research governance, support evidence-informed policy decisions, and a healthier and safer Cambodia for all.

Phnom Penh, 3rd January /2025

H.E. Prof. CHHEA Chhorvann
Director of the National Institute of Public Health

ACKNOWLEDGEMENT

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Nomination Letter

His Excellency Professor, Professor, and staff of the National Institute of Public Health as named below are nominated as a technical team to establish the "**National Agenda for Health System Research**" from March 1st, 2024, onwards:

1.	H.E Prof.	Chhea Chhorvann	Chair
2.	Prof.	Ir Por	Deputy Chair
3.	Ass. Prof.	Leang Supheap	Deputy Chair
4.	Ms.	Chham Savina	Technical Team Leader
5.	Ms.	Ma Sokvy	Technical Team Co-leader
6.	Mr.	Ngor Chamnab	Research and Analysis Technical Assistant
7.	Mr.	Hay Vannit	Research and Analysis Technical Assistant
8.	Mr.	Chorn Sophearom	Research and Analysis Technical Assistant
9.	Mr.	Chhim Srean	Data and Analysis Technical Assistant
10.	Dr.	Hok Phalla	Communication Support
11.	Dr.	Vadhana Cheata	Communication Support
12.	Ms.	Heng Sotheara	Communication Support
13.	Ms.	In Vong Wuddhika	Communication Support
14.	Ms.	Sok Ngovlily	Data Entry Support
15.	Ms.	Pann Sorinphita	Data Entry Support
16.	Ms.	Nea Sophy	Data Entry Support
17.	Mr.	Sun Dyna	Administrative Support
18.	Ms.	Neth Bunnayeth	Accounting and Finance Support

This nomination letter is effective from the date of signing onwards.

Director of NIPH

Prof.CHHEA CHHORVANN

CONTENTS

LIST OF ABBREVIATION

AI	Artificial Intelligence
AMR	Antimicrobial Resistance
CHER	Center for Health Research and Policy Support
CHW	Community Health Worker
COHRED	Commission on Health Research for Development
CPA	Complementary Package of Activities
CSDGs	Cambodian Sustainable Development Goals
EMRs	Electronic Medical Records
ENHR	Essential National Health Research
HIS	Health Information System
HMIS	Health Management Information System
HSR	Health Systems Research
HRH	Human Resource for Health
HTA	Health Technology Assessment
ICT	Information and Communication Technologies
IDPoor	Identification of Poor Households
LMIS	Logistics Management Information System
MCMs	Medical Countermeasures
MedRec	Medication Reconciliation
MoH	Ministry of Health
MPA	Minimum Package of Activities
NAHSR	National Agenda for Health Systems Research
NCDs	Noncommunicable Diseases
NECHR	National Ethics Committee for Health Research
NGOs	Non-governmental Organizations
NHSP	National Health Strategic Plan
NIPH	National Institute of Public Health
NSSF	National Social Security Fund
OOPE	Out-of-Pocket Expenditure
PPP	Public-Private Partnership
SDGs	Sustainable Development Goals
QA	Quality Assurance
QC	Quality Control
UHC	Universal Health Coverage
VHSGs	Village Health Support Groups
WASH	Water Sanitation and Hygiene
WHO	World Health Organization

LIST OF TABLES AND FIRGURE

EXECUTIVE SUMMARY

Recognizing the need and significance of the National Agenda for Health Systems Research (NAHSR) in Cambodia, the National Institute of Public Health (NIPH) initiated the formulation of it as a guiding document to align health research with the country's health priorities.

With a main goal to contribute to building resilient health systems and accelerate progress toward Universal Health Coverage (UHC), this agenda was developed with three primary objectives: (1) To identify the research priorities aligning with Cambodia's national health strategies. (2) To guide the relevancy of standard research for ethical consideration. (3) To disseminate to other stakeholders for further consideration as part of Health Systems Research (HSR) implementation.

Cambodia's key policy documents and the World Health Organization's (WHO) six building blocks of health systems were adopted as a framework to identify emerging research priority areas and research questions for this agenda. In addition to the literature review on global and regional relevant documents, two consultative workshops with stakeholders from the public, private, and non-governmental sectors were conducted to gather input and establish a priority-setting process, ensuring relevance and inclusiveness.

As a result, Cambodia's NAHSR prioritizes research across various focus areas as following:

(1) Health Workforce: National health workforce accounts, the quality of pre-service training and medical education, and the enhancement of employment status among healthcare professionals.

(2) Health Financing: Fiscal sustainability of health systems, health financing for improving health service coverage, resource allocation, financial risk protection, and financing mechanisms.

(3) Medical Products and Technologies: Quality and safety of medical products, vaccines, and technologies, affordable, accessible, and safe medicines, affordable stock and pricing, effective procurement strategies, health technology assessment, medical products, devices, and equipment forecasting, available stock management, access to blood and blood product transfusion.

(4) Leadership and Governance: Oversight and governance on policy, regulation formulation, and compliance, institutional structure and coordination mechanisms, strategic direction and leadership development, accountability and transparency, stakeholder engagement and participation, financial management and resource mobilization, risk management and emergency response, effective management for human resources for health.

(5) Health Information Systems: Standardized data sources and collection, data quality (accuracy, completeness, and reliability), data management and storage (Health Management Information

System (HMIS) and integration), data-based monitoring and evaluation, health information dissemination and reporting, health information systems for decision-making, information and communication technologies (ICT) infrastructure, privacy, security, and confidentiality.

(6) Service Delivery: Healthcare delivery model, social and behavioral change strategies, access to essential healthcare services, environmental approaches, continuity of health service care, and health education/health competency.

(7) Emerging Areas:

    (a) Health Improvement: Noncommunicable diseases, reproductive, maternal, newborn, child health, and nutrition, food and waterborne diseases, and social determinants of health.

    (b) Health Security: One health approach, emergency preparedness, and public health response.

This research agenda could be used by the NECHR when considering the alignment of the proposed research topics to the national priorities. The Center for Health Research and Policy Support (CHER) within NIPH will use this research agenda to assess the fitness to the national priorities of the health system research conducted in Cambodia and also to track the key findings that could be used to support the formulation of needed health policies.

In conclusion, Cambodia's NAHSR is a transformative step in guiding the research priorities, which supports Cambodia's national health goals, therefore transforming Cambodia's healthcare landscape, while its implementation will strengthen research collaboration, inform health policy, and finally improve health outcomes for Cambodia's population as the country is moving toward UHC and resilient health systems by 2030.

1. INTRODUCTION

The National Institute of Public Health (NIPH), a semi-autonomous public institute established in 1997 in Phnom Penh, Cambodia, has transitioned into a public administrative institution since 2007. As an academic institution, NIPH is committed to implementing and achieving its mission with quality through teamwork, transparency, mutual respect, corporate identity, productivity, and moving toward self-reliance. The institute has a broad public health mandate to carry out three main functions: 1) a national public reference laboratory; 2) public health training, including master's and Ph.D. degrees; and 3) health research and policy support, with the main focus on providing the Ministry of Health (MoH) with health systems research and policy support in the country.

Regarding the NIPH's function as a Center for Health Research and Policy Support (CHER), there are key strategic goals to achieve: 1) conducting quality health systems research (HSR) on specific health programs or cross-cutting areas of key priorities: quality of care, antimicrobial resistance (AMR), health financing and social health protection, health equity, noncommunicable diseases (NCDs), maternal and child health with nutrition, and health workforce; 2) bridging research findings into policy through development and practice of knowledge translation (ex. starting to conduct an evidence-based synthesis or policy brief for every NIPH research where relevant) and creating and facilitating communication or dialogue platforms between policymakers, evidence's users and researchers; 3) increasing access to public health, health policy, and health systems-related documents through the development of an online database for key national health policy documents; 4) improving health research governance/coordination, including the development of a national agenda for health systems research (NAHSR) to align with current national health priorities and guidance/leading in HSR development. As part of our main function in improving health research governance in Cambodia, NIPH has formed a core research team to develop a NAHSR through the implementation of the mentioned strategic plan.

2. BACKGROUND

Elevating national research for health priorities to achieve effective scale-up is fundamental to progress toward attaining Universal Health Coverage (UHC) (1) and Sustainable Development Goals (SDGs) 3 for health. The World Health Organization, therefore, recommends each country take ownership of its research agenda by developing a national research agenda (2). In Cambodia, with the

new government mandate and political commitment in the country, the Cambodian Sustainable Development Goals (CSDGs) Framework for 2016-2030 (3) has been used as the basis for further development of the National Health Strategic Plan (NHSP), which aims to achieve resilient health systems and UHC that ensures a safe and healthy Cambodia. Despite its significant function in directing prioritized and relevant health research, Cambodia's NAHSR remains unavailable. Therefore, understanding how current health research has been aligned with national health priorities remains a gap to address. Currently, all research protocols for human health in Cambodia have been reviewed and approved by the National Ethics Committee for Health Research (NECHR), with NIPH as a secretariat. To respond to this identified gap and the current need, NIPH has initiated the development of NAHSR. This initiative has a tendency to reinforce the implementation of the research agenda by leveraging the function of NECHR to recommend researchers working on areas aligning with the national health priorities.

3. GOAL AND OBJECTIVES

Goal	"To contribute to building resilient health systems and speed up progress toward UHC, ensuring a safe and healthy Cambodia.
Specific Objectives	❖ To identify the research priority areas that align with current national priorities in Cambodia. ❖ To guide the relevancy of standard research for ethical consideration. ❖ To disseminate to other stakeholders for further consideration as part of HSR implementation in line with national health priorities.

4. METHODS

4.1. Priority setting process and development

This NAHSR is a dynamic document that undergoes periodic reviews and revisions to ensure its alignment with the latest health strategic plan. In the current context, this national agenda focuses only on HSR, defined as research related to the structure and performance of the health systems in both the public and private sectors. Within these defined boundaries, it does not include research specifically related to clinical, medical, biomedical, or laboratory science or disease-specific activities

or vertical programs (4). Establishing HSR priorities is a collective and inclusive process requiring active participation and consultation with all the relevant stakeholders. In establishing the research agenda, dialogues from different stakeholders in the priority-setting process ensure that all voices and commitments were heard, respected, and collected (5) with a well-planned and transparent process (6). While there is no unique gold standard for developing the research agenda, various approaches are available from the literature. Each country is encouraged to adapt and customize any relevant approach that aligns with their local context to establish their research agenda.

As part of this development, the NIPH research team has adapted the Essential National Health Research (ENHR) approach developed by the Commission on Health Research for Development (COHRED) (7) by considering the six key characteristics: 1). inclusiveness; 2). involvement of a broad range of stakeholders; 3). multidisciplinary and cross-sectoral approach; 4). partnership development; 5). participatory and transparent processes; and 6). systematic analysis of health needs and societal and professional expectations.

In alignment with the ENHR approach, there are three key stages, considered to get a final NAHSR, as presented below *(see Table 1).*

Table 1. Three Main Phases with Various Steps

Phases	Adapted detailed steps
Phase 1: Preparation stage (Jan – Apr 2024)	❖ Assigning the NIPH researcher team to develop the NAHSR. ❖ Agreeing with the initial plan of developing the NAHSR (approach, framework, and criteria of priority setting exercise and milestone). ❖ Discussing budget as needed for this priority-setting exercise. ❖ Preparing stakeholder analysis and draft a list of stakeholders' engagement during the priority setting process.
Phase 2: Priority setting process and development Stage (Jan – Dec 2024)	❖ Conducting situation analysis: a scoping review to draft an initial list of research priorities. ▪ Conducting literature review on national research agendas or research priorities both regionally and globally. ▪ Conducting desk review of relevant policy and strategic documents in Cambodia (Health program areas and cross-cutting issues such as

relevant guidelines/ roadmaps being implemented/plan from key departments & stakeholders).

❖ Convening two sequential consultative workshops:

▪ **1st consultative workshop**: Presenting initial list of and brainstorm on research areas and questions where applicable.

▪ After the first consultative workshop, the prioritized areas and sub-areas were refined, and some prioritized research questions were proposed for each sub-area. The sub-areas were scored based on four criteria: appropriateness, relevancy, feasibility, and research impact. They were then ranked descending based on the total scores and consensus among the group.

▪ **2nd consultative workshop**: Presenting the list of prioritized areas, sub-areas, and proposed research questions and build consensus among participants before finalizing the list.

❖ Compiling a comprehensive list of research priority areas and questions.

❖ Finalizing the NAHSR with an updated list of research priority areas in line with national priority needs.

Phase 3: Dissemination stage (2025)	❖ Disseminating NAHSR to other stakeholders as a guidance for research priorities in Cambodia. ❖ Providing NAHSR as a reference document to be a part of research application review process to NECHR.

4.2. Adapted Refining Framework

The framework mentioned in this NAHSR follows the WHO's six building blocks and was cross-checked with key policy documents in Cambodia within the current context *(see Figure 1).* This framework was used to identify emerging research priority areas and questions based on the situation analysis and input from various stakeholders.
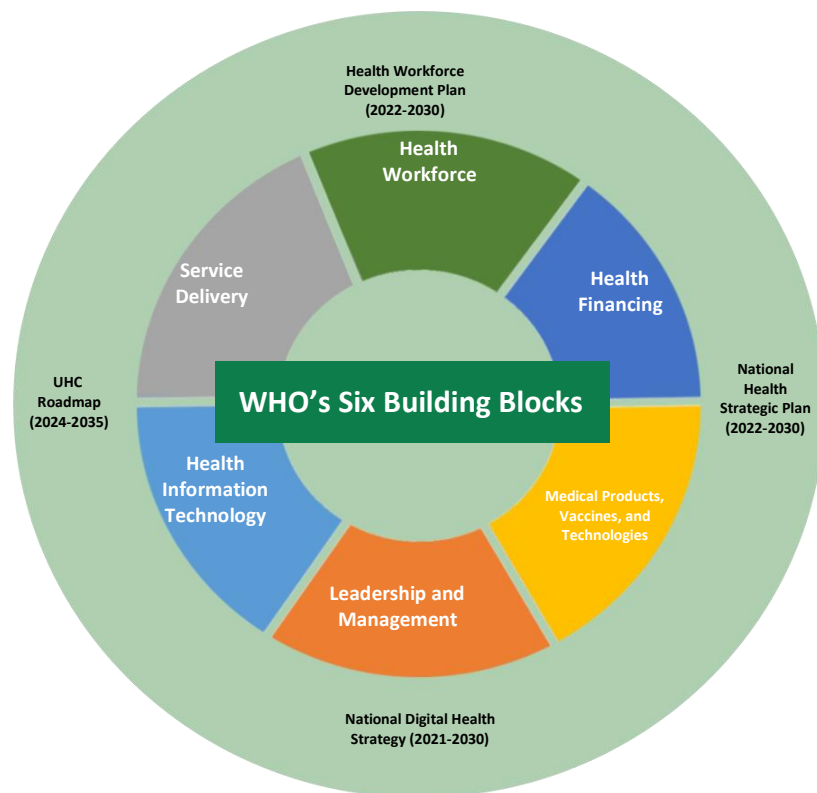
Figure 1 Adapted Refining Framework

4.3. Proposed Criteria and Scoring and Ranking Technique

Key proposed criteria adopted from the ENHR guidelines outlined by Okello and Chongtrakul (8) was used for the final discussion *(see Table 2)*

Table 2. Priority Setting Criteria

Priority setting criteria	key considerations/approach during the development of the final list
Criteria # 1: Appropriateness *(Should we, do it?)*	❖ Whether the proposed research is well suited to the target society. Ethical and moral issues, human rights issues, legal aspects, political acceptability, and commitment of the responsible policymakers.
Criteria # 2: Relevancy *(Why should we do it?)*	❖ Whether the proposed research is the right kind for the right people and whether it is pertinent to the policy

Criteria # 3: The feasibility or Chance of Success *(Can we do it?)*	❖ Capacity of the system to undertake the research, cost justification, time justification, and funding support.
Criteria # 4: Impact of the research outcome *(What will the stakeholders get out of it?)*	❖ Benefit of using or implementing the research results and evaluate the merit and usefulness of the research outcome. ❖ Research utilization, public health significance, economic impact, and development impact (drive policy changes).

*Scoring the prioritized sub-areas based on key criteria for priority setting, rank them based on the total scores, and review for consensus to arrive at the final priority health problems or broad research issues.

4.4. Stakeholders and Consultative workshops

As part of stakeholder engagement in the consultative workshops, key stakeholders were discussed in terms of power mapping and further administrative arrangements. Two sequential consultative workshops were conducted to gather additional input. The participants included senior and mid-level policymakers, along with key stakeholders from both the public and non-governmental organization (NGO) sectors in Cambodia.

The first one-day consultative workshop was held in May 2024, with around 50 participants. During this workshop, an overview of the development of the NAHSR was presented. The process of priority setting and conducting priority-setting exercises using the ENHR approach was also shared to enhance transparency. Additionally, the initial list from the scoping review, combined with the adapted framework, was presented, followed by small group discussions organized by themes (the WHO's six building blocks) based on participants' backgrounds, working experiences, and interests. The discussion concentrated on current and future priority areas and research questions.

The second half-day workshop was held in October 2024 with the same key stakeholders who attended the first workshop. This workshop reviewed the refined list of prioritized areas and sub-areas, along with some proposed research questions to build consensus among participants before finalizing the list. Additionally, a plan for HSR governance and a coordinating body was discussed to explore the potential use of the NAHSR in maximizing its impact on the health systems.

5. RESULTS OF NAHSR PRIORITIES AREAS

The final NAHSR in Cambodia is the result of 1) a literature review on national research agendas or research priorities both regionally and globally; 2) a desk review of relevant policy and strategic documents in Cambodia; and 3) consultations with key stakeholders through sequential consultative workshops in May and October 2024 **(See annex for details)**.

This final agenda is a living document that can be prioritized and regularly updated. It must remain flexible to accommodate and address newly emerging challenges in the future, in alignment with national needs. An agreed-upon coordinating institution must consistently maintain transparency and effectiveness.

The NAHSR was structured to collate all prioritized areas and sub-areas under a specific theme from the WHO's six building blocks. Sub-areas and specific themes have also been identified from all the national health programs. However, those identified themes of the specific national health programs have been integrated into the six building blocks for alignment. Those remaining prioritized areas and sub-areas, health improvement and health security, have been illustrated as extra sub-area since they could not be refined into the six building blocks.

6. GOVERNANCE OF NAHSR

The NECHR of MoH plays a key role in approving research applications based on the secretariats' review outcome. The CHER of NIPH, as the secretariat of the NECHR, will coordinate and monitor the implementation of NAHSR to maintain the quality of research with rigorous methods and ensure the best use of research results.

6.1. NAHSR Implementation

❖ NAHSR will be disseminated to relevant key stakeholders (NECHR, departments of MoH, NGOs, etc.) as guidance for research priorities in Cambodia and provided as a reference document to be a part of the research application review process for NECHR.

❖ Public or private institutes working on HSR are encouraged to conduct their relevant research aligned with NAHSR, thus receiving the following benefits:

• A support letter from NIPH as a supporting mechanism for their research application to NECHR.

- An opportunity as presenters for their research findings in dissemination workshops every 3-6 months conducted by the CHER, possibly contributing to the policy brief development for MoH if findings are potential enough for policy formulations.
- A letter of appreciation for presenting their research findings.

6.2. Monitoring and Evaluation Mechanism

- ❖ The CHER of NIPH will be working monthly on routine NECHR data to further code information on submitted proposals to identify key variables for monitoring, such as areas and sub-areas of research, nationality/gender of principal investigators, type of research institute, source of funding (local or donor), and report of the results as indicated in the research timeframe, etc.
- ❖ The monitoring and evaluation platform will be firstly developed as a checklist and then transformed into a digitalized version (Kobo or Qualtrics).
- ❖ The Director of NIPH, as the head of the secretariat of NECHR, will annually update the alignment of submitted research to NASHR.
- ❖ Number of disseminations workshops every 3-6 months, and their progress will be regularly monitored and evaluated.

7. REFERENCE

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8. ANNEXES

Annex 1. List of HSR Priority Area- Health Workforce

No.	Priority Areas	Priority Sub-Areas	Possible Research Questions
1	National Health Workforce Accounts	1.1. Health Workforce Distribution (doctors, nurses, midwives, others…)	1.1.1. What is the current distribution of health workforce by gender, regions and different sectors (private and public)?
			1.1.2. How current socio-demographic factors influence the distribution and availability of health workforce in underserved areas?
		1.2. Health Workforce Ratios	1.2.1. What is the current ratio of health workforce categories in public health facilities to impact healthcare system performance?
		1.3. Health Workforce Competencies	1.3.1. How can the capacity of current healthcare professionals and the overall quality of the health systems be effectively assessed and measured?
			1.3.2. What are healthcare professionals' perspectives on their current capacity in providing healthcare services?

			1.3.3. What are the effective strategies for enhancing and maintaining the competencies of healthcare professionals to ensure high-quality of care?
		1.4. Skill-Mix and Task Shifting	1.4.1. How does the current distribution of health workforce impact the workload and job satisfaction?
			1.4.2. What is the potential role of skill-mixed of healthcare professionals in task sharing within public health facilities?
			1.4.3. What are the most effective strategies for enhancing task shifting in public healthcare settings?
		1.5. Organizational Structure and Roles (functions, roles, and responsibilities within the health workforce)	1.5.1. How does the current organizational structure, including defined roles and terms of reference for human resources in health, impact the effectiveness and efficiency of the health systems?
		1.6. Need-Based Population Health Workforce Modelling	1.6.1. What are the projected health workforce needs in public health facilities?
		1.7. Gender and Equity in Health Workforce (Patient preference for female	1.7.1. What are the trends in gender and regional distribution of newly graduated health professionals entering the health workforce?

		health attendants, and gender balance in management roles…)	1.7.2. What are the barriers and facilitators to achieving gender balance and role of women of health workforce across regions?
2	**The quality of pre-service training and medical education** *(i.e., curriculum development, teaching methods, capacity/qualification of faculty members, student assessment and evaluation…)*	2.1. Assessing the Quality of Pre-Service Training and Medical Education	2.1.1. What are the gaps/mismatch between the competencies developed through pre-service training curricula and the actual health needs of the population?
			2.1.2. How can current gaps/mismatch be addressed to better align pre-service training and medical education with current HRH demands?
		2.2. Enhancing the Qualification and Competencies of Preceptors	2.2.1. What are the qualifications and competencies of current preceptors?
			2.2.2. What are the key qualifications and competencies required for preceptors to effectively mentor and assess students in medical education to meet the standard of HRH policy?
		2.3. Health Care Market Analysis	2.3.1. What are the key trends and challenges in Cambodia's healthcare market?
		2.4. Integration of Soft Skills into Pre-Service Education	2.4.1. What are the current gaps in soft skills training within Cambodia's pre-service and medical education programs?

			2.4.2. What are the perceived benefits and challenges of incorporating soft skills into pre-service and medical education from the perspectives of educators, students, and healthcare professionals in Cambodia?
			2.4.3. How can soft skills be effectively integrated into pre-service training and medical education curricula in Cambodia to enhance healthcare professionals' overall performance?
3	Enhancing Employment Status Among Healthcare Professionals	3.1. Retention and Employment Status	3.1.1. What factors most influence the retention of healthcare professionals in public health facilities in Cambodia?
			3.1.2. What are the most effective strategies in retaining health workforce in rural and remote areas?
		3.2. Upskilling and In-Service Training	3.2.1. What are the key challenges and opportunities in accessing, delivering and managing upskill/ in-service training among healthcare professionals?
			3.2.2. What are the most feasible and effective ways to implement upskilling programs for digital health among Cambodian healthcare workers?
		3.3. Current Skillsets and Training Needs	3.3.1. What are healthcare professionals' perspectives on their current skill gaps and training needs?

		3.4. Career Path Development	3.4.1. What are the most effective strategies for developing career paths among healthcare professionals?
		3.5. Reskilling	3.5.1. What are the barriers and facilitators to implementing reskilling programs for healthcare professionals in Cambodia?
			3.5.2. Which reskilling methods enhance the adoption of new skills and improve job performance among health professionals?
		3.6. Digital Health Literacy	3.6.1. What is the current level of digital health literacy among healthcare professionals and its impact of their ability to effectively use e-Health tools and technologies?
			3.6.2. What are the training needs to better understand how they learn differently on digital health?

Annex 2. List of HSR Priority Area- Health Financing

No.	Priority Areas	Priority Sub-Areas	Possible Research Questions
1	**Fiscal Sustainability of Health Systems**	1.1. Health Expenditure	1.1.1. How do demographic changes, such as aging populations, impact future healthcare expenditure?
		1.2. Health Budgeting	1.2.1. What are the key challenges in budgeting for healthcare programs, and how do these challenges impact the effectiveness and sustainability of healthcare delivery?
			1.2.2. How do health's budgeting challenges impact the effectiveness and sustainability of healthcare delivery?
		1.3. Healthcare cost control	1.3.1. What are the most effective approaches for controlling healthcare costs while maintaining or improving the quality of care?
		1.4. Fiscal Space	1.4.1. To what extent does fiscal space impact the financial sustainability on health systems to achieve universal health coverage?

		1.5. Fiscal Decentralization	1.5.1. What are roles of fiscal decentralization in promoting sustainable health financing?
2	**Health Financing for Improving Health Service Coverage**	2.1. Primary Health Care	2.1.1. To what extent can the utilization of the Lum-sump grant (62028) budget in primary healthcare for other purposes of each health center in Cambodia affect their overall performance in effectively and efficiently functioning?
		2.2. Effect of Out-of-Pocket Health Expenditures	2.2.1. To what extent does the reduction in out-of-pocket health expenditures through Health Equity Fund and National Social Security Funds improve health service coverage for chronic disease management in Cambodia?
		2.3. Health Service Coverage Index	2.3.1. What is the status of health service coverage index in Cambodia?
		2.4. Return on Investment	2.4.1. What is the return on investment for interventions targeting specific NCD risk factors (e.g., smoking, hypertension, obesity) in Cambodia by considering cost savings and improved health outcomes?

			2.4.2. What is the economic cost or return on investment if salaried CHWs function will be integrated into primary health care?
			2.4.3. How do financial barriers affect the accessibility and utilization of essential health services, and what policies can mitigate these barriers?
		2.5. Cost-Effectiveness of Implementing the Newly Health-Related Interventions	2.5.1. What is the cost-effectiveness of implementing the newly proposed health-related interventions on non-communicable disease, providing the improvement of its service coverage in Cambodia?
		2.6. Demand-Side and Supply-Side Financing	2.6.1. What are the demand-side and supply-side financing measures to increase health service utilisation and improve health outcomes?
		2.7. Health Purchasing	2.7.1. How does social health determinants influence health purchasing?
			2.7.2. To what extent does strategic health purchasing affect the essential health services

			coverage in the rural and underserved regions of Cambodia?
		2.8. One-Stop Healthcare Service	2.8.1. What are the cost implications of implementing one-stop healthcare services for both patients and healthcare systems?
		2.9. Private Health Insurance	2.9.1. What are the patterns of healthcare utilization among those with private health insurance in Cambodia?
3	Resource Allocation	3.1. Health Financing Model	3.1.1. What are the impacts of different health financing model for financial risk protection interventions on universal health coverage?
		3.2. Efficacy and Effectiveness of Resource Allocation for Specific Health Programs from Development Partners	3.2.1. What is the impact of resource allocation by developing partners on the efficacy of health interventions to achieve the targeted health outcomes?
		3.3. Impact of Financial Risk Protection Payment Mechanism	3.3.1. Can co-payment payment contain healthcare costs?
		3.4. Budgeting Method	3.4.1. What is the impact of incremental budgeting on the efficiency and effectiveness of health programs in Cambodia?

		3.5. Case-Capped Financial Mechanism	3.5.1. To what extent is case-caped mechanism feasible on the accessibility and affordability of health care in Cambodia?
4	**Financial Risk Protection**	4.1. Healthcare Utilization	4.1.1. What are the patterns of health service utilization among NSSF cardholders compared to IDPoor cardholders in Cambodia?
		4.2. Vulnerable Populations and Ethnic Minority Groups	4.2.1. What are the strengths and weaknesses of current social health protection programs in addressing the needs of vulnerable populations and ethnic minority groups in Cambodia?
			4.2.2. Why are risk-pooling arrangements necessary for OOPE reduction among vulnerable population?
			4.2.3. What is the impact of user-fee charges on health service access and utilization among vulnerable populations and ethnic minority groups in Cambodia?
		4.3. Financial Protection Measures Implementation	4.3.1. What is the estimated cost of implementing financial protection measures to ensure that all individuals, including low-income

			and vulnerable populations, are protected from catastrophic health expenditures in Cambodia?
			4.3.2. What are the key factors (enablers and barriers) on the implementation on social health protection scheme? If aligned with the objectives of the scheme?
5	**Financing Mechanisms**	5.1. Performance-Based Financing Mechanism	5.1.1. What impact does performance-based financing mechanism have on the quality of healthcare services and patient outcomes in rural and underserved regions of Cambodia?
		5.2. Innovative Financing Mechanisms	5.2.1. What innovative financing mechanisms can be employed to support a comprehensive continuum of health service delivery from community levels to health facilities in Cambodia?
			5.2.2. What financial mechanism model is feasible to improve the accessibility to healthcare among aging population?
			5.2.3. What is the impact of moving into incentivised CHWs for health service delivery?

		5.2.4. What financial mechanisms can be employed to enhance the coverage of mental health services at primary health care settings in Cambodia? (health financing)
		5.2.5. How can the policy on financial and non-financial incentives be used to optimize the efficiency and quality of health care?

Annex 3. List of HSR Priority Area- Medical Products, Vaccines, and Technologies

No.	Priority Areas	Priority Sub-Areas	Possible Research Questions
1	Quality, and Safety of Medical Products, Vaccines, and Technologies	1.1. Health Product Regulations	1.1.1. What percentage of unlicensed drugs (illegal drugs) are found in the private sector? What strategies can be implemented to combat these practices?
			1.1.2. What are the key gaps and inefficiencies in the current drug regulatory mechanisms in the private sector, and what strategies can enhance these mechanisms for improved enforcement?
			1.1.3. What is the adherence rate of current prescription practices for antimicrobial agents (antibiotics) in public health facilities?
		1.2. Health Product Registration and Regulation	1.2.1. How well are current registration procedures ensuring the safety and efficacy of health products, and what strategies can enhance these procedures to improve product safety and efficacy?

		1.3. Effectiveness of Monitoring & Evaluation mechanisms	1.3.1. How well does the current pharmacovigilance system monitor the safety and efficacy of newly introduced health products?
			1.3.2. What are the implementation challenges of the pharmacovigilance system?
			1.3.3. What are the most effective strategies for ensuring timely and accurate access to information about harmful products?
2	**Affordable, Accessible, and Safe Medicines**	2.1. Optimizing Rational Use and Adherence to Essential Medicines	2.1.1. What factors influence adherence to or deviations of prescribing/ using the existing essential drug list? And what strategies can be developed to promote its use among healthcare professionals?
		2.2. Strengthening Quality Control Mechanisms to Combat Counterfeit and Substandard Medicines	2.2.1. How effective are the current procedures of QA and QC for ensuring the safety and efficacy of health products (counterfeit and substandard products), and what strategies can be implemented to enhance these procedures to improve product safety and efficacy?

		2.3. Enhancing Supply Chain Efficiency and Availability of Essential Medicines	2.3.1. What are the supply-side and demand-side perspectives for extending the MPA and CPA essential drug lists?
		2.4. Ensuring Patient Safety Through Medication Reconciliation and Error Prevention Strategies	2.4.1. What are the key challenges to introducing medication reconciliation (MedRec) for ensuring medication adherence across public health facilities?
		2.5. Improving Waste Management and Disposal Practices	2.5.1. How well do the current practice on waste management for health products and medical devices across public health facilities?
3	**Affordable Stock and Pricing**	3.1. Affordable Price	3.1.1. What are the factors influencing price variation for health products, medical devices, and equipment across the private sector?
			3.1.2. How do prescription drug pricing/procurement reforms impact overall healthcare affordability and patient access to necessary medications?
		3.2. Health Product Price Regulations	3.2.1. What are the potential challenges and benefits of adopting or introducing new

			regulations on drug pricing in the private sector?
			3.2.2. What are the key determinants influencing self-medication and the purchase of drugs without a prescription, and what strategies can be implemented to enforce regulations on self-medication and prescription drugs?
4	Effective Procurement Strategies	4.1. Procurement and Supply Chain Management	4.1.1. How effective are the current procurement strategies in ensuring the efficiency and reliability of the supply chain for health products, medical devices, and equipment?
		4.2. Routine Health Products, Medical Devices, and Equipment	4.2.1. How effective are the current procurement strategies for routinely procured health products, medical devices, and equipment?
		4.3. Medical Countermeasures (MCMs)	4.3.1. What are the key challenges in the procurement strategies for medical countermeasures needed for emerging public health threats?

5	**Health Technology Assessment (HTA)**	5.1. Routine Health Products, Medical Devices, and Equipment	5.1.1. What are the barriers and benefits of adopting HTA to select routine health products, medical devices, and equipment in terms of clinical effectiveness and safety?
		5.2. Assessment of Newly Developed Products/MCMs	5.2.1. What are the barriers and benefits of adopting HTA to select newly developed health products, medical devices, and equipment for use in pandemics in terms of clinical effectiveness and safety?
			5.2.2. How do newly developed medical products compare to existing alternatives in terms of clinical effectiveness, safety, and cost-effectiveness?
6	**Medical Products, Devices, and Equipment Forecasting**	6.1. Current Models for Forecasting	6.1.1. How effective are the current models for projecting or forecasting the needed medical products, medical devices, and equipment (type and quantity) for routine use or public health emergencies, and what are the key challenges in implementing these models?

7	Available Stock Management	7.1. Logistic Management for Routine Products	7.1.1. How effective are current logistics management practices in ensuring uninterrupted distribution and supply of routine medical products from the central level to sub-national levels, and what are the key challenges in improving these practices?
		7.2. Stock Management or Inventory	7.2.1. What are the key challenges and opportunities for enhancing stock management or inventory practices (including stock levels, storage, and expiry dates) across public health facilities?
		7.3. Logistics Management for MCMs	7.3.1. What are the key challenges in ensuring the timely distribution and supply of needed MCMs across public health facilities during pandemics, and how can current practices be optimized to improve preparedness for future pandemics?
		7.4. Logistics Management Information System (LMIS)	7.4.1. How effective is the current LMIS in monitoring stock levels across public health facilities?

			7.4.2. What are the current capacity and functionality of the existing LMIS, and how do they impact supply chain management?
			7.4.3. How can LMIS be improved to enhance stock management, and reduce stockouts in Cambodia's public healthcare system?
			7.4.4. What are the gaps and challenges in developing LMIS in Cambodia?
8		8.1. Adequate Blood and Product Stocks	8.1.1. What are the needs for ensuring the availability of stock for blood and blood products across public health facilities?
	Access to Blood and Blood Product Transfusion	8.2. Safe Blood and Product Use	8.2.1. How effective are the current management and use of patient blood across public health facilities, and what strategies can be implemented to optimize these practices?

Annex 4. List of HSR Priority Area- Leadership and Governance

No.	Priority Areas	Priority Sub-Areas	Possible Research Questions
1	**Oversight and Governance on Policy, Regulation Formulation, and Compliance**	1.1. Health Impact Assessment of Different Health Policy or Governance Approaches	1.1.1. What are the effects of the policy of health-care dual practice on the quality of care?
			1.1.2. Are regulations on dual practice required, and if so, how should they be designed and implemented?
			1.1.3. How is the population's confidence and satisfaction in the current health systems?
		1.2. Monitoring and Evaluation of Different Approaches to Health Systems Governance	1.2.1. What functional approaches will improve financial management, monitoring, and evaluation of health systems at the subnational levels under the D&D reforms?
		1.3. Regulation and Governance of Dual Practice	1.3.1. What is the current status and prevalence of dual practice among public healthcare professionals?

			1.3.2. What are the effects of dual practice on the performance and productivity of health workers in public health facilities?
			1.3.3. How does the cost-effectiveness of dual practice compare to exclusive private sector practice in terms of healthcare outcomes, service efficiency, and overall system sustainability?
			1.3.4. How effective is the current dual practice policy in regulating the balance of work among healthcare professionals?
			1.3.5. What are the impacts of the dual practice policy on healthcare access and quality in public health facilities?
		1.4. Healthcare Accreditation	1.4.1. How do healthcare accreditation and certification processes contribute to the improvement of quality in health services?
2	**Institutional Structure and Coordination Mechanisms**	2.1. Approach of Strengthening Institutional Capacity at National and Sub-National Levels (i.e., mandate, functions, planning)	2.1.1. What are feasible and efficient modalities for strengthening individual, organizational, and institutional capacities at the national and sub-national levels?

			2.1.2. What is the impact of leadership and management training on health systems performance?
			2.1.3. How is the effectiveness of the current health systems and structures?
3	**Strategic Direction and Leadership Development**	3.1. Enhancement of Management and Leadership Capacity for Human Resources for Health	3.1.1. What are the critical management and leadership skills for improving health workforce performance?
			3.1.2. What are the most effective approaches for enhancing management and leadership skills among healthcare professionals?
			3.1.3. What are the key barriers and facilitators to adopting management and leadership skills among healthcare professionals in public health facilities?
4	**Accountability and Transparency**	4.1. Implementation of the Strategic Plan to be Aligned with Existing Resource Availabilities	4.1.1. What gaps exist in understanding and implementing the newly introduced policies and guidelines at the national and sub-national levels to ensure effective policy execution?

			4.1.2. How does the newly introduced policy impact health-seeking behaviour?
			4.1.3. How can the policy on financial and non-financial incentives be used to optimize the efficiency and quality of health care?
5	**Stakeholder Engagement and Participation**	5.1. Strengthening Public-Private Partnership (PPP)/ Multi-Sectoral Interventions	5.1.1. What effective PPP models can be used for strengthening healthcare infrastructure and services?
			5.1.2. What are the enablers and barriers in optimizing the use of PPP at the subnational levels?
			5.1.3. What are the costs, risks, and benefits of PPP?
6	**Financial Management and Resource Mobilization**	6.1. Supporting Structures/Mechanism for Health Workforce to Improve Health Service Delivery (Financial vs. Non-Financial)	6.1.1. How do different incentive structures (both financial and non-financial) impact healthcare professionals' performance and motivation?
			6.1.2. Which incentive is most effective in enhancing job satisfaction and productivity?

			6.1.3. What are the key factors influencing the feasibility and effectiveness of integrating Community Health Workers (CHWs) (i.e. VHSGs) into existing health workforce systems?
7	**Risk Management and Emergency Response**	7.1. Surge Capacity of Health Systems during Public Health Emergencies (i.e., disasters/crisis/stress tests)	7.1.1. What is the health systems' ability and readiness to rapidly expand its capacity beyond normal services to meet the increased demand for qualified personnel, medical care, and public health services during public health emergencies?
8	**Effective Management for Human Resources for Health**	8.1. Optimizing Staff Performance and Retention	8.1.1. What are feasible and effective strategies for improving/optimizing staff performance in public health facilities?
			8.1.2. What are the key factors influencing the feasibility and effectiveness of improving staff retention among public health professionals? (i.e. policy, motivation, or support structure for staff retention)

		8.2. Competency-Based Recruitment Process among Healthcare Professionals	8.2.1. How effective is the competency-based recruitment process in aligning with current HRH policy and governance?
		8.3. Integration of Other Health-Related Professions into the Healthcare Workforce (i.e., biomedical, immunology)	8.3.1. What are the key factors influencing the feasibility and effectiveness of integrating other health-related profession into healthcare workforce?
			8.3.2. What are the key competencies required for healthcare professionals to meet the current standards set by HRH policy and governance?

Annex 5. List of HSR Priority Area- Health Information System

No.	Priority Areas	Priority Sub-Areas	Possible Research Questions
1	**Standardized Data Sources and Collection**	1.1. Health Information Systems Mapping	1.1.1. What are the available health information systems in the country? (i.e., mapping or landscape analysis)
			1.1.2. What is the feasibility of collecting data and building dashboards for sub-national levels to enhance utilization?
		1.2. Collect Emerging Health and Health-Related Data Sources	1.2.1. How can we effectively collect data from diverse emerging sources (e.g., wearables, social media, environmental sensors) into Cambodia's existing health data infrastructure?
2	**Data Quality (Accuracy, Completeness, Reliability)**	2.1. Data Ownership and Monitoring Tools	2.1.1. What are the key strategies to enhance ownership and regulation of health data integration?
			2.1.2. What feasible tools can be developed for progress monitoring systems (e.g., registration database)?

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3	**Data Management and Storage (HMIS and Integration)**	3.1. Data Linkage and Sharing Platform	3.1.1. What are the technical, organizational, and financial feasibility of integrating two database systems in the Cambodian healthcare setting? a. public vs public (e-LMIS, EMRS and HMIS) b. public vs private c. emerging health data sources
		3.2. Integrating Emerging Health and Health-Related Data Sources	3.2.1. What are the ethical implications and regulatory challenges of integrating emerging health and health-related data sources, particularly in relation to data privacy, ownership, and access?
4	**Data -Based Monitoring and Evaluation**	4.1. Data Use for Quality Improvement	4.1.1. What barriers and facilitators affect the utilization of health data for decision-making and quality improvement in Cambodia?
			4.1.2. How can data analysis and utilization of HIS be maximized for quality improvement?
5	**Health Information Dissemination and Reporting**	5.1. Enhancing Health Information Dissemination Strategies	5.1.1. What are the key barriers to the utilization of digital health reporting platforms by healthcare providers, and how

			can these platforms be optimized for better health information dissemination in Cambodia?
			5.1.2. How effective are Cambodia's current health information dissemination strategies in ensuring timely communication of public health risks?
6	**Health Information Systems for Decision-Making**	6.1. Influencing on policy formulation	6.1.1. How do HIS impact the formulation of health policy in Cambodia?
			6.1.2. What roles do HIS play in identifying priority areas for policy development in Cambodian public health?
			6.1.3. What barriers and facilitators influence the effective utilization of patient and hospital data for policy management?
7	**ICT Infrastructure**	7.1. Digital health infrastructure and technology (AI, e-health, telemedicine…)	7.1.1. What are the potential ethical implications of integrating AI into Cambodia's healthcare services (i.e., early detection, diagnosis)?
			7.1.2. What is the feasibility of using telemedicine services in Cambodia,

			considering infrastructure, human resources, policy, and financing?
			7.1.3. How are emerging technologies (e.g., artificial intelligence, and machine learning) integrated into HIS for policymaking?
			7.1.4. What role does technology play in enhancing the delivery and effectiveness of long-term care services?
8	Privacy, Security, and Confidentiality	8.1. Approaches for Infodemic Management (Health Security System)	8.1.1. How can we effectively identify and track the origin and spread of misinformation and disinformation during health emergencies?
			8.1.2. How can technology be leveraged to enhance early detection, monitoring, and response to infodemics?
			8.1.3. What are the key factors influencing the effectiveness of multisectoral collaboration in managing infodemics?

Annex 6. List of HSR Priority Area- Service Delivery

No.	Priority Areas	Priority Sub-Areas	Possible Research Questions
1	**Healthcare Delivery Model**	1.1. Community-Based Care (family, community, and local authorities at primary health care setting)	1.1.1. How does community engagement impact the effectiveness of health service delivery programs in improving health outcomes in Cambodia?
			1.1.2. How could family members play a role in health service delivery especially for older population?
			1.1.3. What is the role of local authorities in enhancing the accessibility and quality of primary health care services in communities?
			1.1.4. What are the challenges and benefits of involving patients and families in the quality improvement processes within healthcare settings?

		1.1.5. What roles do community-based organizations play in enhancing the effectiveness of service delivery for mental health, domestic violence, and substance abuse, and what are the best practices?
	1.2. Patient-centered Care	1.2.1. How does the implementation of a Patient-centered Care model impact patient satisfaction and health outcomes in primary care settings?
		1.2.2. What resources are needed for a comprehensive patient-centered care?
		1.2.3. How effective is the patient-centered care in delivery health service for older population or chronic disease patients?
	1.3. Integrated Service Delivery	1.3.1. What differences does the integration of health promotion/education into horizontal health systems structure make in term of health service delivery at the primary care level?

		1.3.2. What differences would impact the current health service delivery if there is an integration between: a. mental health service into each vertical or national program b. vertical program into vertical program c. vertical program into horizontal health systems structure?
		1.3.3. What differences does the integration of community health workers in horizontal health service delivery at primary health care settings?
		1.3.4. What differences does the integration of community-based intervention of each vertical program into routine village health support groups make in term of resource and role?
		1.3.5. How effective are integrated service delivery models in addressing co-occurring mental health issues, substance abuse, and domestic violence compared to separate service models?

		1.4. One-Stop Model for Healthcare Services	1.4.1. How do one-stop health services impact patient satisfaction and health outcomes compare to traditional multi-visit healthcare models?
			1.4.2. How do one-stop health service models affect the efficiency of care delivery and patient wait times in integrated care settings?
			1.4.3. What are the challenges and best practices in implementing one-stop health services?
			1.4.4. What role do one-stop services play in improving access to preventive care and early intervention for chronic diseases?
			1.4.5. What are the patient and provider perceptions of one-stop health services, and how do these perceptions influence the success of such models?
2	**Social and Behaviour Change Strategies**	2.1. Supporting Structure of Community Health Workers	2.1.1. What could be the ideal supporting structure to maximise the potential of

		CHWs in providing health service delivery/primary health care?
		2.1.2. What roles do community health centers play in improving access to affordable healthcare, and how can their effectiveness be enhanced?
		2.1.3. What role do community health workers play in delivering essential health services, and how can their effectiveness be enhanced?
		2.1.4. How do the qualifications and training of community health workers affect the quality of health services they provide in communities?
	2.2. Community Health Workers for Routine Health Service Delivery	2.2.1. What is the potential of CHWs performance if the health systems decide to give them regular financial support?
		2.2.2. What are the impacts of integrating community health workers into the formal health systems on patient outcomes and system efficiency in low-resource settings?

		2.3. Social Behavioural Change Intervention	2.2.3. What are the barriers for CHWs to function in the routine health care structure?
			2.2.4. What roles do community-based health education programs play in improving health literacy and health outcomes in underserved/vulnerable populations?
		2.3. Social Behavioural Change Intervention	2.3.1. How could social behavioural change intervention affect people's seeking care? Or access to health service?
			2.3.2. What are the most effective behavioural change intervention in improving people's trust in local health service delivery?
3	**Access to Essential Healthcare Services**	3.1. Safe and Quality Healthcare Services	3.1.1. What are the factors affecting patients perceived of quality of care?
			3.1.2. What are the strategies to enhance safety in health care settings and reduce medical errors?

			3.2.3. What is the impact of patient feedback mechanisms on the quality of care in outpatient clinics?
			3.1.4. How does the integration of multidisciplinary care teams affect the quality of care?
			3.1.5. How does the use of patient-centered care practices influence the quality of care in mental health services?
		3.2. Affordable Healthcare Services	3.2.1. Should health care be free to be called affordable?
			3.2.2. How do different countries' approaches to universal health coverage impact healthcare affordability and health outcomes?
			3.2.3. What are the barriers to implementing affordable healthcare solutions in rural and underserved areas, and how can these barriers be overcome?

		3.2.4. How do social health insurance coverage expansion initiatives impact healthcare affordability and utilization among previously uninsured populations?
		3.2.5. What are the most effective strategies for reducing out-of-pocket costs for patients while maintaining the quality of healthcare services?
	3.3. Component of Essential Healthcare Services	3.3.1. What are the key indicators of high-quality healthcare, and how can these indicators be effectively measured and monitored? or how can health systems effectively monitor and evaluate the quality and coverage of essential health services to ensure they meet public health needs?
		3.3.2. How do patient-centered care approaches influence overall quality of care and patient satisfaction in different healthcare settings?
		3.3.3. What are the key indicators of comprehensive essential health services,

			and how can these indicators be effectively measured and monitored?
			3.3.4. What are the impacts of integrating essential health services into primary care on overall health outcomes and system efficiency?
			3.3.5. What criteria should be used to define and prioritize essential health services in different healthcare systems (MPA or CPA guideline)?
		3.4. Referral System/Gatekeeping Policy	3.4.1. What is the possible investment in the health systems to design a comprehensive gatekeeping policy?
			3.4.2. What does gatekeeping impact on health care delivery?
			3.4.3. How far does the referral system need to stop and restrain in one place?
4	**Environmental Approaches**	4.1. Health Care Waste Management in Primary Health Care	4.1.1 What are the most effective strategies for reducing hazardous health care waste in primary care facilities?

		4.1.2. What are the environmental and public health impacts of improper disposal of health care waste?
	4.2. Monitoring of and Improving Water, Sanitation, and Hygiene (WASH) in Primary Health Care	4.2.1. How does the integration of WASH practices into healthcare facilities impact infection rates and overall patient health outcomes?
		4.2.2. How does access to clean water and sanitation in healthcare facilities influence the quality of health services?
		4.2.3. How can community-based WASH education programs improve health service delivery and outcomes in rural communities?
		4.2.4. What are the long-term health impacts of improved WASH conditions on populations served by healthcare facilities in developing countries?
		4.2.5. What are the best practices for integrating WASH strategies into health

			service delivery models to address both immediate and long-term health needs?
5	**Continuity of Health Service Care**	5.1. Continuum of Care	5.1.1. How is the continuity of care designed for chronic patient care?
			5.1.2. What does population gain from retaining in the continuum of care?
			5.1.3. What are the factors influencing access to the continuum of care?
			5.1.4. How can health systems ensure the continuous delivery of essential health services during emergencies or crises, such as pandemics or natural disasters?
			5.1.5. What is the role of pharmacists in optimizing medication use and reducing hospital readmissions within integrated health service delivery systems?
			5.1.6. How do pharmacist-initiated health screenings and preventive services impact patient health outcomes and the efficiency of health service delivery?

		5.1.7. How do pharmacy services contribute to managing medication-related problems and reducing healthcare costs in integrated care systems?
	5.2. Emergency Medical Services (i.e., ambulance services, paramedic services)	5.2.1. How do response times in emergency medical services affect patient outcomes in urban versus rural settings?
		5.2.2. What are the most effective strategies for improving the coordination and communication between EMS and hospital emergency departments?
		5.2.3. What are the challenges and benefits of implementing community paramedicine programs within emergency medical services?
		5.2.4. What are the barriers to accessing emergency medical services in underserved communities, and how can these barriers be addressed?
		5.2.5. What role does public awareness and education play in optimizing the use and

			effectiveness of emergency medical services?
		5.3. Long-term Care for the Elderly Population	5.3.1. How do staffing levels and training in long-term care impact patient care quality and service satisfaction?
			5.3.2. What are the barriers to accessing high-quality long-term care services among older populations, and how can these barriers be addressed?
		5.4. Rehabilitation and Palliative Care	5.4.1. What are the barriers and facilitators to implementing comprehensive palliative and rehabilitation care models in home-based settings?
			5.4.2. What are the most effective strategies for improving communication between healthcare providers and patients in palliative care settings?
			5.4.3. How do different models of palliative care (e.g., inpatient, outpatient, home-based) affect patient and family outcomes?

6			5.4.4. What do health systems need to prepare in delivering rehabilitation services at referral hospital?
			5.4.5. What are the impacts of different long-term care models on the quality of life and health outcomes for elderly patients?
6	Health Education/Health Competency	6.1. Health Literacy for General Populations	6.1.1. What is the status of health literacy among Cambodian population (specific age group, regions)?
			6.1.2. How does health literacy impact the access to health services/disease management?
			6.1.3. What factors influencing the health literacy among Cambodian population?
			6.1.4. How does health literacy impact the perception of Cambodian in seeking domestic care?
			6.1.5. What are the effects of culturally tailored health literacy programs on patient outcomes/access to health services?

		6.1.6. How does health literacy influence the effectiveness of patient-provider communication in primary care settings?
	6.2. Health Rights and Ethics in Health Service Delivery (i.e., patient right, appeal mechanism, informed consent, …)	6.2.1. How does the implementation of patient confidentiality policies impact trust and the quality of patient-provider relationships in different healthcare settings?
		6.2.2. What are the ethical considerations in the use of patients' data to improve the health service delivery?
		6.2.3. How do patient rights to privacy and confidentiality affect the delivery and quality of healthcare services in different healthcare settings?
		6.2.3. How do patient rights to privacy and confidentiality affect the delivery and quality of healthcare services in different healthcare settings?

		6.2.4. What are the barriers to accessing healthcare services for marginalized (underserved or vulnerable) populations, and how do these barriers affect their ability to exercise their health rights?
		6.2.5. What role do healthcare providers play in educating patients about their health rights, and how does this education impact patient outcomes?
	6.3. Growth of AI in Service Delivery / Patient Care	6.3.1. What roles do AI/ digital health tools play in improving health service delivery/access to health care among Cambodian older adults?
		6.3.2. What are the effects of digital health technologies on the delivery and accessibility of essential health services?

Annex 7. List of HSR Priority Area- Health Improvement (New Emerging Area)

No	Priority Areas	Priority Sub-Areas	Possible Research Questions
1	NCDs	1.1. Political economy on health tax reform on alcohol, tobacco, sugar beverages)	1.1. How do revenues generate from taxes on unhealthy products (e.g., sugary drinks, tobacco, alcohol) influence public health funding and health promotion initiatives in Cambodia?
			1.1.2. How effective are different tax rates on unhealthy products in reducing consumption and improving public health outcomes in Cambodia?
		1.2. e-Health to Monitor Physical Activity among NCD Patients (i.e., step counter, calories burn, physical activity)	1.2.1. What are the barriers and facilitators to the adoption of e-Health technologies among NCD patients in Cambodia?
			1.2.2. How effective are e-Health solutions in promoting sustained physical activity and improving health outcomes among NCD patients in rural and urban Cambodia?

2	**Reproductive, Maternal, Newborn, Child Health, and Nutrition (RMNCH-N)**	2.1. End All Forms of Malnutrition	2.1.1. How effective are community-based nutritional interventions in reducing malnutrition among children under five in Cambodia?
		2.2. Improve the Nutritional Needs of Adolescent Girls, Pregnant and Lactating Women and Elderly People	2.2.1. What are the most effective community-level interventions for improving nutrition among pregnant and lactating women in rural Cambodia?
		2.3. School Health	2.3.1. How do school-based health education programs impact the nutrition and health literacy of children in Cambodian primary schools?
3	**Food and Waterborne Diseases**	3.1. Prevention of Food and Waterborne Diseases	3.1.1. How effective are current public health campaigns in raising awareness and changing behaviors around safe food and water consumption in Cambodia?
4		4.1. Impact of Social Determinants on Disease Prevention	4.1.1. What roles do social determinants of health play in shaping the knowledge and awareness of disease prevention

	Social Determinants of Health (Gender Equality, Rights, Vulnerable and Disadvantaged Groups…)		interventions among Cambodia's vulnerable populations?
			4.1.2. What are the key socio-economic factors affecting access to mental health services among Cambodia's aging population?

Annex 8. List of HSR Priority Area- Health Security (New Emerging Area)

No	Priority Areas	Priority Sub-Areas	Possible Research Questions
1	One Health Approach (Zoonotic Disease Epidemic, AMR, Climate Change, Environmental Health Risk	1.1. Managing AMR	1.1.1. How effective are national AMR policies in reducing the misuse of antibiotics in both human and veterinary medicine?
		1.2. Public Awareness and Food Safety Practices	1.2.1. How can community-based educational programs improve food safety practices among households and small-scale food businesses in Cambodia?
		1.3. Integration into Public Health Response	1.3.1. How well is the One Health approach integrated into Cambodia's response to emerging public health threats?
		1.4. Adaptation and Mitigation strategies	1.4.1. What is the role of community adaptation strategies in mitigating the health impacts of climate change in Cambodia?

		1.5. Strengthen inter-collaborations	1.5.1. How effective are current inter-agency collaborations in addressing zoonotic disease risks in Cambodia?
		1.6. Assessing the Impact of Heat Wave on Population Health	1.6.1. What are the most effective public health interventions to reduce the impact of extreme heat on population health in Cambodia?
2	**Emergency Preparedness and Public Health Response**	2.1. Better Preparedness and Response to Pandemics	2.1.1. What are the key gaps in Cambodia's health systems that affect preparedness and response to pandemics?
		2.2. Enhancing Risk Management Strategies	2.2.1. How can Cambodia's disaster risk management strategies be strengthened to better address public health threats?

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