

# Setting Global Research Priorities for Private Sector Child Health Service Delivery: Results from a CHNRI Exercise

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Child Health Task Force, Private Sector Engagement Meeting  
October 29, 2020





# Agenda

- CHNRI Overview
- Background and Objectives
- Methods
- Results
- Discussion
- Call to Action
- Q&A





## Meet the speakers



**Catherine Clarence**

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# Background and Objectives



# What is CHNRI?

- **C**hild **H**ealth and **N**utrition **R**esearch **I**nitiative
- Most commonly used methodology for health research priority setting
- Democratic, transparent approach to establishing a research agenda
- Systematic yet flexible process

Electronic supplementary material:  
The online version of this article contains supplementary material.

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## Setting health research priorities using the CHNRI method: VII. A review of the first 50 applications of the CHNRI method

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**Background** Several recent reviews of the methods used to set research priorities have identified the CHNRI method (acronym derived from the “Child Health and Nutrition Research Initiative”) as an approach that clearly became popular and widely used over the past decade. In this paper we review the first 50 examples of application of the CHNRI method, published between 2007 and 2016, and summarize the most important messages that emerged from those experiences.

**Methods** We conducted a literature review to identify the first 50 examples of application of the CHNRI method in chronological order. We searched Google Scholar, PubMed and so-called grey literature.

**Results** Initially, between 2007 and 2011, the CHNRI method was mainly used for setting research priorities to address global child health issues, although the first cases of application outside this field (eg, mental health, disabilities and zoonoses) were also recorded. Since 2012 the CHNRI method was used more widely, expanding into the topics such as adolescent health, dementia, national health policy and education. The majority of the exercises were focused on issues that were only relevant to low- and middle-income countries, and national-level applications are on the rise. The first CHNRI-based articles adhered to the five recommended priority-setting criteria, but by 2016 more than two-thirds of all conducted exercises departed from recommendations, modifying the CHNRI method to suit each particular exercise. This was done not only by changing the number of criteria used, but also by introducing some entirely new criteria (eg, “low cost”, “sustainability”, “acceptability”, “feasibility”, “relevance” and others).

**Conclusions** The popularity of the CHNRI method in setting health research priorities can be attributed to several key conceptual advances that have addressed common concerns. The method is systematic in nature, offering an acceptable framework for handling many research questions. It is also transparent and replicable, because it clearly defines the context and priority-setting criteria. It is democratic, as it relies on “crowd-sourcing”. It is inclusive, fostering “ownership” of the results by ensuring that various groups invest in the process. It is very flexible and adjustable to many different contexts and needs. Finally, it is simple and relatively inexpensive to conduct, which we believe is one of the main reasons for its uptake by many groups globally, particularly those in low- and middle-income countries.



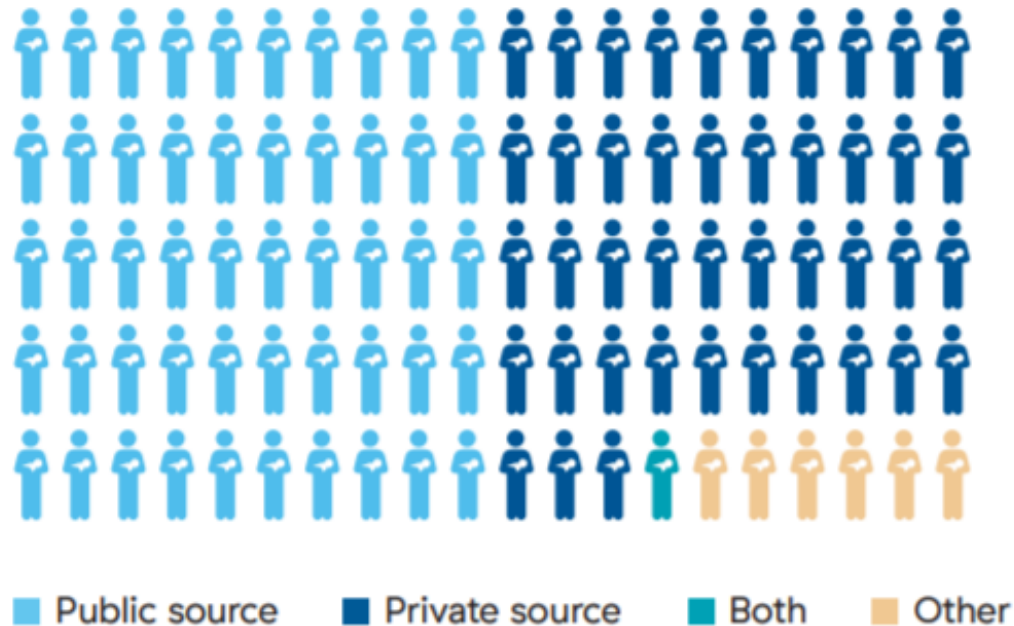
## What is the CHNRI process?

1. Identify and invite experts to participate in the process
2. Determine criteria against which participants will evaluate all questions submitted through step #3
3. Ask experts to submit priority research questions
4. Consolidate and refine research questions to reduce duplication
5. Send prioritization survey to experts, asking them to evaluate submitted research questions
6. Analyze results

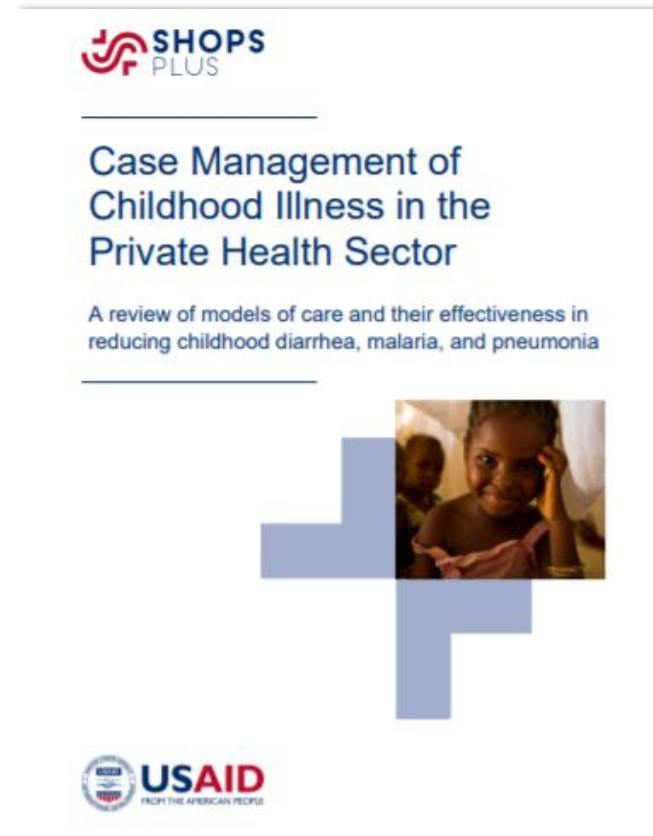


# Why focus on the private health sector for sick child care?

The private sector is a key source of sick child care



Gaps in the literature persist





## Private Sector Child Health CHNRI objectives

- SHOPS Plus, Boston University, and USAID led a collaborative CHNRI process
- Objective: Set an **actionable research agenda** to fill evidence gaps in childhood case management delivered by the private health sector
- This exercise is the **most extensive to date** to define a prioritized research agenda for private sector childhood case management

### **Call to Action!**

The onus is on stakeholders like you to realize this research agenda and help fill evidence gaps



# Methods



## CHNRI scope: Defining the private health sector

- For purposes of this CHNRI, private health sector includes:
  - For-profit providers
  - Non-governmental and faith-based organizations
  - Social enterprises, social marketing organizations, social franchises
  - Pharmacies, drug shops, markets





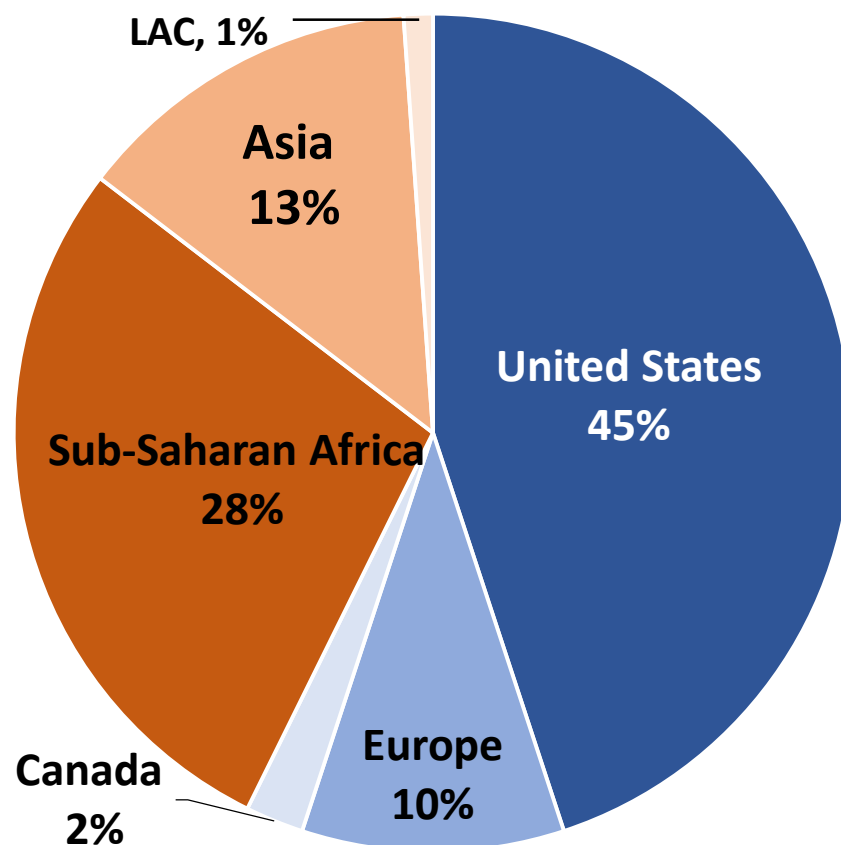
## Creation of a technical advisory group

- We asked a technical advisory group of six individuals to provide additional input throughout the process
- This technical advisory group provided input into the CHNRI scope, evaluation criteria, and manuscript draft
- Selected advisory group members assisted with validation of analysis techniques



## Identify and invite experts: Geographic representation

We invited 129 diverse technical experts to participate, and 89 agreed to partake

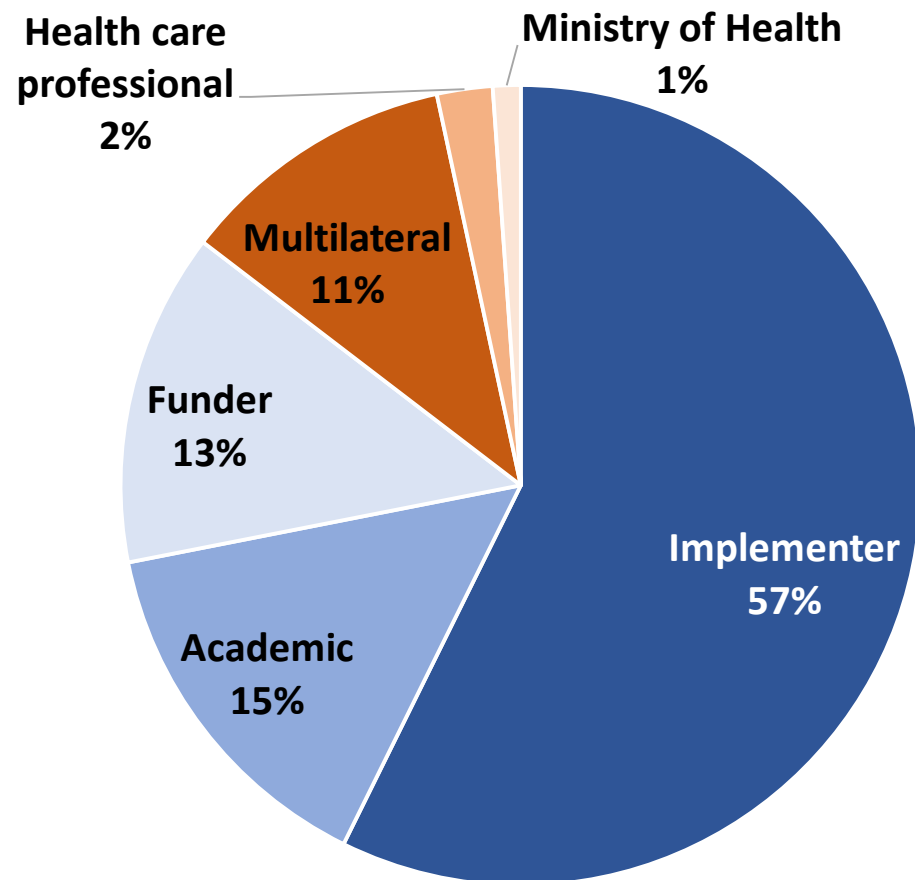


Distribution of CHNRI  
Participants  
by Geographic Region



## Identify and invite experts: Institutional affiliation

We invited 129 diverse technical experts to participate, and 89 agreed to partake



Distribution of CHNRI  
Participants  
by Type of Institutional  
Affiliation





# Determine evaluation criteria

Based on previous CHNRIs, we used four evaluation categories and 11 criteria

## Answerability (2 criteria)

- Ex: Does the research question have measureable outcome indicators?

## Research feasibility (2 criteria)

- Ex: Is a potential study design feasible?

## Sustainability, scalability, and equity (4 criteria)

- Ex: Are research results likely to result in a scalable and sustainable intervention/strategy?

## Importance and potential impact (4 criteria)

- Ex: Are research results likely to strengthen quality of care in the private sector?



Ask experts to submit research questions and consolidate duplicate questions

- We asked the 89 experts to submit their ideas for priority research questions
- 38 experts (43%) submitted nearly 150 questions
- We consolidated similar questions to reduce duplication, resulting in a final list of 50 research questions



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## Send prioritization survey to experts

- Experts evaluated the 50 research questions in an online survey
- Experts scored each research question against the 11 evaluation criteria
- Respondents were given one month to complete the survey





## Analyze results

- Calculated the Research Priority Score
  - Indicates the “collective optimism” among scorers that a research question satisfies all 11 evaluation criteria
- Weighted each evaluation criteria equally
- Disaggregated results by LMIC versus HIC location
  - Country location based on IP address at time respondent completed the online survey

# Results





## Completed surveys

- 55% (n=49) of participants completed the online survey
- 33 located in HICs and 16 in LMICs (Based on IP address)
- Respondents in HICs and LMICs had statistically similar rankings





# Top 10 questions among all respondents

1

- Does **accreditation or regulation** of private sector care improve IMCI diagnosis, treatment, and appropriateness of testing and prescription?

2

- Can **supportive supervision** lead to improved **quality of care** in the private sector?

3

- What is the effectiveness of training **private sector medicine vendors** to recognize, manage and/or refer **sick young infants**?

4

- Can **tools** used by private providers/pharmacies/drug shops improve **adherence to child health protocols**?

5

- What are the key drivers of **appropriate and inappropriate antimalarial and antibiotic prescription**?



# Top 10 questions among all respondents

6

- How can private sector child health data be integrated into national HIS?

7

- What are the referral pathways in the private sector and what factors contribute to appropriate referrals?

8

- What models of supportive supervision for child health service delivery are most cost-effective in the private sector?

9

- What interventions are most effective in closing the gap between private provider knowledge and implementation of IMCI protocols?

10

- What factors contribute to private provider adherence to IMCI protocols?



## Questions ranked in the top 10 by low- and middle-income and high-income respondents

- **Infant & Newborn:** What is the effectiveness of training private sector medicine vendors to recognize, manage and/or refer sick young infants?
- **Quality of Care:** Can supportive supervision lead to improved quality of care in the private sector?
- **Quality of Care:** What are the key drivers of appropriate and inappropriate antimalarial and antibiotic prescription for children in private-for-profit sources of care by type of provider?
- **Quality of Care:** What are the referral pathways in the private sector and what factors contribute to appropriate referrals to or from private sector providers?
- **Quality of Care:** What factors contribute to private provider adherence to IMCI protocols?

# Discussion





## Global importance of this CHNRI

- Answer foundational questions to inform policies and programs
- Help countries meet SDG targets for under-five and neonatal mortality
- Leverage the important role of the private health sector in caring for sick children
- Address the paucity of evidence on effective integrated case management strategies through the private health sector
- Develop market-based approaches that can help respond to the COVID-19 pandemic and other health system shocks



## Limitations

- Did not reach all relevant experts, particularly in LMICs
- Respondents' country location based on IP address
- Relatively low survey response rate of 55%
- Long survey completion time (~1.5 hours)



## **Quality of care and case management adherence are highly prioritized research themes across respondents**

- 4 of the top 10 questions referenced adherence to IMCI protocols and what can improve adherence
- These questions were ranked highly by participants in both HICs and LMICs
- Frequency of quality of care questions aligns with recent global visibility in this area
  - 2017 launch of global Quality of Care Network
  - New WHO pediatric standards released in 2018 and corresponding indicators being developed in 2020



## Difference in rankings between respondents in HIC and LMICs

Respondents in HICs were most interested in questions related to:	Respondents in LMICs were most interested in questions related to:
1. Policy, regulation, and accountability	1. Training and supportive supervision
2. Case management adherence	2. Digital health and data
3. Infant and newborn health	3. Cost-effectiveness
4. Training and supportive supervision	4. Case management adherence
5. Non-clinical private sector	5. Scope of services
6. Scope of services	6. Infant and newborn health



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4. <b>Training and supportive supervision</b>	4. <b>Case management adherence</b>
5. Non-clinical private sector	5. <b>Scope of services</b>
6. <b>Scope of services</b>	6. <b>Infant and newborn health</b>





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4. Training and supportive supervision	4. Case management adherence
5. <b>Non-clinical private sector</b>	5. Scope of services
6. Scope of services	6. Infant and newborn health



## Consensus that health information systems are important for future policy and practice

How can the integration of routine child health data from private sector providers (clinical and non-clinical) into national health information systems be improved and sustained?

- Ranked 1<sup>st</sup> for the evaluation criteria on “importance and potential impact to inform future policy and practice”
- Ranked 6<sup>th</sup> overall, 13<sup>th</sup> among HIC individuals, and 2<sup>nd</sup> among LMIC individuals

# Call to action



# Implementing the prioritized research agenda

- Integrate these research questions into:
  - Work plans
  - Learning agendas
  - Global studies
  - National priorities and goals
- Conduct implementation research to inform policies and programs on the delivery of high-quality private sector health services
- Address evidence gaps to strengthen the private health sector's role in sick child care, reducing childhood morbidity and mortality





# More detailed results will be available in the *Journal of Global Health*

Electronic supplementary material:  
The online version of this article contains supplementary material.

Journal of  
**global**  
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**Background** The private health sector is an important source of sick child care, yet evidence gaps persist in best practices for integrated management of private sector child health services. Further, there is no prioritized research agenda to address these gaps. We used a Child Health and Nutrition Research Initiative (CHNRI) process to identify priority research questions in response to these evidence gaps. CHNRI is a consultative approach that entails prioritizing research questions by evaluating them against standardized criteria.

**Methods** We engaged geographically and occupationally diverse experts in the private health sector and child health. Eighty-nine experts agreed to participate and provided 150 priority research questions. We consolidated submitted questions to reduce duplication into a final list of 50. We asked participants to complete an online survey to rank each question against 11 pre-determined criteria in four categories: (i) answerability; (ii) research feasibility; (iii) sustainability/equity; and (iv) importance/potential impact. Statistical data analysis was conducted in SAS 9.4 (SAS Institute Inc, Cary NC, USA). We weighted all 11 evaluation criteria equally to calculate the research priority score and average expert agreement for each question. We disaggregated results by location in high-income vs low- and middle-income countries.

**Results** Forty-nine participants (55.1%) completed the online survey, including 33 high-income and 16 low- and middle-income country respondents. The top, prioritized research question asks whether accreditation or regulation of private clinical and non-clinical sources of care would improve integrated management of childhood illness services. Four of the top ten research priorities were related to adherence to case management protocols. Other top research priorities were related to training and supportive supervision, digital health, and infant and newborn care. Research priorities among high-income and low- and middle-income country respondents were highly correlated.

**Conclusion** To our knowledge, this is the first systematic exercise conducted to define research priorities for the management of childhood illness in the private sector. The research priorities put forth in this CHNRI exercise aim to stimulate interest from policy makers, program managers, researchers, and donors to respond to and help close evidence gaps hindering the acceleration of reductions in child mortality through private sector approaches.



# Question & Answer

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