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Private sector delivery of maternal and newborn health care in low-income and middle-income countries: a scoping review protocol

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ABSTRACT

Introduction Recent studies have pointed to the substantial role of private health sector delivery of maternal and newborn health (MNH) care in low-/middle-income countries (LMICs). While this role has been partly documented, an evidence synthesis is missing. To analyse opportunities and challenges of private sector delivery of MNH care as they pertain to the new World Health Organization (WHO) strategy on engaging the private health service delivery sector through governance in mixed health systems, a more granular understanding of the private health sector's role and extent in MNH delivery is imperative. We developed a scoping review protocol to map and conceptualise interventions that were explicitly designed and implemented by formal private health sector providers to deliver MNH care in mixed health systems.

Methods and analysis This protocol details our intended methodological and analytical approach following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews. Seven databases (Cumulative Index to Nursing and Allied Health, Excerpta Medica Database, International Bibliography of the Social Sciences, PubMed, ScienceDirect, Web of Science, WHO Institutional Repository for Information Sharing) and two websites will be searched for studies published between 1 January 2002 and 1 June 2021. For inclusion, quantitative and/or qualitative studies in LMICs must report at least one of the following outcomes: maternal morbidity or mortality; newborn morbidity or mortality; experience of care; use of formal private sector care during pregnancy, childbirth, and postpartum; and stillbirth. Analyses will synthesise the evidence base and gaps on private sector MNH service delivery interventions for each of the six governance behaviours.

Ethics and dissemination Ethical approval is not required. Findings will be used to develop a menu of private sector interventions for MNH care by governance behaviour. This study will be disseminated through a peer-reviewed publication, working groups, webinars and partners.

Strengths and limitations of this study

- ► By using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews and by sharing our codebook and data extraction template, we increase the potential usefulness, clarity and transparency with which we will report the results from this study.
- ► To minimise potential bias from the publication of positive results and to increase the validity of this scoping review, we will make a concerted effort to supplement our electronic database searches with grey literature and programmatic reports.
- ► We acknowledge a risk of bias in locating studies for two reasons: (1) it is possible that evidence on the provision of maternal and newborn healthcare by the private sector may be disseminated internally beyond public reach, and (2) the searches will be conducted in English with the risk of reproducing the bias of Eurocentrism and neglecting to incorporate research from under-represented geographies.
- ► Although we acknowledge that informal healthcare providers also play a role in the delivery of maternal and newborn healthcare, we are limiting our scoping review to the formal private sector since the term 'informal' is debateable and requires further discussion.

INTRODUCTION

Private sector delivery of healthcare services is by now part and parcel of health systems across the globe. In low/middle-income countries (LMICs), the private sector fills a critical gap in the delivery of maternal and newborn health (MNH) care. An analysis of 70 countries showed that the private health sector is responsible for providing over one-third of maternal health services.[1] Across LMICs, the private health sector accounts for a 44% mean market share among users of antenatal care and a 40% mean market share for delivery care.[2]

With an increasing proportion of mothers and newborns accessing care in the private sector, achieving universal health coverage requires engaging the private sector[3] and working with everyone involved in delivering MNH care in mixed health systems. Strengthening governments' stewardship of mixed

health systems is key to engaging the private sector. In recognition of existing governance weaknesses, the World Health Organization (WHO) launched a new strategy in 2020 on engaging the private health service delivery sector through governance in mixed health systems.[4] Now that the strategy is in place, one of the next tasks is to broaden the evidence base and opportunities for learning.

Despite the existence of comparative studies and systematic reviews on the performance of private and public healthcare services[5 6] and an analysis of opportunities and challenges of private sector delivery of child health interventions,[7] the role and extent of private sector services for the delivery of MNH care across LMICs remain insufficiently understood.[1] To begin filling these knowledge gaps, WHO and the Network for Improving Quality of Care for Maternal, Newborn and Child Health (the Network) initiated exploratory research on mechanisms for engaging the private sector in delivering MNH services with quality. At the country level, the project documented the lessons learnt from private sector delivery of quality MNH services in Bangladesh, Ghana and Nigeria. This research identified mechanisms and opportunities for collaboration between the public and private sectors.[8–10] At the global level, a systematic review[11] addressed how and to what extent the provision of quality healthcare by the private sector affects morbidity and mortality among mothers, newborns and children[12] as well as experiences of care among mothers, newborns and children using healthcare provided by the private sector.[13]

The Strategic and Technical Advisory Group of Experts (STAGE) on Maternal, Newborn, Child and Adolescent Health and Nutrition reinforced the need for this work. As part of WHO's private sector engagement strategy,[4] STAGE recommended that WHO identify key provisions and effective strategies for private sector engagement that are specifically necessary for, or will help to achieve, equity with improved outcomes for all women, children and adolescents as part of quality universal health coverage.[14] This scoping review will contribute to the identification of these strategies, starting with the identification of service delivery interventions for MNH services in the formal private sector. Issues of policy and administration, regulation and equity may be covered in future scoping reviews.

Aim and research questions

In order to analyse opportunities and challenges of private sector involvement in delivering MNH care in mixed health systems, as well as to address questions of how to effectively engage and sustain private sector involvement in delivering quality MNH care in LMICs, a more granular understanding of the private sector's involvement in delivering MNH care is imperative. We aim to systematically scope the literature for studies that evaluate service delivery interventions that have been explicitly designed and implemented by formal private health sector providers to deliver MNH care. As part of this aim, the scoping review will answer the following questions:

- What service delivery interventions have been explicitly designed and implemented by formal private health sector providers to deliver MNH care?
- How do these interventions align with the WHO private sector governance behaviours?

METHODS AND ANALYSIS

This scoping review protocol details our intended methodological and analytical approach based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR). The PRISMA-ScR outlines a systematic approach to mapping evidence and identifying main concepts and knowledge gaps; this approach and its checklist facilitate greater quality in the methodology and reporting of scoping reviews.[15]

The private sector includes individuals and organisations that are neither owned nor directly controlled by governments and are involved in the provision of health services (ie, for-profit and not-for-profit entities; providers in the formal and informal sectors; and domestic and international actors, charities, faith-based organisations, and non-governmental groups).[16] The scoping review uses a service delivery lens[17] to focus on formal private sector MNH service delivery (both for profit and non-profit) and the individuals using these services (women during pregnancy, childbirth, and postpartum; and newborns). Our focus on MNH service delivery includes the provision of care in the private sector, including preventive, promotive and curative services. Traditional and informal private sector providers are beyond the scope of this project, as are private service aspects in relation to service delivery (eg, supply chain, education/training, insurance providers).

Inclusion/exclusion criteria

For inclusion, studies must evaluate service delivery interventions that have been primarily and explicitly designed to deliver MNH care by the formal private health sector in LMICs. LMICs include countries classified as having low-income economies, lower middle-income economies and upper middle-economies based on the World Bank Atlas method for the 2021 fiscal year.[18] As indicated in the Populations, Interventions, Control, Outcomes, Timeframe, Setting criteria in table 1, included studies must report quantitative, qualitative or mixed-methods data on at least one of the following outcomes:

- Maternal morbidity
- Maternal mortality
- Newborn morbidity
- Newborn mortality
- Components of quality care (ie, safety, effectiveness, timeliness, efficiency, equity, people-centred care)
- Experience of care, including respectful care
- Use of formal private sector care during pregnancy, childbirth and postpartum

Table 1 Populations, Interventions, Control, Outcomes, Timeframe, Setting (PICOTS) criteria used in the scoping review

PICOTS	
Populations	Women during pregnancy, childbirth, and postpartum; and newborns
Interventions	An implemented intervention that is primarily and explicitly designed to deliver maternal and newborn healthcare services by the formal private health sector
Control	Not necessary
Outcomes	Quantitative, qualitative, or mixed-methods data on: ▶ maternal morbidity ▶ maternal mortality ▶ newborn morbidity ▶ newborn mortality ▶ one of the six components of quality care (ie, safety, effectiveness, timeliness, efficiency, equity, people-centred care) ▶ experience of care, including respectful care ▶ use of formal private sector care during pregnancy, childbirth, and postpartum ▶ stillbirth
Timeframe	1 January 2002 to 1 June 2021
Setting	Low-income and middle-income countries

- Stillbirth.

For inclusion, items must be research articles, reports or descriptions of the implemented services/interventions. Items will be eligible if published in English, French, German or Italian between 1 January 2002 and 1 June 2021. We selected this starting point based on findings from a recent systematic review on the provision of quality maternal, newborn and child healthcare by the private sector; while the systematic review used 1 January 1995 as a starting point, 99% of included studies were published in 2002 or later.[13] As we are focused on service delivery, we are limiting the private health sector to formal private providers who deliver direct medical care (eg, private health facilities, private health providers, civil society organisations delivering MNH care, charities delivering MNH care). Since MNH needs may be met through primary health care,[19] titles and abstracts that mention primary health care without specific mention of MNH care will be moved forward to full-text screening for verification of the population and intervention.

Items will be excluded if they report on aggregated service delivery data (ie, public health sector and private health sector outcome data combined). The private non-health sector (eg, private cars or buses that transport pregnant women to health facilities) and private sector entities that do not deliver direct medical care will be excluded. For example, we will exclude private pharmaceutical providers (including pharmacies) and private health insurance companies. We will also exclude study protocols.

Search strategy and terms

We will search the following seven electronic databases that were assessed for their coverage, availability and relevance of literature on the private health sector:

- Cumulative Index to Nursing and Allied Health (CINAHL)
- Excerpta Medica Database (EMBASE)
- International Bibliography of the Social Sciences (IBSS)
- PubMed
- ScienceDirect
- Web of Science
- WHO Institutional Repository for Information Sharing (IRIS)

We will also search publications on two websites: Health Care Provider Performance Review (HCPPR) and the Maternal healthcare markets Evaluation Team (MET) at the London School of Hygiene & Tropical Medicine. The HCPPR database includes over 700 studies (including unpublished studies) from a systematic review on the effectiveness of strategies to improve healthcare provider performance in LMICs.[20] MET conducts multidisciplinary research on the role of public and private health sectors in delivering maternal healthcare.

We acknowledge risk of bias in locating studies. Our efforts to locate evidence on the provision of healthcare by the private sector may be limited, specifically when such evidence is only disseminated internally where it is beyond public reach or when it is published in languages not included in this review. Our test search of the English search terms in the LILACS (Latin American and Caribbean Health Sciences Literature) database returned no results, for example, so we excluded that database.

We will conduct our searches using combinations of search terms detailed in table 2. These terms were developed and tested for sensitivity in capturing all studies examining the private health sector and MNH. Search terms will be adapted to the basic search particulars (eg, wildcards (*), capacity for complex searches) of each electronic database.

Screening process

Searches and application of the inclusion/exclusion criteria will be conducted according to the PRISMA-ScR approach. Citations and abstracts for all items located by our searches will be exported into EndNote for screening. After removing duplicates, A-SJ and SRL will conduct duplicate title and abstract (TIAB) test screenings of at least 100 items in an effort to minimise bias and develop a consistent approach. A-SJ and a research assistant will then screen remaining items in duplicate for inclusion based on TIAB. If inclusion/exclusion cannot be determined based on the TIAB, then the item will be pushed forward for full-text screening. Once items are moved forward to full-text screening, A-SJ and SRL will conduct full-text

Table 2 Search terms and their combinations

1. Private health sector terms	2. Intervention/ study type terms	3. Population terms
private sector	arrangement*	*Antepartum terms*
for-profit	evaluat*	antenatal
for profit	initiative*	antepartum
public-private	intervention*	pregnan*
private enterprise*	model*	prenatal
NGO	package*	trimester
non-government*	pilot*	*Intrapartum terms*
self-financ*	program*	birth*
charit*	project*	childbirth
faith-based	provision*	intrapartum
private health sector	regime*	matern*
mixed health system*	scheme*	obstetric*
integrated health system*	strateg*	parturition
non-state	trial*	partus
non-profit		perinatal
not-for-profit		stillbirth*
		Postpartum terms
		mother*
		newborn*
		neonat*
		postnatal
		postpartum
		puerper*

test screenings of at least 20 items in an effort to minimise bias and develop a consistent approach. A-SJ will conduct the remaining full-text screening, seeking guidance from SRL on items considered borderline or problematic.

Data extraction

A-SJ and SRL will pilot the data extraction form (online supplemental file 1) with five initial randomly selected studies to assure quality in data extraction. Based on their extractions in Excel, the authors will compare their extractions and discuss changes to what, how, where and/or why data are extracted. Any necessary changes to the data extraction form will then be discussed among the authors. Prior to full data extraction, this iterative process will be repeated until A-SJ and SRL reach consensus in their extractions and no further changes to the data extraction form are required.

Following the guidance in our codebook (online supplemental file 2), A-SJ will extract data for all studies into the data extraction template. Data will be extracted on the following categories:

- Background information (eg, author, date, setting, study objective)
- Intervention background information (eg, implementing agency, geographic level, study population)
- Intervention details (eg, intervention recipients, nature of intervention, health systems drivers that affect service delivery)
- Critical outcomes (both quantitative and qualitative):
  - Maternal morbidity or mortality
  - Newborn morbidity or mortality
  - Quality of care
  - Experience of care, including respectful care
  - Use of formal private sector care during pregnancy, childbirth, and postpartum
  - Stillbirth
- Evaluation/study details (eg, study type, data type, intervention claims, strategy effectiveness, cost data)
- WHO private sector governance behaviours (ie, build understanding, foster relations, align structures, enable stakeholders, deliver strategy, and nurture trust).

Data synthesis

Once the data have been extracted, we will map the interventions by private sector governance behaviours. The resulting analysis will synthesise the evidence base on private sector MNH service delivery interventions for each of the six governance behaviours and will identify knowledge gaps. Data will be reported using a systematic narrative synthesis in which the results are presented narratively and organised thematically around the private sector governance behaviours. Tables of descriptive statistics on the included studies and their outcomes will be developed thematically to supplement the narrative synthesis.

Patient and public involvement

The need for this scoping review was initiated by discussions with members of STAGE and colleagues involved in developing WHO's private sector strategy. While patients were not involved in developing this scoping review protocol, we will capture outcome data on patients' experiences of care.

Members of STAGE will be engaged in the identification of studies and interpretation of the results. More specifically, members of the Knowledge Translation workstream (under which the private sector work is situated) will be asked to review a final list of included studies to see if any critical studies are absent. Later, the initial findings will be presented to all STAGE members to discuss and validate interpretation of the results.

FINAL SEARCH STRATEGY BY DATABASE

The full electronic search strategies for all databases, including limits and filters used, appear below.

CINAHL

Search strategy: we will search all sets of search terms (table 2).

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Search options

- Search mode: Boolean/phrase
- Limit results:
  - Published date: January 2002 to June 2021
  - Language: English, French, German, Italian

Search terms: ("private sector" OR for-profit OR "for profit" OR public-private OR "private enterprise*" OR NGO OR non-government* OR self-financ* OR charit* OR faith-based OR "private health sector" OR "mixed health system*" OR "integrated health system*" OR non-state OR non-profit OR not-for-profit) AND (arrangement* OR evaluat* OR initiative* OR intervention* OR model* OR package* OR pilot* OR program* OR project* OR provision* OR regime* OR scheme* OR strateg* OR trial*) AND (antenatal OR antepartum OR pregnan* OR prenatal OR trimester OR birth* OR childbirth OR intrapartum OR matern* OR obstetric* OR parturition OR partus OR perinatal OR stillbirth* OR mother* OR newborn* OR neonat* OR postnatal OR postpartum OR puerper*)

EMBASE

Search strategy: we will search all search terms (table 2) using the multifield search in the title or abstract field.

Search options

- Limit results:
  - Publication year: 2002 to 2021
  - Language: English, French, German, Italian

Search terms: ("private sector" OR for-profit OR "for profit" OR public-private OR "private enterprise*" OR NGO OR non-government* OR self-financ* OR charit* OR faith-based OR "private health sector" OR "mixed health system*" OR "integrated health system*" OR non-state OR non-profit OR not-for-profit) AND (arrangement* OR evaluat* OR initiative* OR intervention* OR model* OR package* OR pilot* OR program* OR project* OR provision* OR regime* OR scheme* OR strateg* OR trial*) AND (antenatal OR antepartum OR pregnan* OR prenatal OR trimester OR birth* OR childbirth OR intrapartum OR matern* OR obstetric* OR parturition OR partus OR perinatal OR stillbirth* OR mother* OR newborn* OR neonat* OR postnatal OR postpartum OR puerper*)

HCPPR

Search strategy: for this systematic review database on the effectiveness of strategies to improve healthcare provider performance in LMICs, we will use a list of all HCPPR's included grey literature that we obtained directly from the project investigator. Literature on MNH services will be included for review.

Search options

- Limit results:
  - Publication year: 2002 to 2021

IBSS

Search strategy: we will search all sets of search terms (table 2) using the advanced search feature. To minimise extraneous results returned during test searches, searches will be conducted "anywhere except full text." Thus, the searches will use title and abstract, in line with our initial plans for TIAB screening.

Search options

- Limit results:
  - Publication date: 1 January 2002 to 1 June 2021
  - Language: English, French, German, Italian

Search terms: noft(("private sector" OR for-profit OR "for profit" OR public-private OR "private enterprise*" OR NGO OR non-government* OR self-financ* OR charit* OR faith-based OR "private health sector" OR "mixed health system*" OR "integrated health system*" OR non-state OR non-profit OR not-for-profit) AND (antenatal OR antepartum OR pregnan* OR prenatal OR trimester OR birth* OR childbirth OR intrapartum OR matern* OR obstetric* OR parturition OR partus OR perinatal OR stillbirth* OR mother* OR newborn* OR neonat* OR postnatal OR postpartum OR puerper*))

MET

Search strategy: we will export all grey literature (eg, policy briefs, reports) on the MET publications page.

PubMed

Search strategy: we will search all sets of search terms (table 2) using the advanced search builder.

Search options

- Limit results:
  - Publication dates: From 1 January 2002 to 1 June 2021
  - Language: English, French, German, Italian

Search terms: ("private sector" OR for-profit OR "for profit" OR public-private OR "private enterprise*" OR NGO OR non-government* OR self-financ* OR charit* OR faith-based OR "private health sector" OR "mixed health system*" OR "integrated health system*" OR non-state OR non-profit OR not-for-profit) AND (arrangement* OR evaluat* OR initiative* OR intervention* OR model* OR package* OR pilot* OR program* OR project* OR provision* OR regime* OR scheme* OR strateg* OR trial*) AND (antenatal OR antepartum OR pregnan* OR prenatal OR trimester OR birth* OR childbirth OR intrapartum OR matern* OR obstetric* OR parturition OR partus OR perinatal OR stillbirth* OR mother* OR newborn* OR neonat* OR postnatal OR postpartum OR puerper*)

ScienceDirect

Search strategy: Since this database does not support wildcards (*) or more than eight Boolean connectors per field, we will search a modified set of search terms (table 2) using the advanced search feature and limiting keywords to those most widely used. We will split the terms between articles and title, abstract or keywords, as detailed below.

Search options

- Limit results:
  - Year(s): 2002 to 2021

Search terms

- Find articles with these terms: (maternal OR maternity OR newborn OR antenatal OR prenatal OR childbirth OR pregnancy OR pregnant OR postpartum)
- Title, abstract or keywords: ("private sector" OR for-profit OR "for profit" OR public-private OR non-profit OR charitable OR NGO OR faith-based)

Web of Science

Search strategy: we will search all sets of search terms (table 2) using the advanced search feature and topic (TS) field tag.

Search options

- Limit results:
  - Year(s): 2002 to 2021
  - Language: English, French, German, Italian

Search terms: ("private sector" OR for-profit OR "for profit" OR public-private OR "private enterprise*" OR NGO OR non-government* OR self-financ* OR charit* OR faith-based OR "private health sector" OR "mixed health system*" OR "integrated health system*" OR non-state OR non-profit OR not-for-profit) AND (arrangement* OR evaluat* OR initiative* OR intervention* OR model* OR package* OR pilot* OR program* OR project* OR provision* OR regime* OR scheme* OR strateg* OR trial*) AND (antenatal OR antepartum OR pregnan* OR prenatal OR trimester OR birth* OR childbirth OR intrapartum OR matern* OR obstetric* OR parturition OR partus OR perinatal OR stillbirth* OR mother* OR newborn* OR neonat* OR postnatal OR postpartum OR puerper*)

WHO IRIS

Search strategy: given the limitations of this database for complex searches and filtering, we will search IRIS for the search term "private sector" and limit the results to the subject areas maternal and child health, maternal health, and maternal health services.

Search options

- Limit results:
  - Date issued: 2000 to 2021
  - Subjects: Maternal and child health, maternal health, and maternal health services

Search term: "private sector"

Ethics and dissemination

Formal ethical approval is not required for this research, as it is based on secondary publicly available data, which are not identifiable.

We expect to conclude this scoping review by 31 December 2021. Findings from this review will be used to inform the WHO's strategy for private sector engagement and develop models for effective collaboration of the private and public sectors in implementing quality of care for mothers and newborns. In addition to publishing our findings in a peer-reviewed journal, we will share the findings via relevant mailing lists, webinars, social media and relevant working groups (eg, Global Hub for Private Sector Engagement in Healthcare, Health Systems Governance Collaborative, STAGE).

Should we need to amend this protocol following its publication, we will ensure that future publications arising from this protocol provide the date of each amendment, describe the change(s), and report the rationale for the change(s).

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Contributors BM, SRL and NY conceived the idea for the review. SRL drafted the first draft of the protocol with inputs from A-SJ. All authors contributed to subsequent revisions and approved the protocol prior to its submission. SRL is the guarantor.

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