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MOBILE PHONE SURVEYS FOR RMNCAH&N

PRELIMINARY RESULTS FROM A LITERATURE REVIEW

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OUTLINE

- Introduction and background

- Study objectives and outline

- Preliminary findings

- Conclusion and next steps

INTRODUCTION AND BACKGROUND

INTRODUCTION

- In the last two decades, mobile phone surveys have emerged as an increasingly common method for measuring population health both at national and sub-national levels.

- MPS offer a versatile approach to gather data on a range of health metrics and have become increasingly common in low- and middle-income countries (LMICs) due to their cost-effectiveness and logistical simplicity.

- For Reproductive, Maternal, Newborn, Child, and Adolescent Health and Nutrition (RMNCAH&N), mobile phone surveys can be used to estimate key indicators, such as contraceptive prevalence, breastfeeding practices, antenatal care attendance, and vaccination coverage.

- Despite the rise in their acceptability and use, significant questions remain around the representativeness and reliability of mobile phone surveys for RMNCAH&N. Surveys for RMNCAH&N often focus on reproductive-age women and we know that phone surveys can be biased towards male and higher-income respondents.

STUDY OBJECTIVES AND OUTLINE

STUDY OBJECTIVES

To answer these questions, we conducted a systematic literature review to explore the use, challenges, and best practices of phone surveys in gathering RMNCH&N data across LMICs:
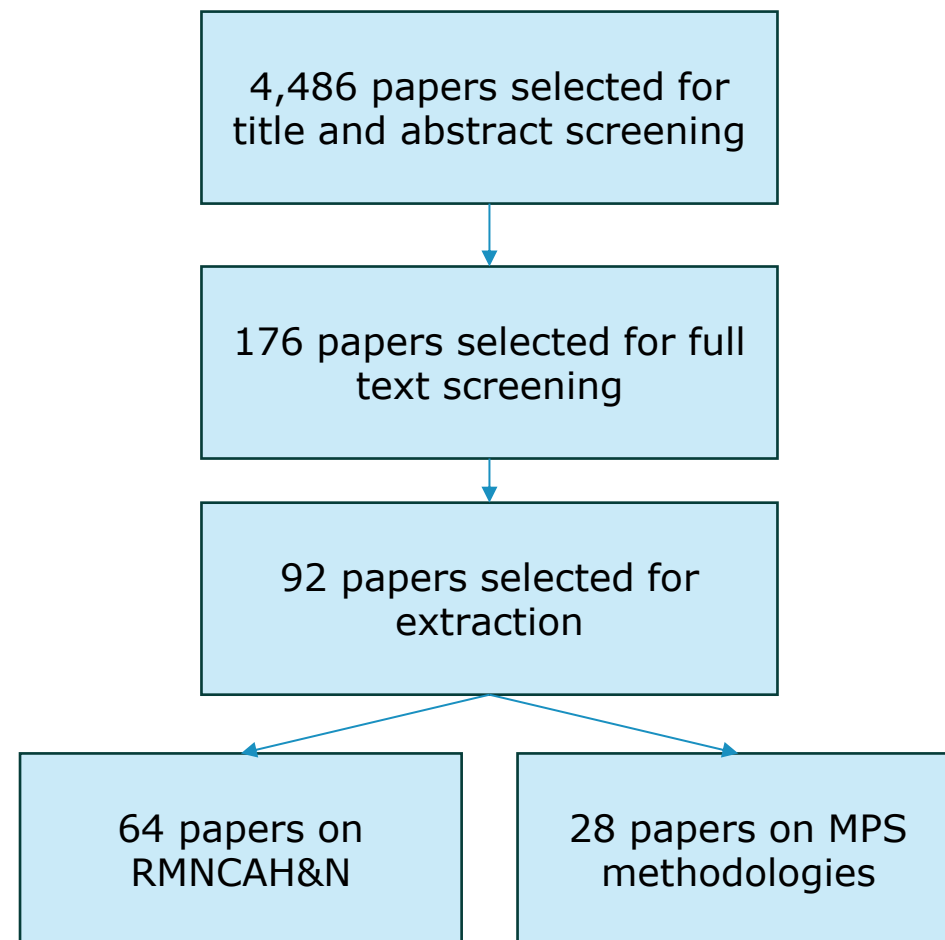
The review followed PRISMA guidelines, searching PubMed and other databases for articles related to phone surveys, RMNCAH&N, and LMICs. This work had two primary objectives:

1. To conduct a comprehensive literature review on the use of phone surveys to measure RMNCAH&N indicators in LMICs, evaluating the scope and potential of phone surveys for collecting health indicators or receipt of RMNCAH&N-related services

1. To assess the extent of evidence on the reliability, validity, and feasibility of phone surveys in capturing health-related data, best practices for implementation, and challenges and best practices in the implementation of health-related phone surveys

SCREENING SUMMARY

- **Inclusion criteria** included peer-reviewed articles from within the last 20 years, conducted in LMICs, and which included either:
  - **RMNCAH&N studies:** Surveys conducted via mobile phones and focused on issues related to RMNCH&N, OR
  - **Methodology studies:** Studies that aim to draw conclusions about the methods for conducting mobile phone surveys (as defined above) in LMICs using primary data collection.

- **Exclusion criteria** removed studies that did not collect information on health, were focused on digital interventions, had a primarily text message based approach, or did not provide sufficient information.

METHODOLOGY

- The data extraction among RMNCAH&N papers was performed using a standardized extraction form in Covidence

- The extracted data included:
  - Title, country, year, study aims
  - Topic area (RMNCAH&N area, immunization or mortality)
  - Indicator type (prevalence, coverage, knowledge, etc.)
  - Target population
  - Sampling method
  - Survey modality
  - Representativeness
  - Sample size
  - And more…

+ Aa Title

+ Aa Country

+ Aa Year

+ Aa Study aims

+ Aa Specific health topic

+ ⊙ Location

    – Rural

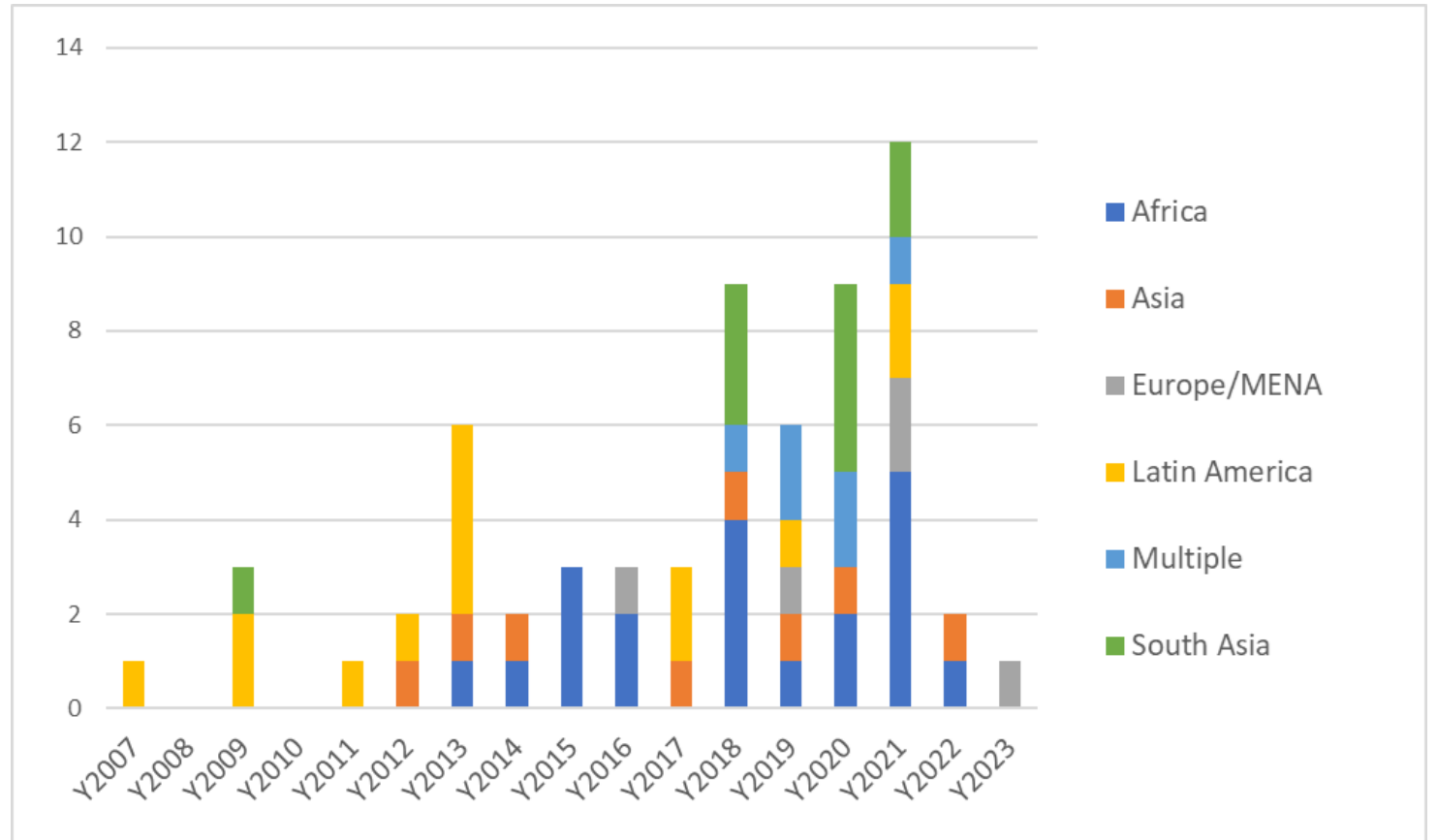   – Urban

    – Mixed

    – Unclear/other

PRELIMINARY FINDINGS

FINDINGS

Studies over time

- The number of mobile phone surveys measuring RMNCAH&N indicators has risen dramatically over the last decade, first in Latin America and now globally

- While the COVID-19 pandemic increased the frequency of mobile phone surveys, the rise in MPS has been evident since at least 2012-2013
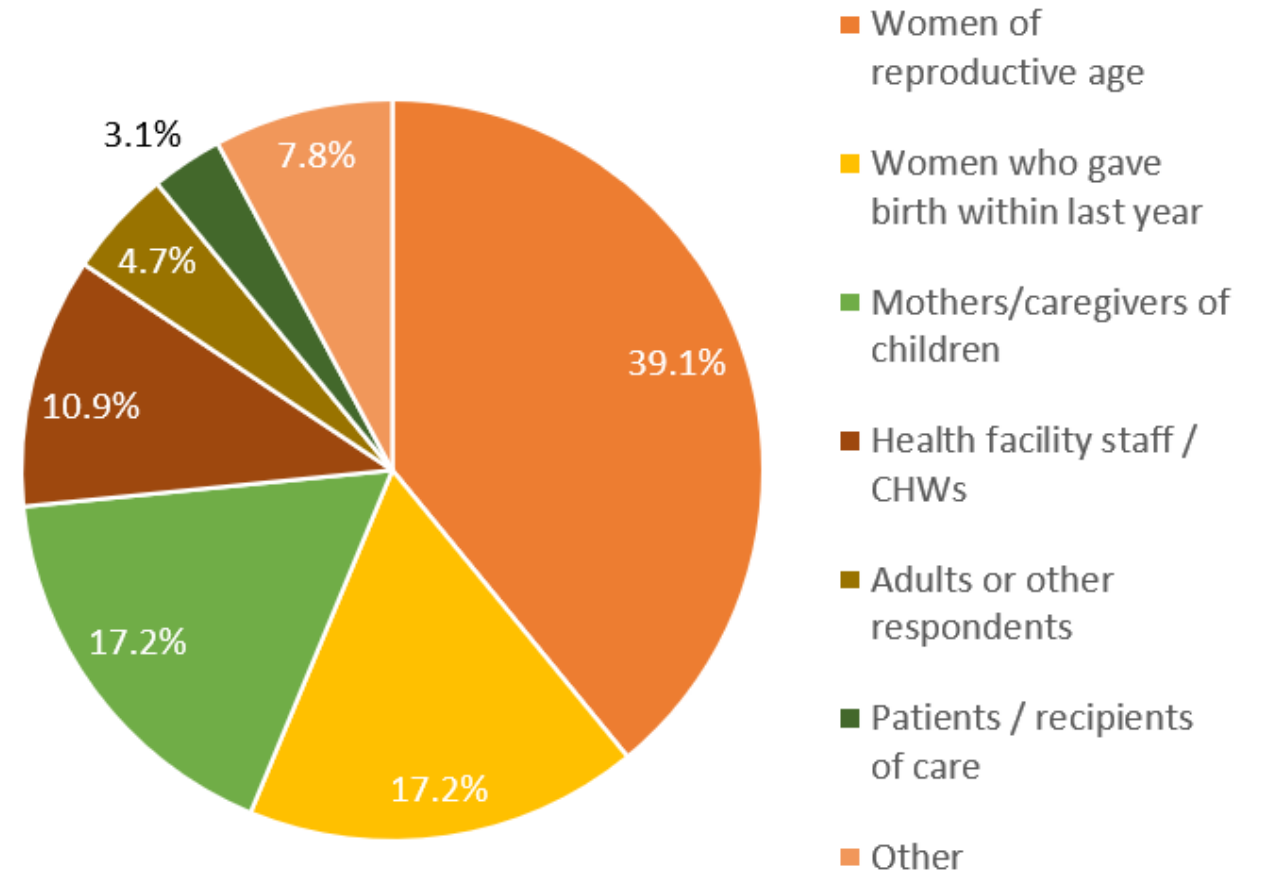
FINDINGS

Target population

- Among the 64 RMNCAH&N papers selected, we found that over half focused on women, either of reproductive age (39.1%) or who gave birth in the last year (17.2%)

- Mothers/caregivers and health facility staff were the next most common category

- Most RMNCAH&N surveys did not start with a population wide focus but instead found specific ways to identify mothers or other relevant groups

Legend:
- Women of reproductive age
- Women who gave birth within last year
- Mothers/caregivers of children
- Health facility staff / CHWs
- Adults or other respondents
- Patients / recipients of care
- Other

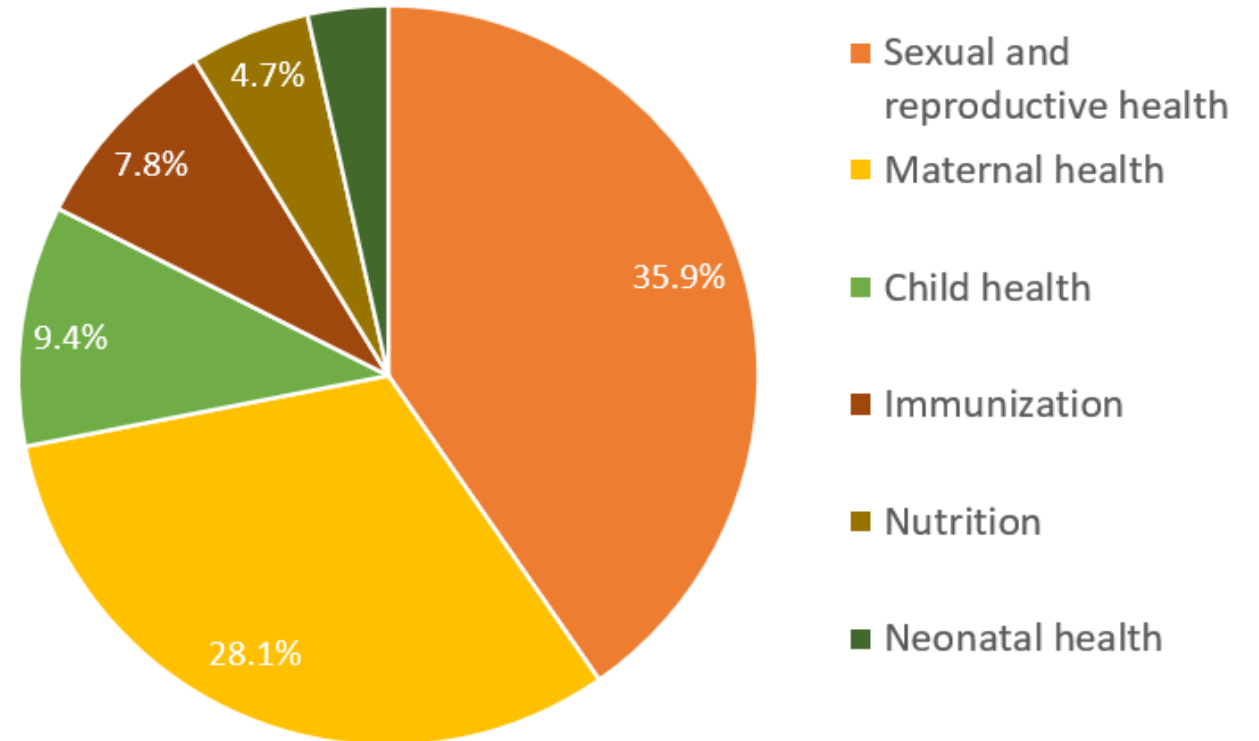Pie chart values: 39.1%, 17.2%, 17.2%, 10.9%, 4.7%, 3.1%, 7.8%

FINDINGS

Health topic

- The predominant topics were sexual and reproductive health (35.9%) and maternal health (28.1%)

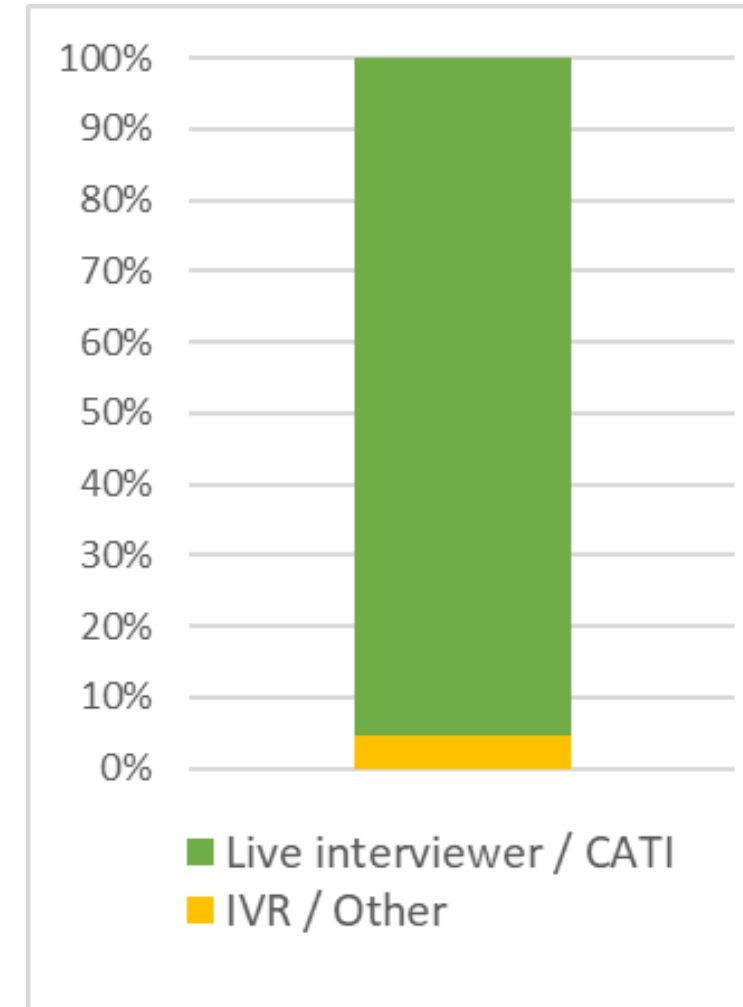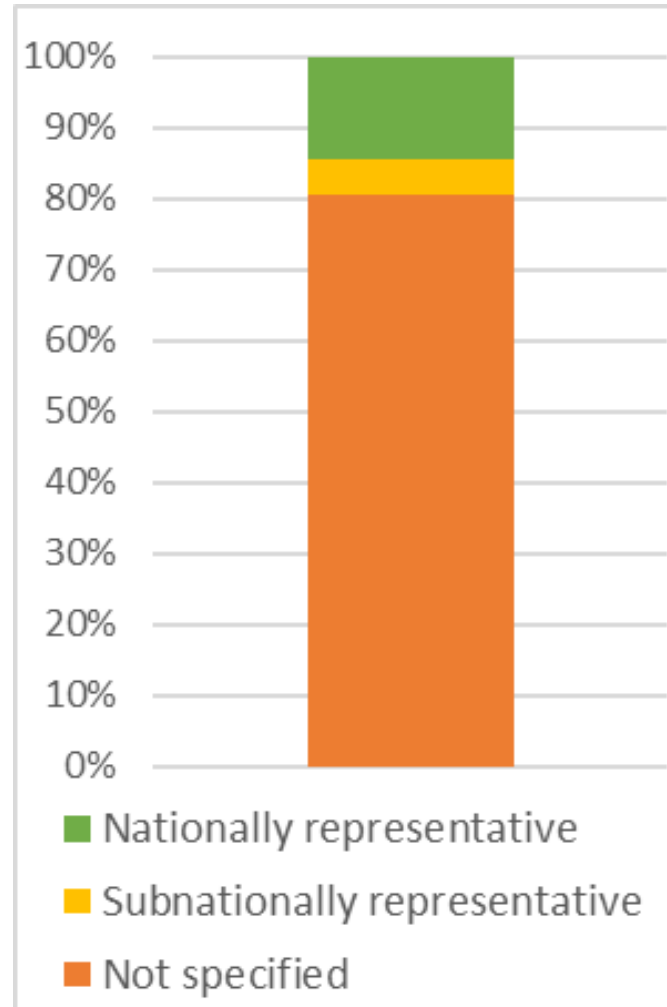- Child health, nutrition, and routine childhood immunizations were much less frequently measured via phone surveys

Legend:
- Sexual and reproductive health — 35.9%
- Maternal health — 28.1%
- Child health — 9.4%
- Immunization — 7.8%
- Nutrition — 4.7%
- Neonatal health

FINDINGS

Representativeness and modality

- A minority of studies were nationally representative (15%) or sub-nationally representative (5%)

- The vast majority of surveys (95%) used a live interviewer or CATI, with IVR used in only a few cases
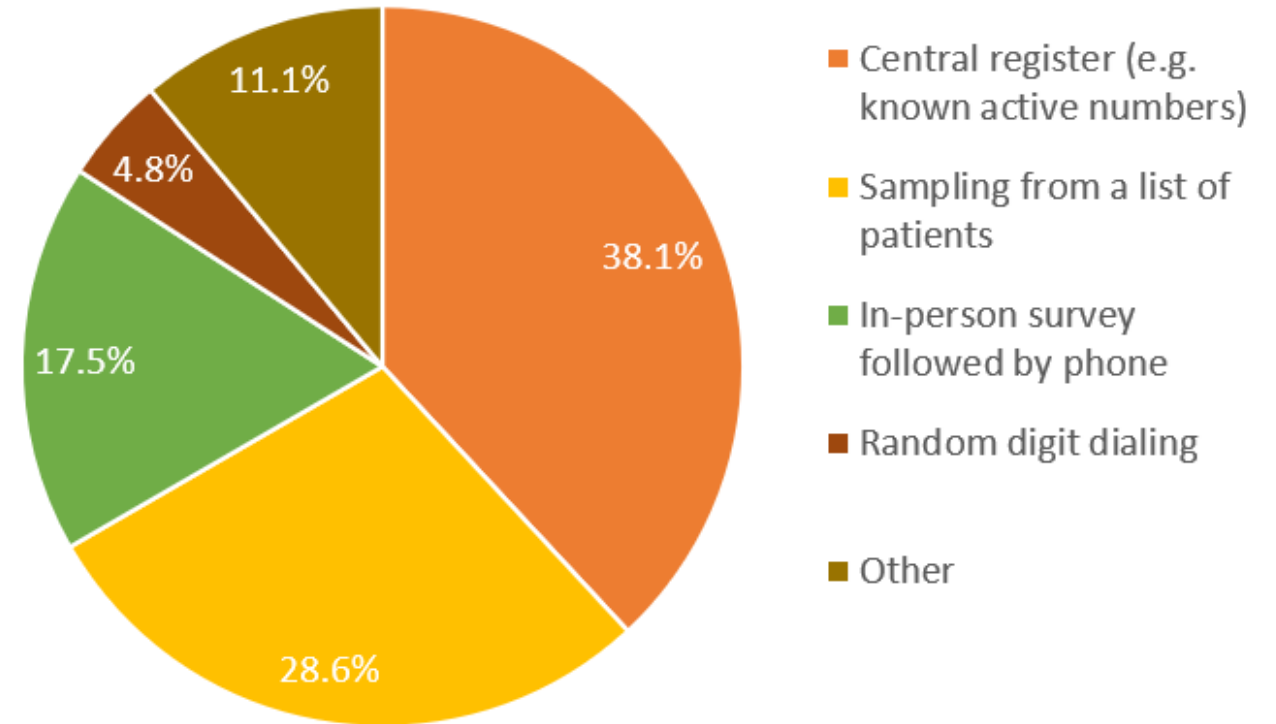

Chart 1 legend:
- Nationally representative
- Subnationally representative
- Not specified

Chart 2 legend:
- Live interviewer / CATI
- IVR / Other

FINDINGS

Sampling method

- Most surveys sampled numbers from a sampling frame, using a variety of frames, e.g.,
  - Lists of active phone numbers from telecom providers
  - Lists of numbers from prior studies
  - Lists of patients

- Random digit dial (RDD) was an uncommon method for RMNCAH&N surveys, potentially due to the specific target group needed

Legend:
- Central register (e.g. known active numbers) — 38.1%
- Sampling from a list of patients — 28.6%
- In-person survey followed by phone — 17.5%
- Random digit dialing — 4.8%
- Other — 11.1%

CONCLUSION AND NEXT STEPS

DISCUSSION AND NEXT STEPS

- To our knowledge, our study is the first to document the current extent of mobile phone surveys of RMNCAH&N and to review how these surveys are implemented

- RMNCAH&N mobile phone surveys have 1) increased in frequency over time, 2) focused primarily on maternal and reproductive health, and 3) used a range of sampling frames

- We will continue to analyze the review data including looking at indicator types, and will conduct a narrative review of papers that address methodological questions for MPS

- The goal is to inform the research agenda coming out of this convening, helping provide evidence for some of the topics under discussion