A maternal and newborn health indicator developed using national health surveys from low- and middle-income countries, and its association with infant mortality

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We have no competing interest to declare

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Maternal and Newborn Health Interventions

Stillbirth, neonatal, and maternal mortality

Decreasing globally

Higher burden of deaths: low- and middle-income countries (LMICs)

Adequate antenatal care, delivery care, and early postnatal checks

Reduce morbidity and mortality, prevent, detect, and treat adverse outcomes

No unique indicator able to track progress

MNH interventions are closely related

Progress has been monitored separately

Objective

To create a composite indicator to measure coverage of MNH interventions using national surveys from low- and middle-income countries and to investigate its relationship with neonatal and post-neonatal mortality rates

Methods

DHS and MICS data

- Nationally representative household surveys carried out in LMICs
- Standardized data collection procedures
- Comparable across time and between surveys and countries

Last child born

Last two years

≥2010

Latest DHS or MICS survey

DHS: Demographic and Health Surveys
MICS: Multiple Indicator Cluster Surveys

Maternal and Newborn Health composite indicator (MNHci)

Three related interventions on three crucial moments

MNHci: numerical count assigning one point to each intervention received, thus ranging from zero to three

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Analysis

Distribution of the MNHci at the national level
Mean and percentages of woman-baby dyads with scores of zero and three

Distribution of the MNHci stratified by wealth deciles and place of residence

Spearman correlation coefficients between the MNHci and neonatal and post-neonatal mortality rates (per 1,000)

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Results

- **Surveys 2010-2022**
  48 DHS & 49 MICS
  97

- **Woman-baby dyads**
  Last child born
  397,930

- **Highest coverage**
  Postnatal care women-baby within two days of delivery
  88.3%

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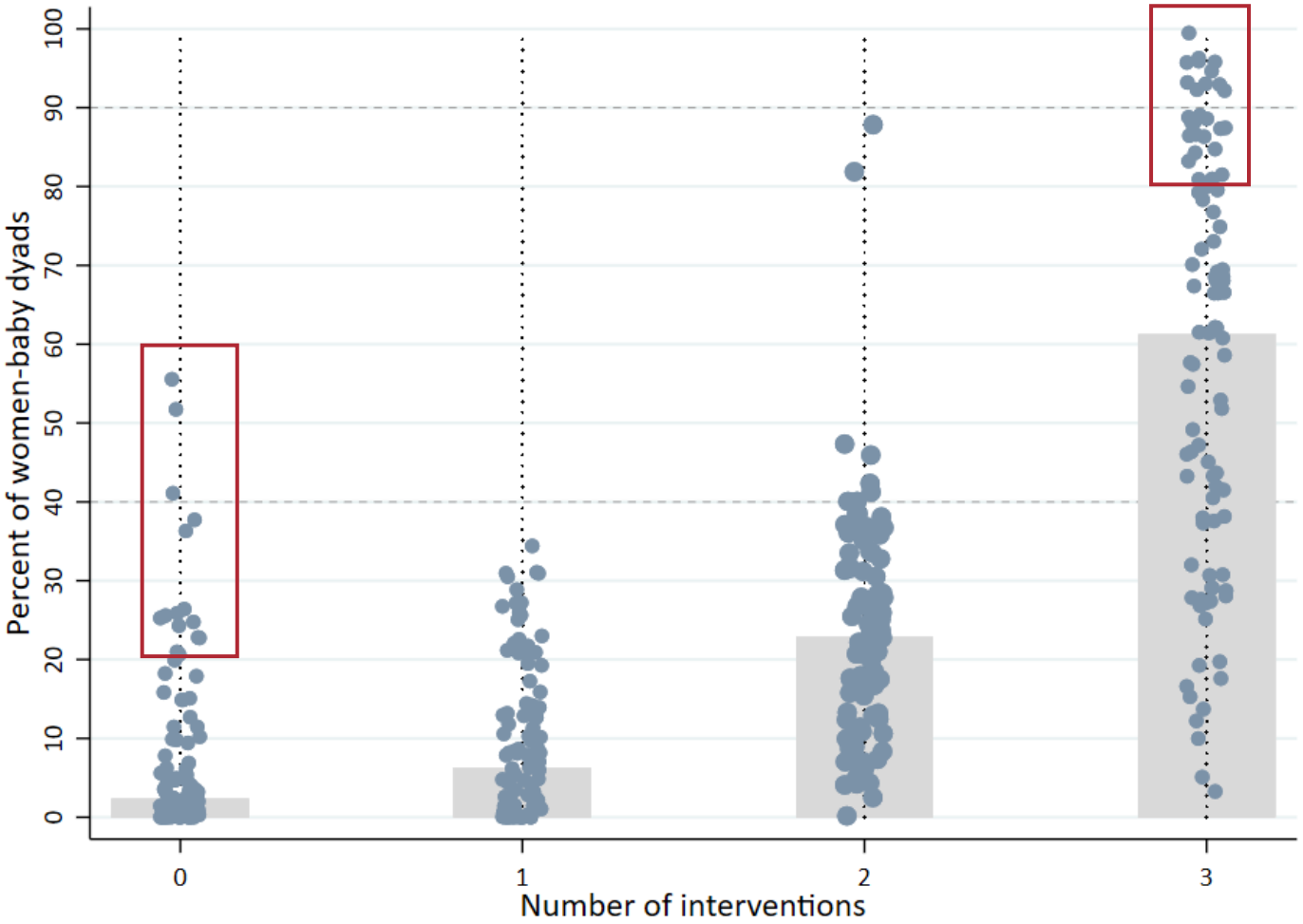
Wide variation in the number of interventions received



All interventions **61%**

Woman-baby dyads

> 80%: all 3 interventions

29 out of 97 countries

> 20%: no interventions

15 out of 97 countries

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Wide gap between the poorest and wealthiest deciles

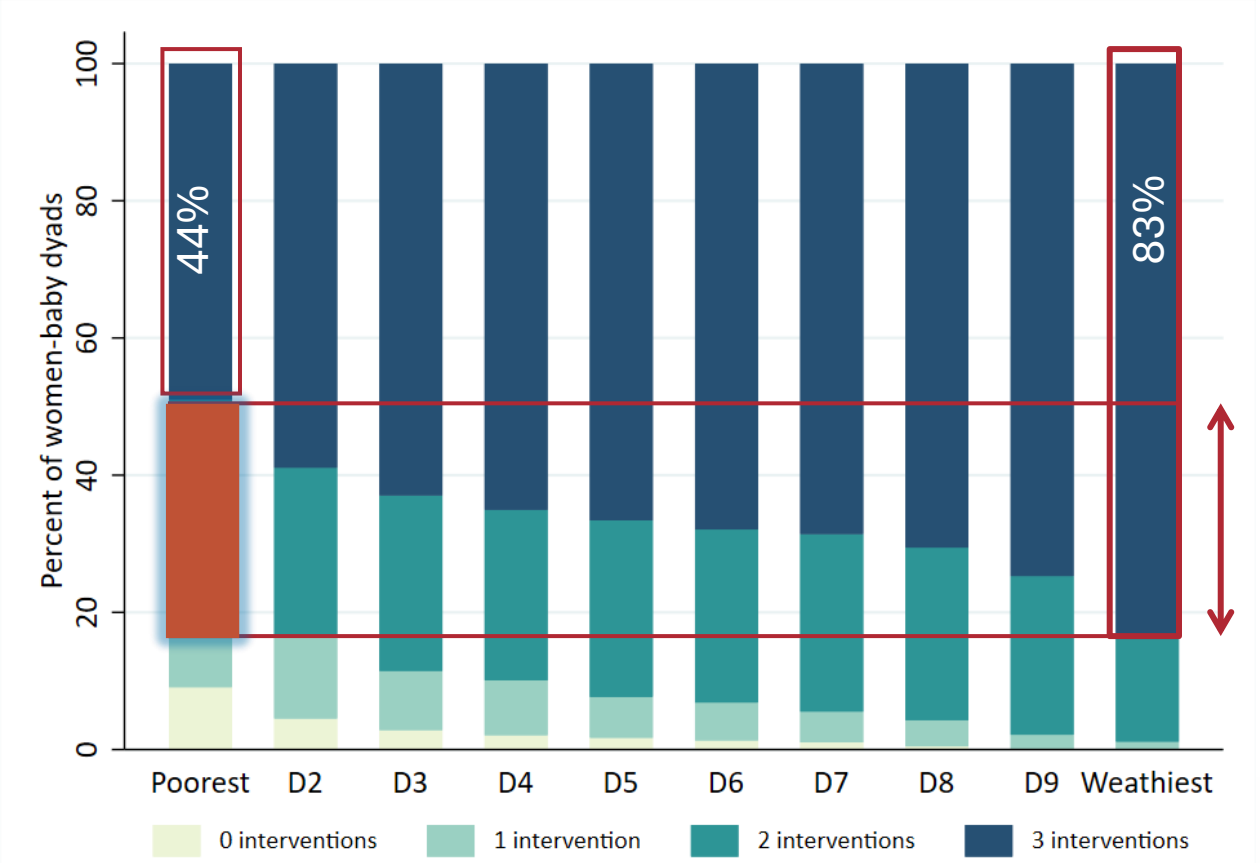
- Poorest

  44% of woman/baby dyads received all three interventions

- Wealthiest

  83% of woman/baby dyads received all three interventions

39 percentage points difference!



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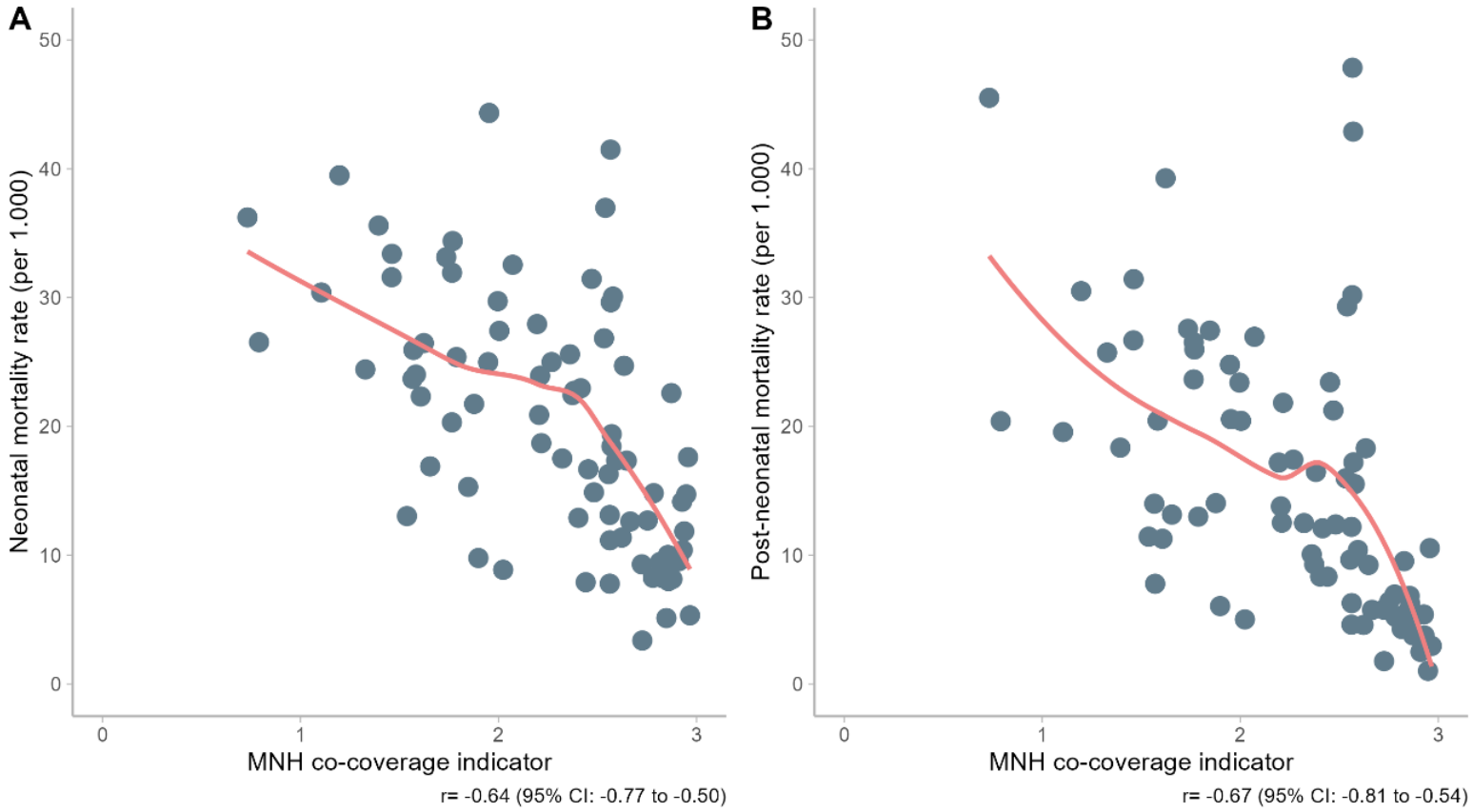
Inverse correlation with neonatal and post-neonatal mortality rates



Data on mortality were available for 80 LMICs

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Conclusions

MNHci

- Simple, easily interpretable, standardized, comparable, and meaningful measure
- Comparisons between and within countries
- Useful for assessing MNH intervention coverage, adequacy, and inequalities in monitoring exercises in LMICs

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Thank you!

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