



Trends and inequalities in maternal and newborn health services for unplanned settlements of Lusaka city, Zambia

Choolwe Jacobs, PhD

School of Public Health

University of Zambia

Zambia

Background...

- Globally, more people are living in urban areas than before
- In Zambia's capital, Lusaka, the population continue to rise since 2008
- 10-fold increase in the last five decades, from 353,975 in 1969 to 3,360,183 by 2020
- Extensive housing shortages and increased unplanned settlements

The Problem.....

- Poorer living conditions and other socio-economic disadvantages in urban unplanned settlements present unique challenges for improving maternal and newborn health
- The health and safety of a pregnant woman and her baby can be improved by providing affordable access to good quality services
- Despite good availability of antenatal care (ANC) services, not all women in Lusaka receive timely or quality ANC services
- Neonatal mortality rates have stagnated in urban areas of Zambia – with increase from 24 to 29 deaths per 1000 live births between 2013 and 2018 ZDHS

Why this study.....

- Limited evidence describing available health care infrastructure, and population coverage of MNH services for women in unplanned settlements of Lusaka city
- First study to examine trends and inequalities in utilisation of MNH services and neonatal mortality rates in the last 20 years in unplanned compared to planned settlements of Lusaka city, Zambia.

Objectives

We examined trends and inequalities in coverage of maternal and newborn health services in the last 20 years in unplanned and planned settlements of Lusaka city, Zambia.

Specific Objectives

- a. To determine the location and population density of unplanned and planned settlements, and the distribution and types of health facilities providing them with MNH services in Lusaka
- b. To understand the trends in MNH service utilisation and neonatal outcomes in unplanned, compared to planned, settlements of Lusaka

Methodology

Study setting

- Unplanned settlements of Lusaka often referred to as ‘Komboni’.
- Areas not sustainably provided with essential infrastructure for electricity, water, sanitation and effective solid waste management .

Data sources

- Multiple data sources were used:
 - Geospatial information on location of unplanned and planned settlements and facilities;
 - 2017 Zambia National Health Facility Census (ZNHFC);
 - Zambia Demographic Health Surveys (ZDHS 2001, 2007, 2013/14 and 2018)
 - Monthly Health Management Information System (HMIS) data from 2018 to 2021.

Indicators

- **ZDHS** - At least one or any ANC visits, early ANC (before four weeks), having four or more ANC visits, institutional delivery, and Caesarean section rates.
- **HMIS** - volume of first ANC visits, volume of four or more ANC visits (ANC4), institutional deliveries and Caesarean sections.

Data Management...

Objective 1

- Population densities in each settlement were mapped, and health facilities by level using global positioning system (GPS) coordinates.
- HMIS (2021) and ZNHFC (2017) data was used to enumerate facilities at each level providing MNH services within Lusaka.

Objective 2

- Intervention coverage trends and inequalities using the four ZDHS surveys within the Lusaka urban cluster.
- Service volumes and rates using HMIS facility-level data by month.
- Data was aggregated from 2018 to 2021 to gain a picture of the current situation, which is comparable to the period of ZDHS 2018

Data Analysis

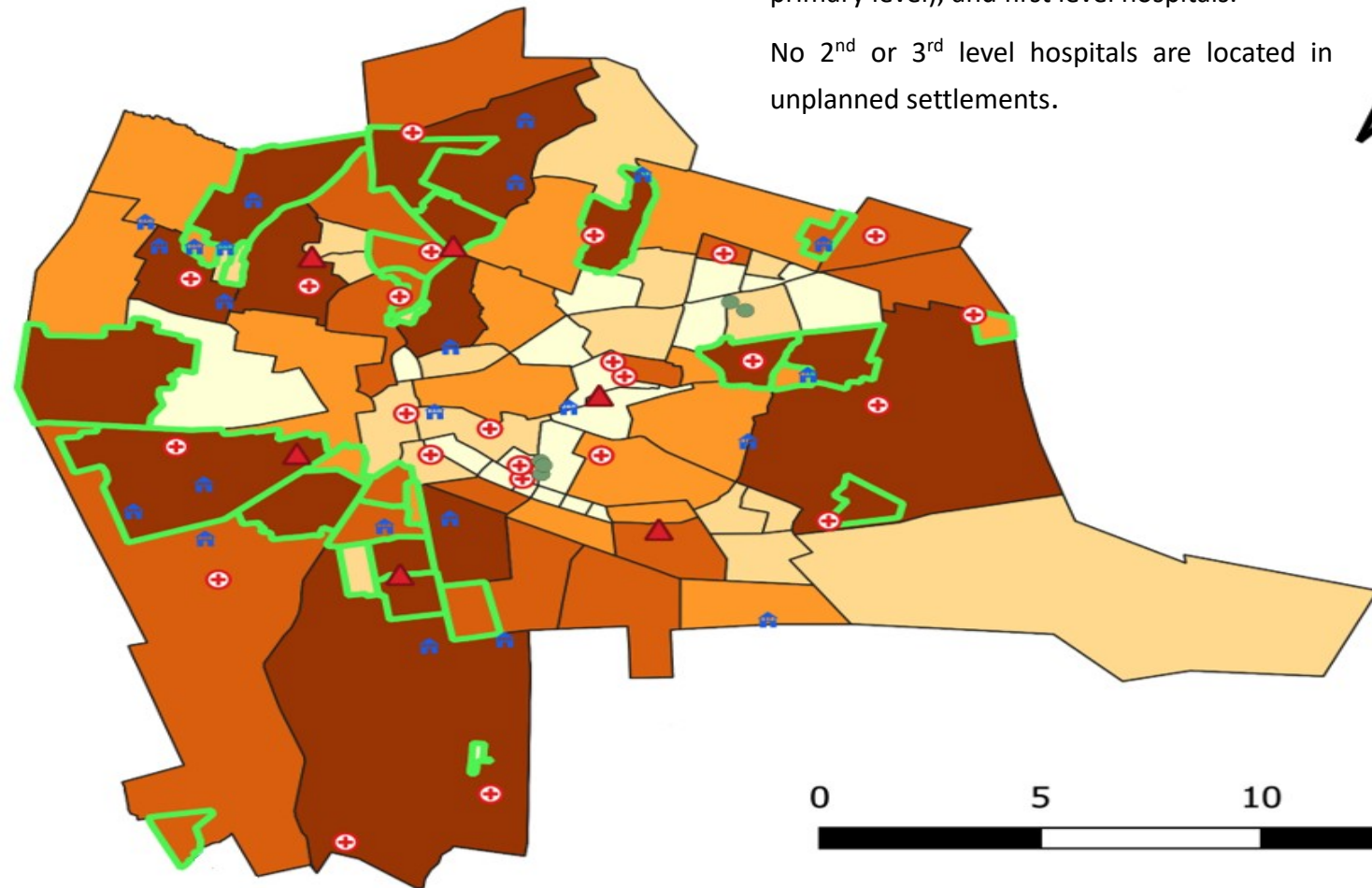
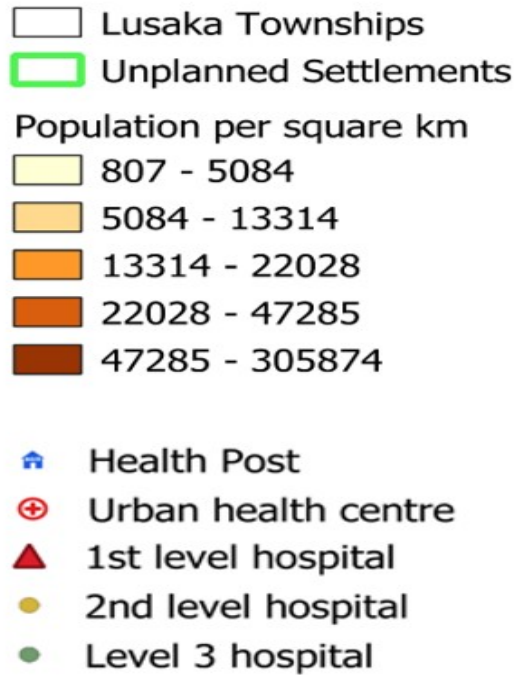
ZDHS data

- Coverage rates were computed among births in the previous five years
- Computed neonatal mortality rates among births in the previous ten years in ZDHS 2007 and 2018.
- Analyses were disaggregated between the poorer 60% and richer 40% of the population, using the scores from the original survey datasets
- Wealth index scores were created using a principal components analysis of dwelling materials, access to utilities and household assets

HMIS data analysis

- Data assessed for quality – consistence, completeness and reporting rates
- Computed total volumes across 2018-21 for the indicators to assess utilization patterns.
- Institutional C-section rates calculated as the proportion of people coming for a delivery who had a C-section among facilities where this service was provided.

Results

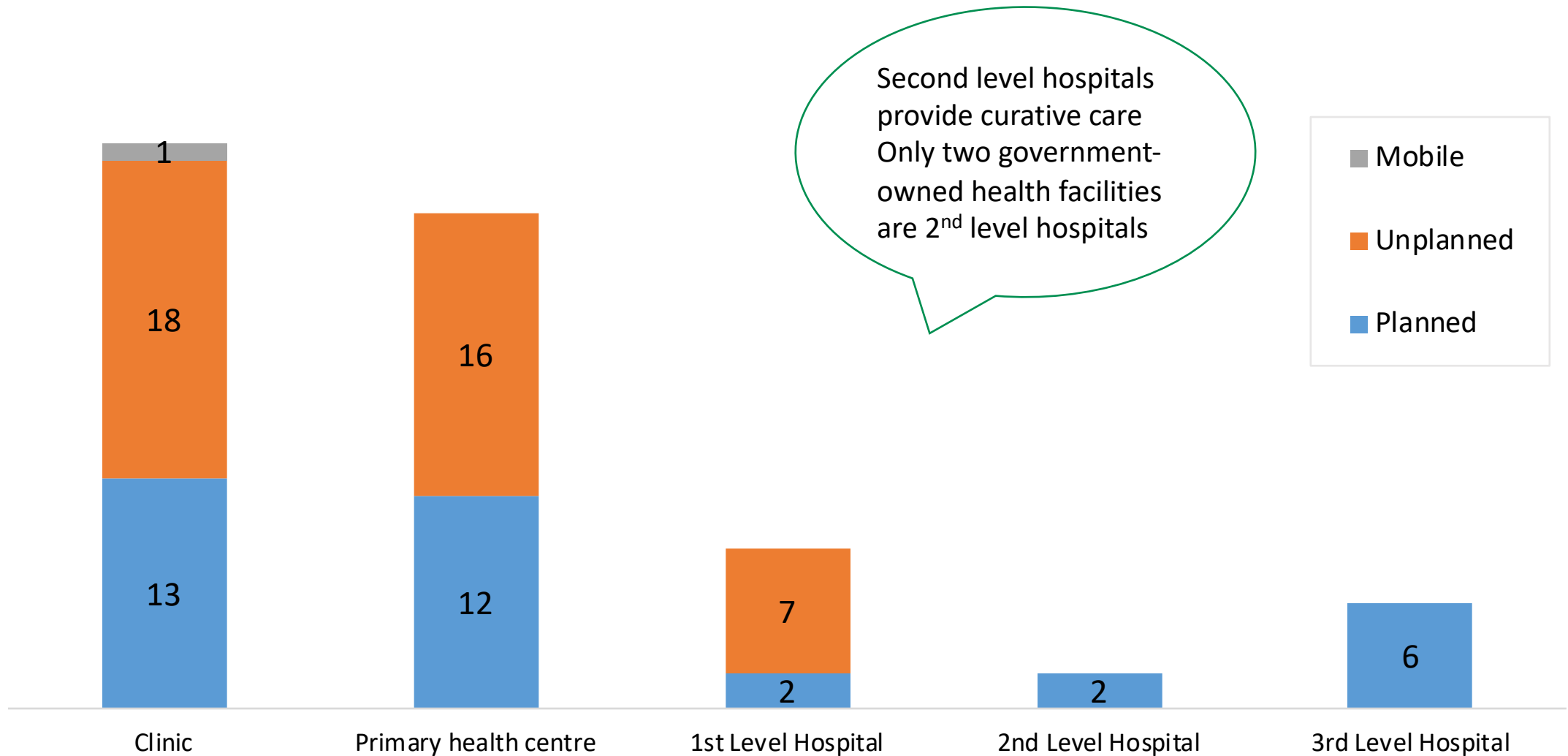


Majority of unplanned settlements serviced by health posts or urban health centres (both primary level), and first level hospitals.

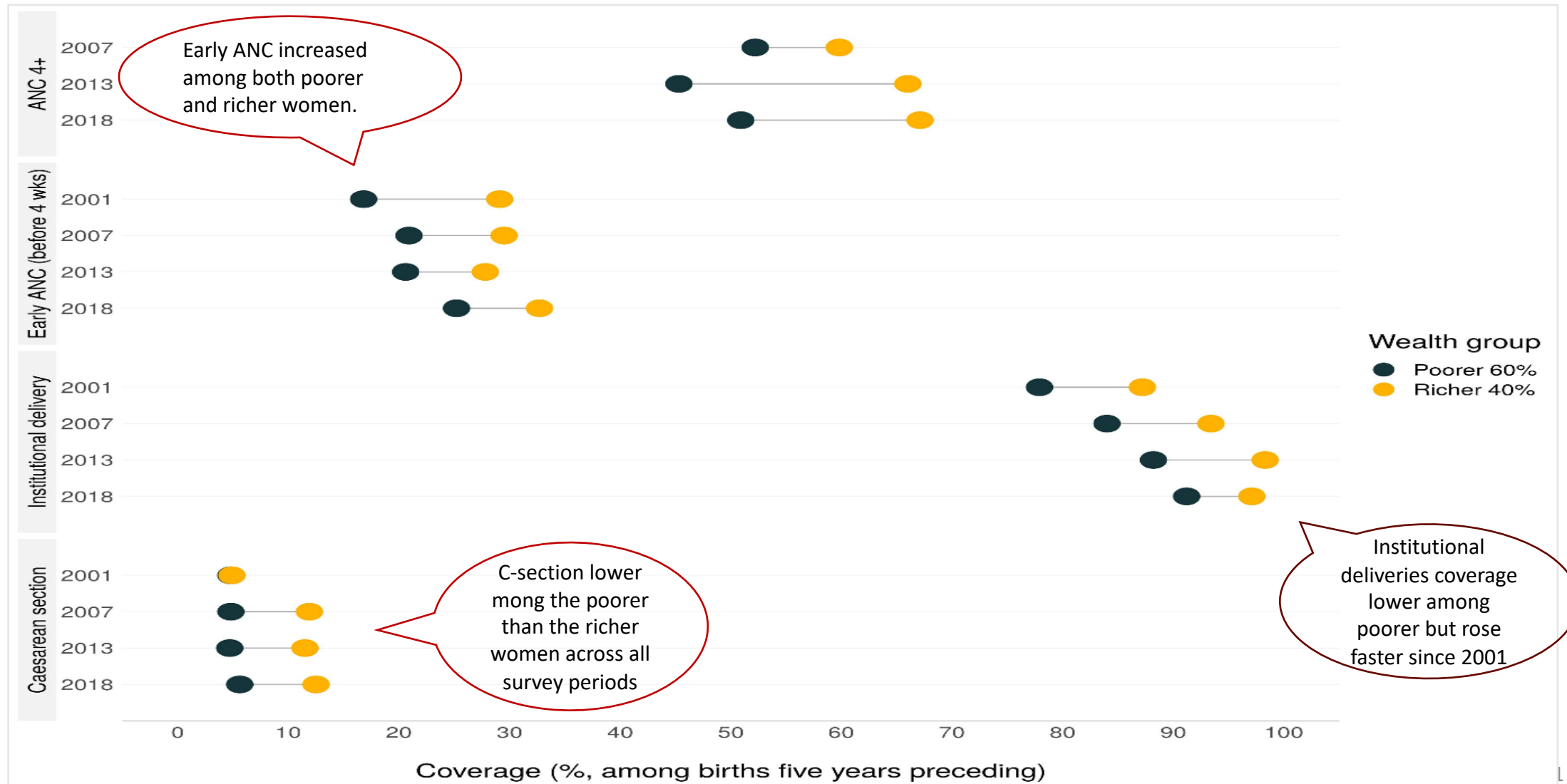
No 2nd or 3rd level hospitals are located in unplanned settlements.



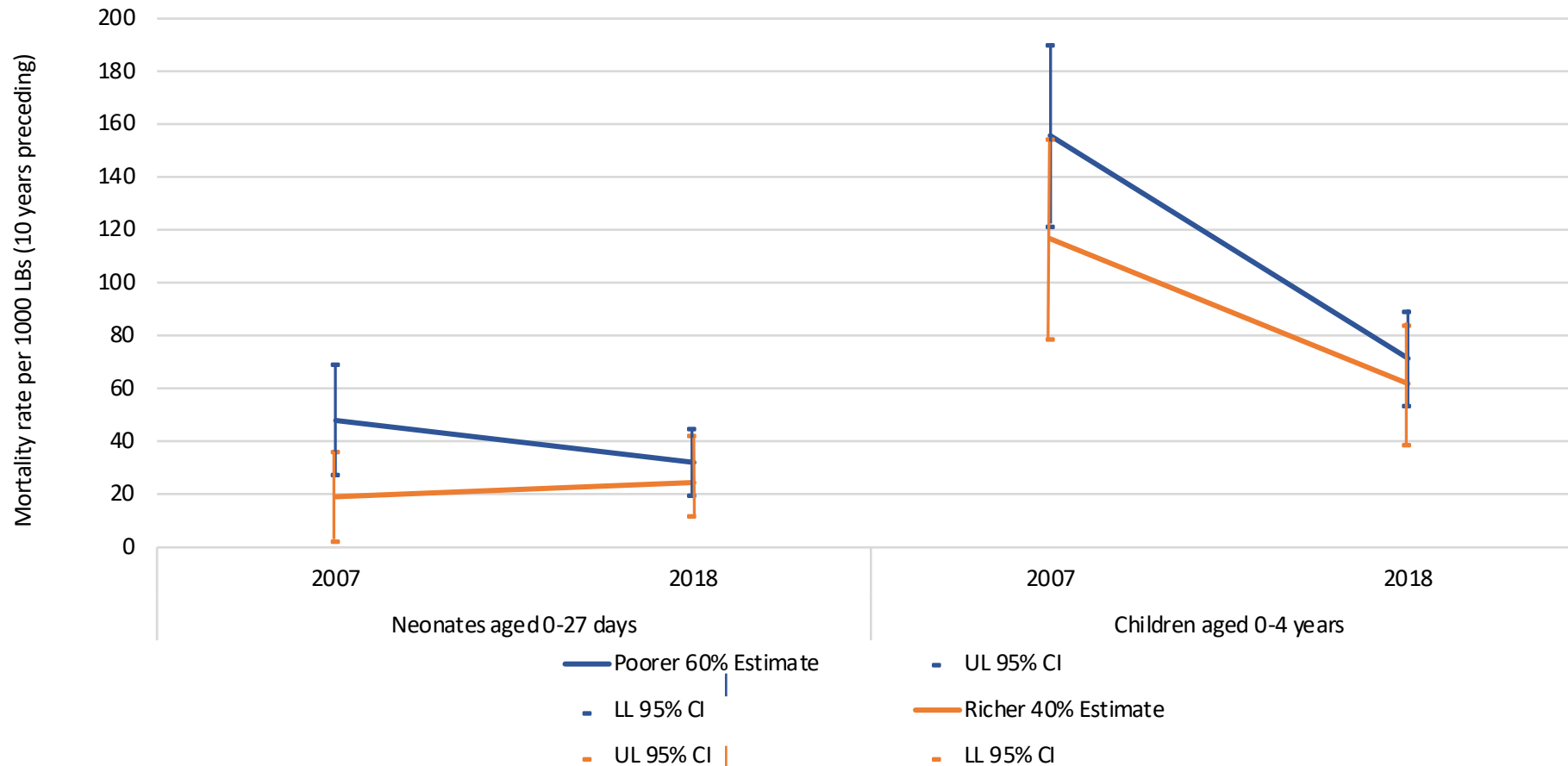
Number of public/government facilities (out of 77 total) by level and catchment area in Lusaka, HMIS 2021



Intervention coverage for ANC, institutional delivery, and C-sections comparing the poorer 60% and richer 40% in Lusaka, ZDHS surveys 2001, 2007, 2013, 2018

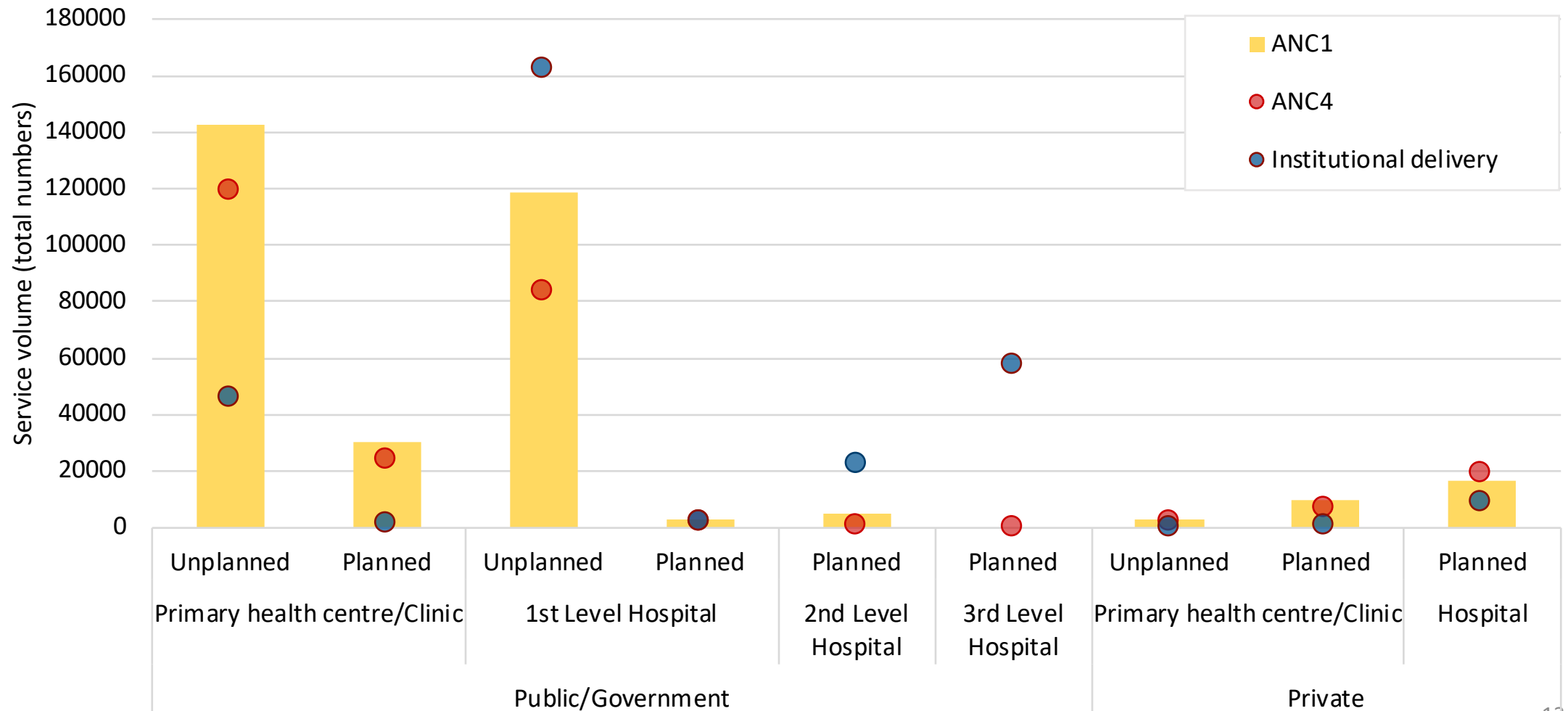


Neonatal and under-five mortality rates per 1000 live births (average among births in the last ten years) comparing the poorer 60% and richer 40% with confidence intervals (95% CI), ZDHS 2007 and 2018

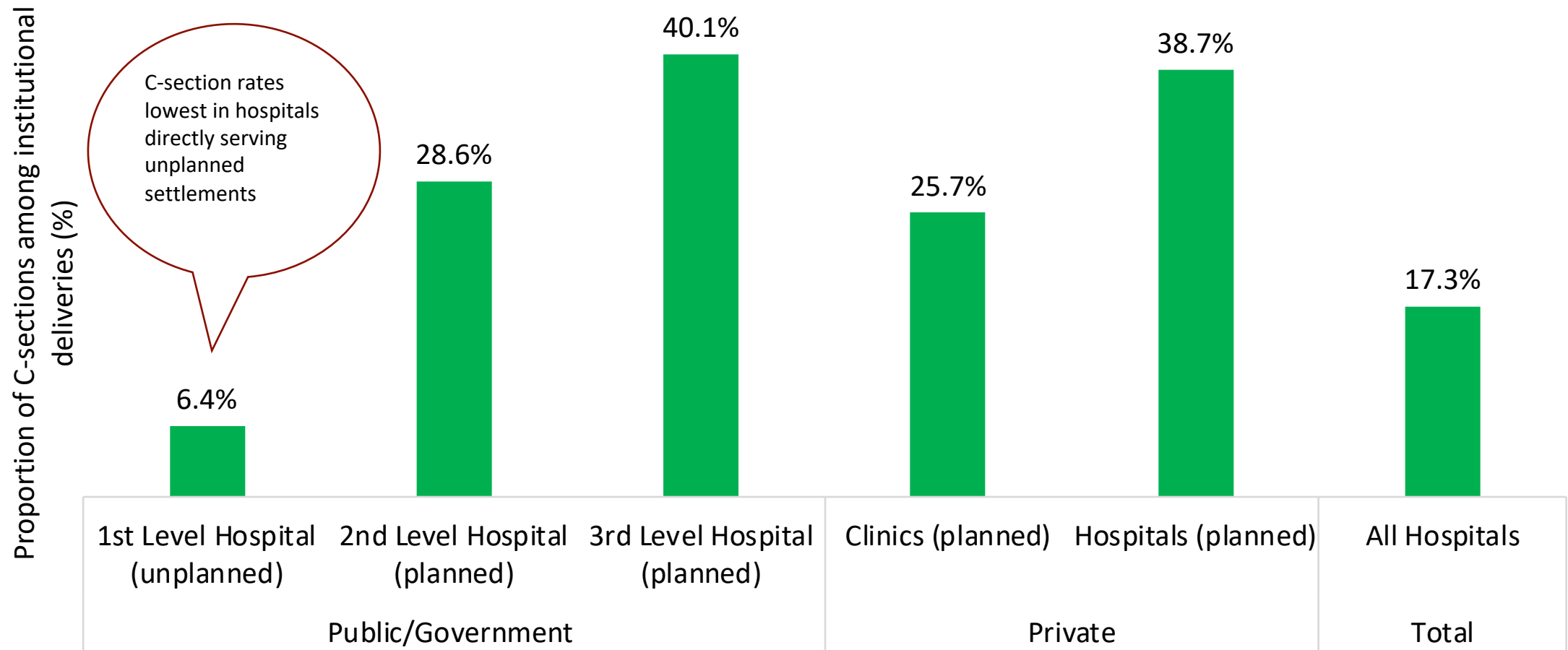


Neonatal mortality rates decline both among poorer and richer women to close the gap

Total service volumes for ANC1, ANC4 and institutional delivery in public and private facilities by level and catchment area, HMIS 2018 to 2021



Institutional C-section rates in public and private hospitals or clinics located in unplanned or planned settlements



Conclusion

- Notable improvements in coverage of any antenatal care and institutional delivery services
- The gaps in coverage between poorer families in unplanned settlements and others in Lusaka city are closing
- Ongoing inequalities in quality ANC, emergency delivery care, and ultimately birth outcomes

Recommendations

- Enhanced outreach to all pregnant women in unplanned settlements is needed to heighten access to timely and continuous ANC services
- There is need for responsive approaches that improve all women's and their children's lives in Zambia's capital city of Lusaka by;
 - ❖ *Moving beyond improving equity in contact with services towards ensuring high quality and timely services*
 - ❖ *Building capacities to provide EmONC services and responsive referral systems at facilities serving them.*

Acknowledgements

Choolwe Jacobs¹, Mwiche Musukuma¹, Raymond Hamoonga², Brivine Sikapande³, Ovost Chooye³, Fernando C. Wehrmeister⁴, Charles Michelo⁵, Andrea K. Blanchard⁶

¹*Department of Epidemiology and Biostatistics, School of Public Health, University of Zambia, Zambia*

²*Zambia National Public Health Institute, Zambia*

³*Ministry of Health, Zambia,*

⁴*International Center for Equity in Health, Federal University of Pelotas, Brazil*

⁵*Harvest University, Lusaka*

⁶*Department of Community Health Sciences, University of Manitoba, Canada*



African Population and Health Research Center



University of Manitoba



Countdown to 2030
Women's, Children's & Adolescents' Health

Thank you

Dr Choolwe Jacobs

choolwe2003@yahoo.com