



Tracking Progress in Reproductive, Maternal, Neonatal and Child Health (RMNCH) in Zambia: An Equity-based Approach

DISSEMINATION BREAKFAST MEETING

JUNE 10, 2022

Background and objectives

Background

- To successfully attain the goal of being a prosperous, middle-income country by 2030, Zambia is determined to transform into a nation of healthy and productive people
- The Government of the Republic of Zambia's Ministry of Health is prioritizing health service provision to achieve this vision
- Reduction in maternal and child mortality is a top agenda in Zambia, as prioritized in the NHSP and aligned with the global Sustainable Development Goals

Sustainable Development Goals



→ Ensure healthy lives and promote well-being at all ages



→ Reduce inequalities within and among countries

Sustainable Development Goal 3

A key element of the SDGs is to effectively mitigate inequalities and ensure universal coverage of essential promotive, preventative, and curative interventions for RMNCAH&N



UN 2030 Agenda for Sustainable Development aspires to *leave no one behind*.

→ tackling inequalities in health

Objectives for equity trend analysis

Aim

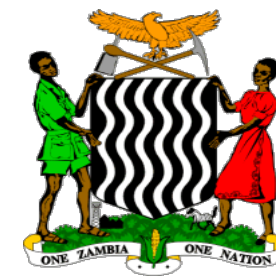
- To enhance the evidence on where and for whom improvements in RMNCAH+N indicators have been made to inform the national and subnational reviews, policies and overall health strategic plans

Specific Objectives

- 1) To conduct equity analysis using data from the Zambia Demographic Health Surveys and other relevant data sources since 2000
- 2) To provide analytical support to the Ministry of Health in the use of routinely collected data

Countdown to 2030: global collaboration

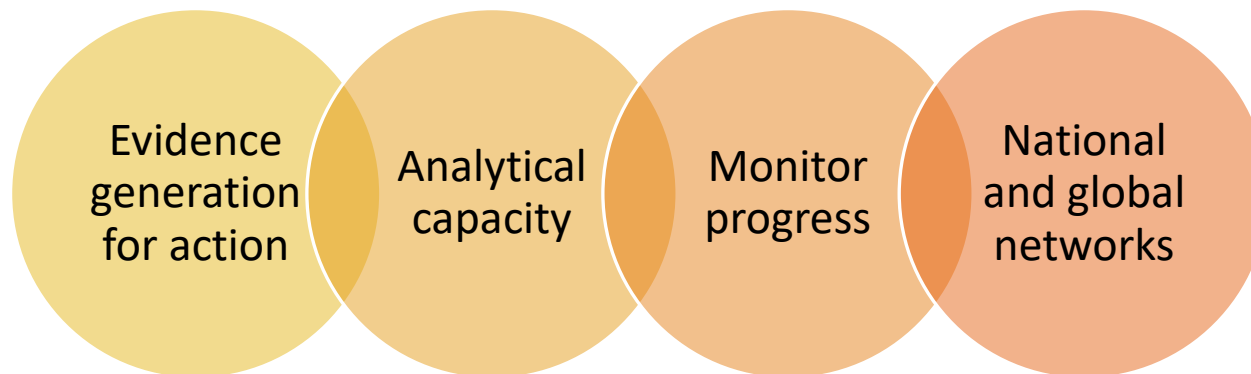
- The Countdown to 2030 (CD2030) is a consortium of global, regional, country academic institutions and ministries of health, in collaboration with UN agencies and World Bank
- Tracks progress in and action for RMNCAH+N (countdown2030.org) in 15 countries
- Zambia Countdown team is a collaboration between national & international partners
 - Ministry of Health, Zambia
 - University of Zambia, School of Public Health
 - Institute for Global Public Health, University of Manitoba, Canada
 - Federal University of Pelotas, Brazil
 - African Population Health Research Centre (APHRC)



African Population and Health Research Center

Countdown to 2030: objectives

- Evidence generation and analytical capacity aligned with national monitoring, learning and evaluation mechanisms to inform in-country reviews and accountability processes, and to monitor progress towards the GFF investment case
- Communication and use of evidence on global, regional and country levels for RMNCAH+N progress and performance with a focus on reducing inequalities, using existing surveys and reporting systems
- Regional to global learning and networking through multi-country meetings



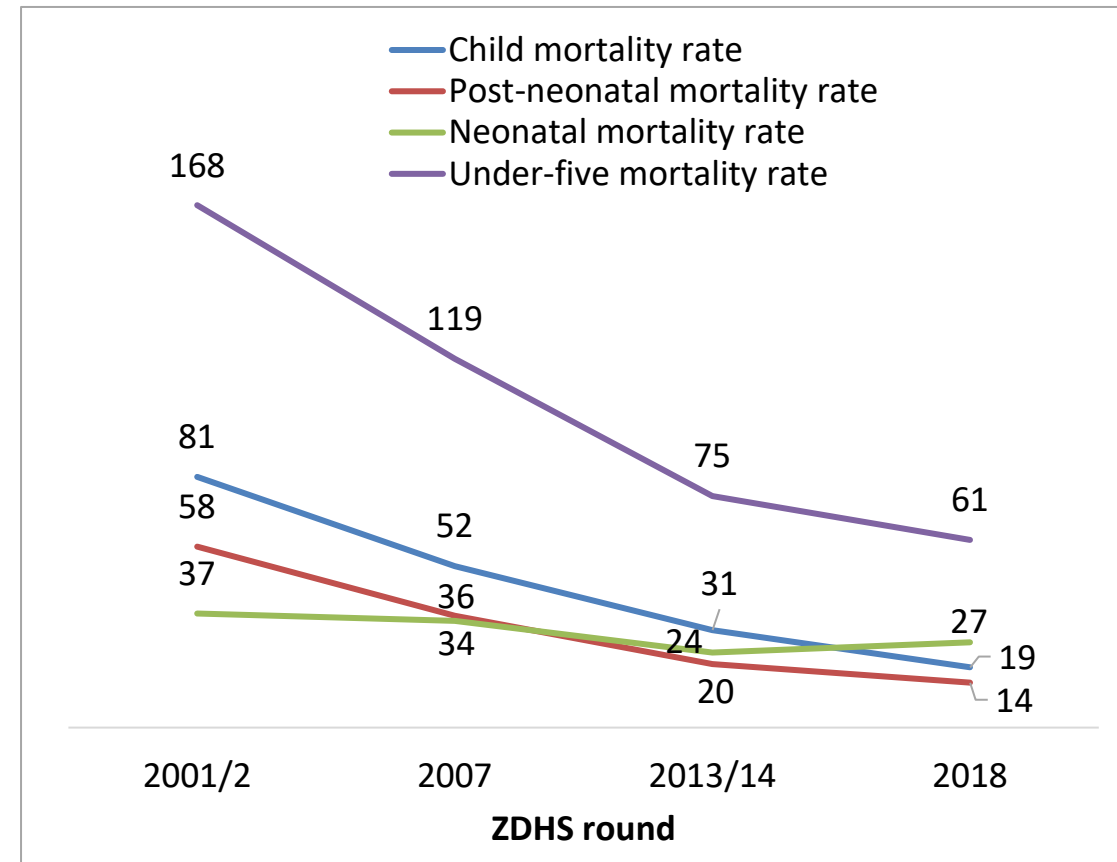
Tracking improvements in child mortality using an equity-based approach

Equity-based approach & trend analysis

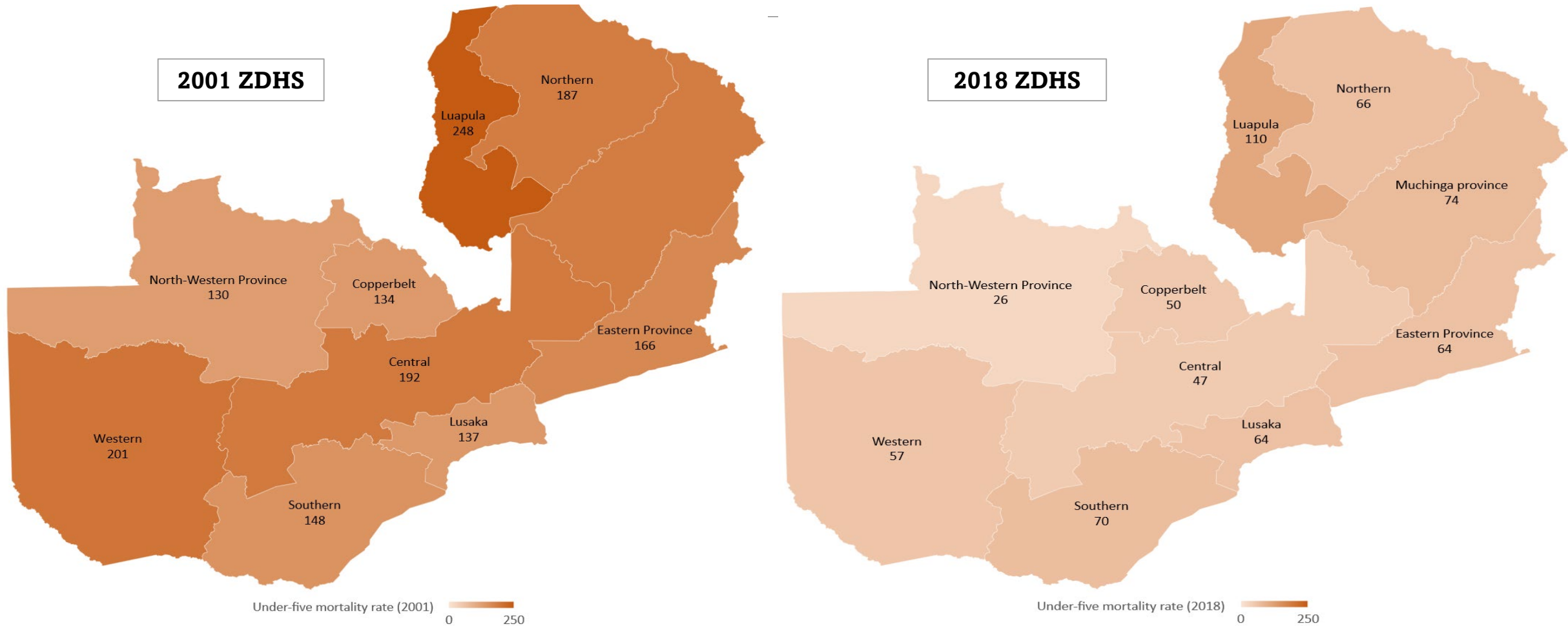
- Analyses of Zambia Demographic Health Survey using last 4 rounds - 2001/2, 2007, 2013/14, 2018 in Stata and Excel
- Trends in child mortality and RMNCH coverage indicators
 - **Under-five mortality rate:** number of deaths among children under-five per 1000 live births, in the last 10 years preceding the survey
 - **Composite coverage index (CCI):** weighted average of contact coverage for eight essential interventions across the continuum of care: demand for modern family planning methods among married women aged 18-45, 4+ antenatal care and skilled birth attendance for pregnant women, BCG/DPT3/MSL immunization of under-five children, and care-seeking for any childhood illness
- Equity stratifiers: comparisons in under-five mortality and composite coverage index by socio-economic and geographical indicators
 - Province, urban-rural residence, wealth quintile (based on asset scores), education

Results on child mortality improvements

- Zambia experienced a major decline in under-five mortality during the 2001-2018 period, declining from 168 to 61 deaths per 1,000 live births
- The decline was almost exclusively due to major reductions in post-neonatal (1-11 months) and child (12-59 months) mortality
- The share of neonatal deaths to under-five deaths doubled from 19% to 38% between 2001 and 2018
- Zambia was among the top three performers in under-five mortality in sub-Saharan Africa since 2000 according to DHS surveys, with an average annual rate of reduction of 6.6%

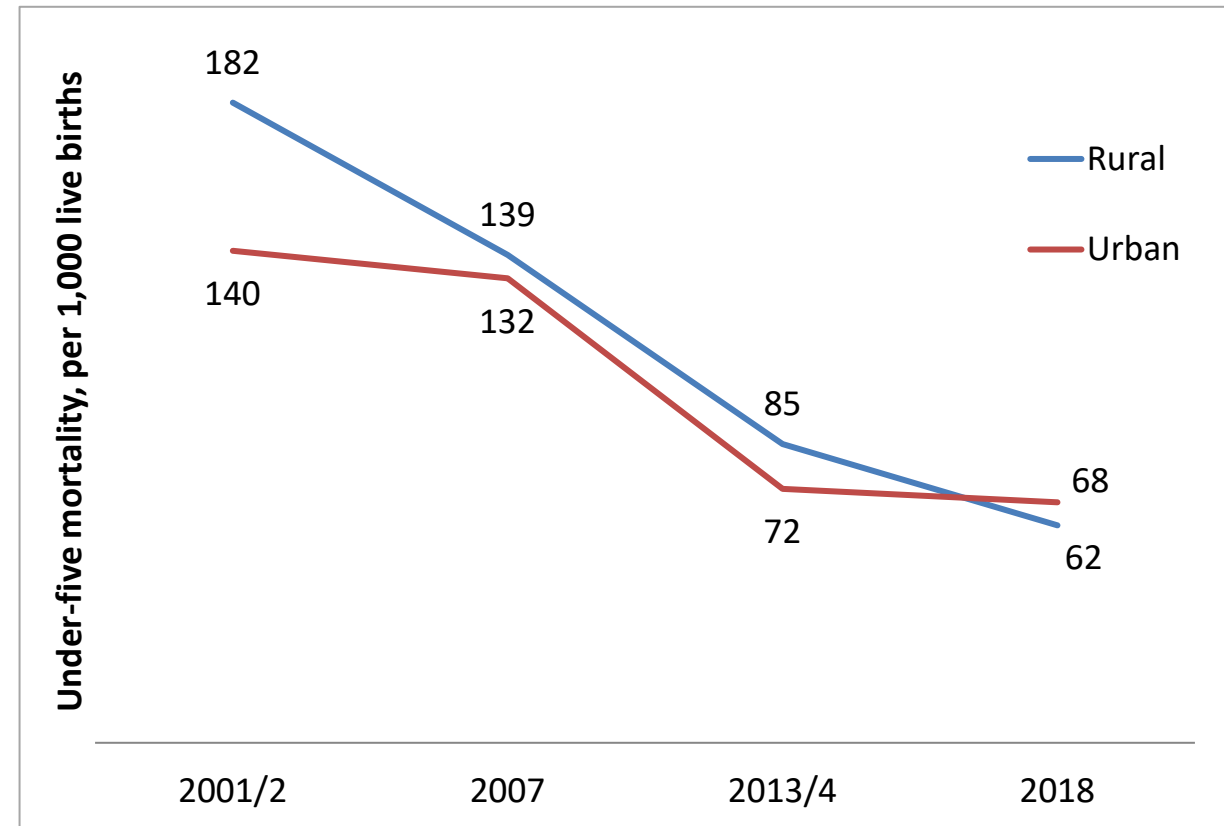


Trends in under-five mortality by province



Trends in under-five mortality by residence

- In ZDHS 2001, children born in rural areas were dying more than children born in urban areas
- The urban-rural gap in under-five mortality reduced to almost none, as early as ZDHS 2007
- However, a higher annual decrease observed in rural areas translated into rural areas performing better than urban areas
- Out of every 1000 children born alive in 2018, 62 children in rural areas and 68 children in urban areas died before their fifth birthday



Trends in under-five mortality by wealth

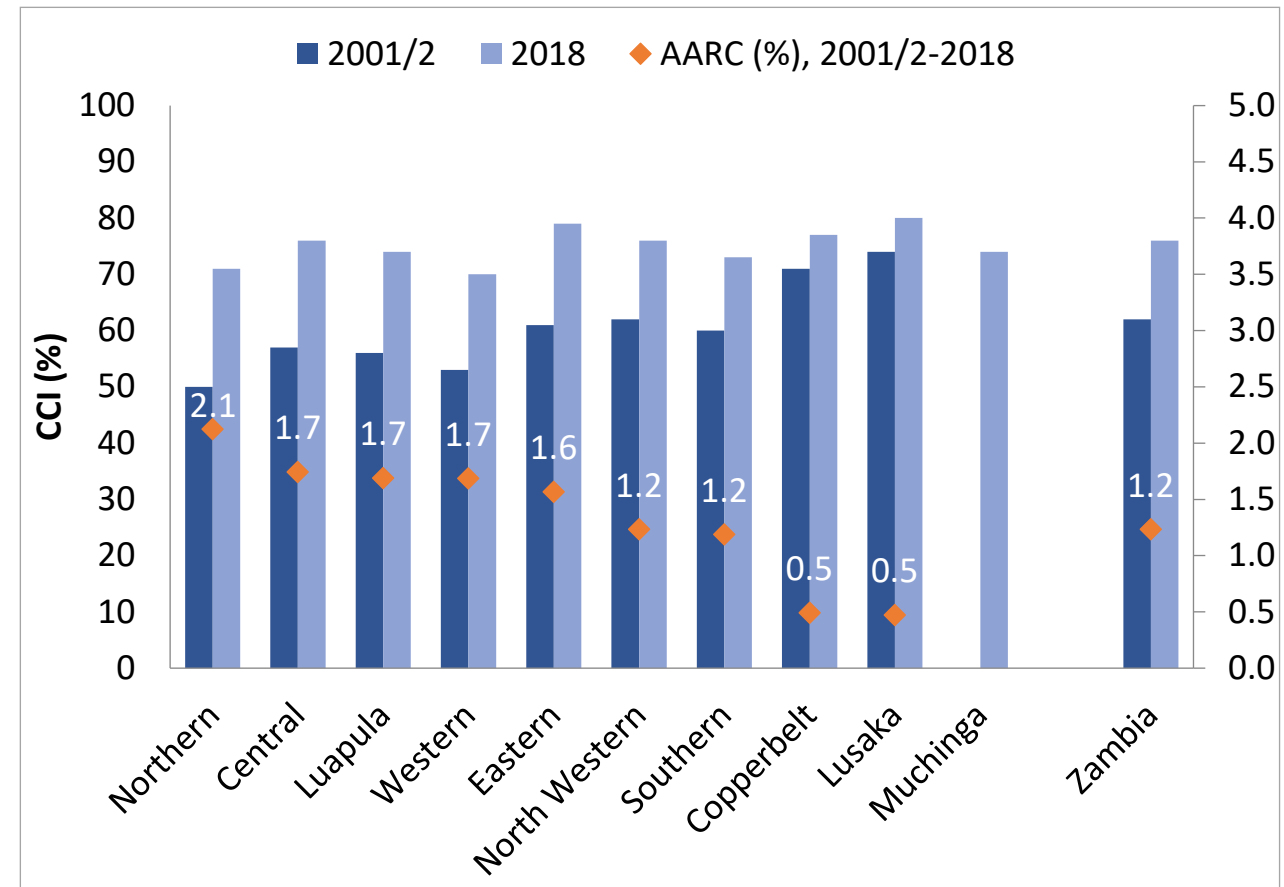
- Between 2001 and 2018, significant reductions have been observed in under-five mortality inequalities among the five socioeconomic groups based on wealth quintile
- Notably, a huge reduction in under-five mortality inequalities was observed between the richest and poorest socioeconomic groups
- However, the absolute level of income among the poorest group did not improve enough compared to the richest group
- This suggests that absolute income did not play an important role in the mortality decline



Tracking improvements in RMNCH service coverage using an equity-based approach

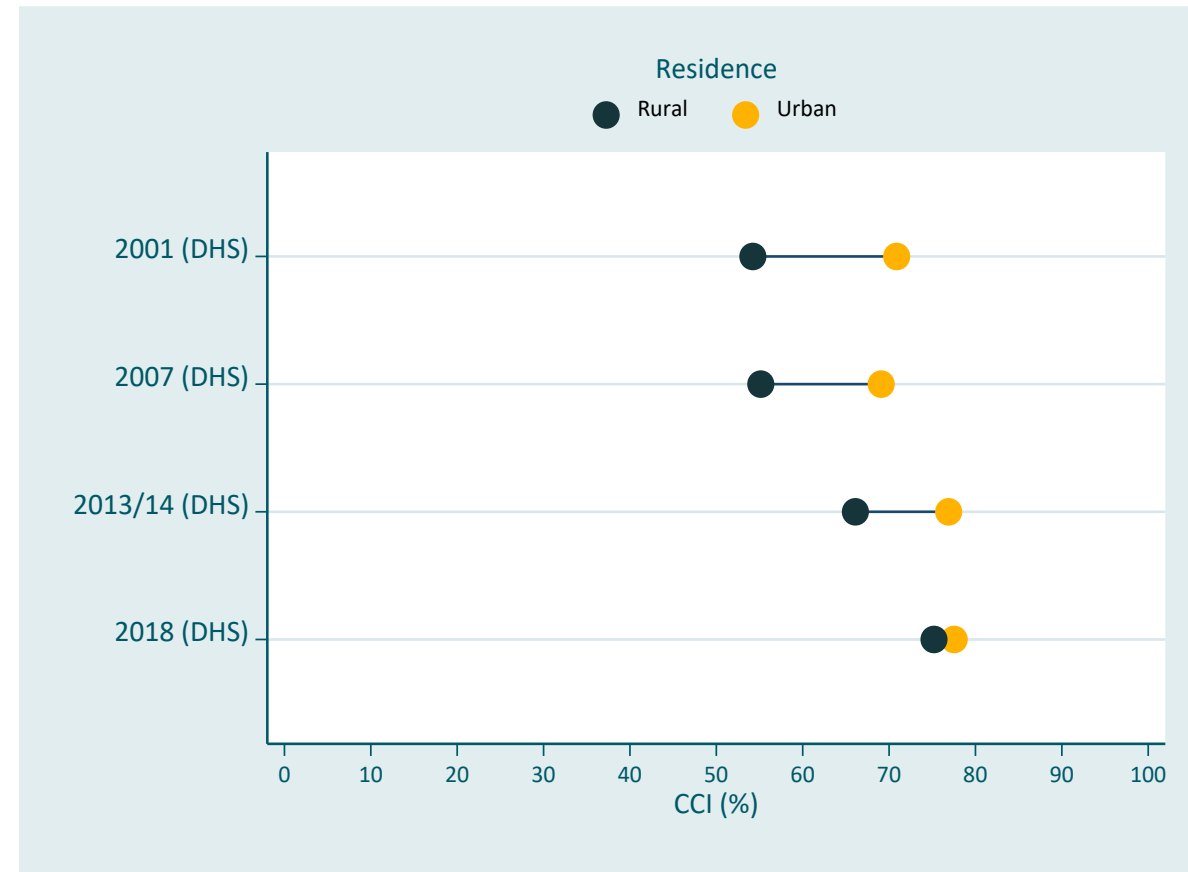
RMNCH intervention coverage (CCI) by province

- Between 2001 and 2018 ZDHS, Zambia's Composite Coverage Index (CCI) improved from 62% to 76%
- Provinces with higher baselines experienced less improvement (Lusaka and Copperbelt provinces) while those with lower baselines improved most (Northern, Central, Luapula, Western and Eastern) at over 15 percentage points



RMNCH coverage (CCI) by residence

- CCI improved rapidly between 2001 and 2018 in rural areas from 55% to 74%
- In urban areas the CCI improvements were more moderate (73% to 79%)
- CCI inequalities between urban versus rural areas thus narrowed from 12 to 5 percentage points between 2001 and 2018



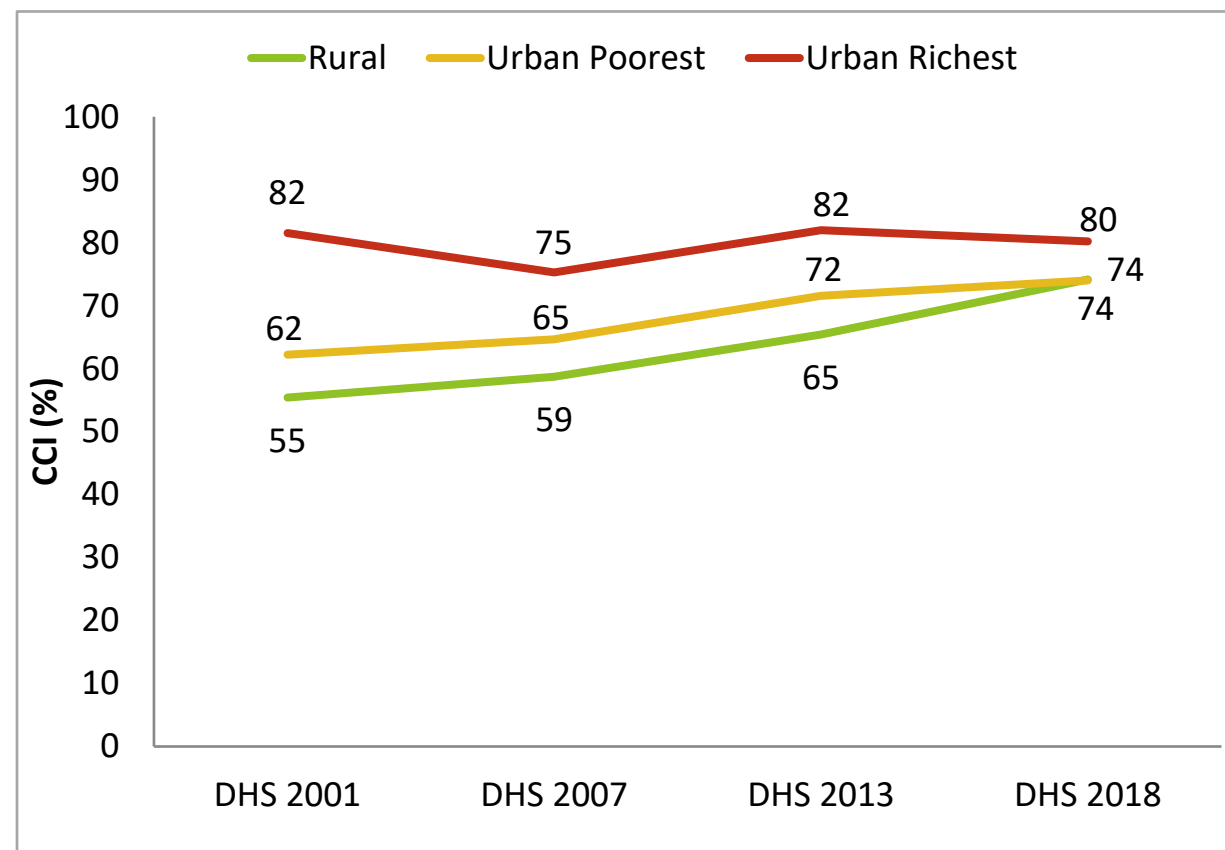
RMNCH coverage (CCI) by wealth

- CCI inequalities between wealth quintiles were very large in 2001: 50% among the poorest versus 78% among the richest
- CCI increased fastest among women in the poorest wealth quintile, up to 71% in 2018
- The poorest – richest gap in CCI reduced from about 30 to 10 percentage points
- However, the CCI remained a bit lower among the poorest compared to the richer wealth groups



RMNCH coverage (CCI) by residence and wealth

- Over two decades, coverage among the urban poorest improved by 19 percentage points, but remained behind the wealthiest group by 6 percentage points
- The CCI among the urban wealthiest group did not improve
- In 2018, coverage in rural areas was as high as for the urban poorest

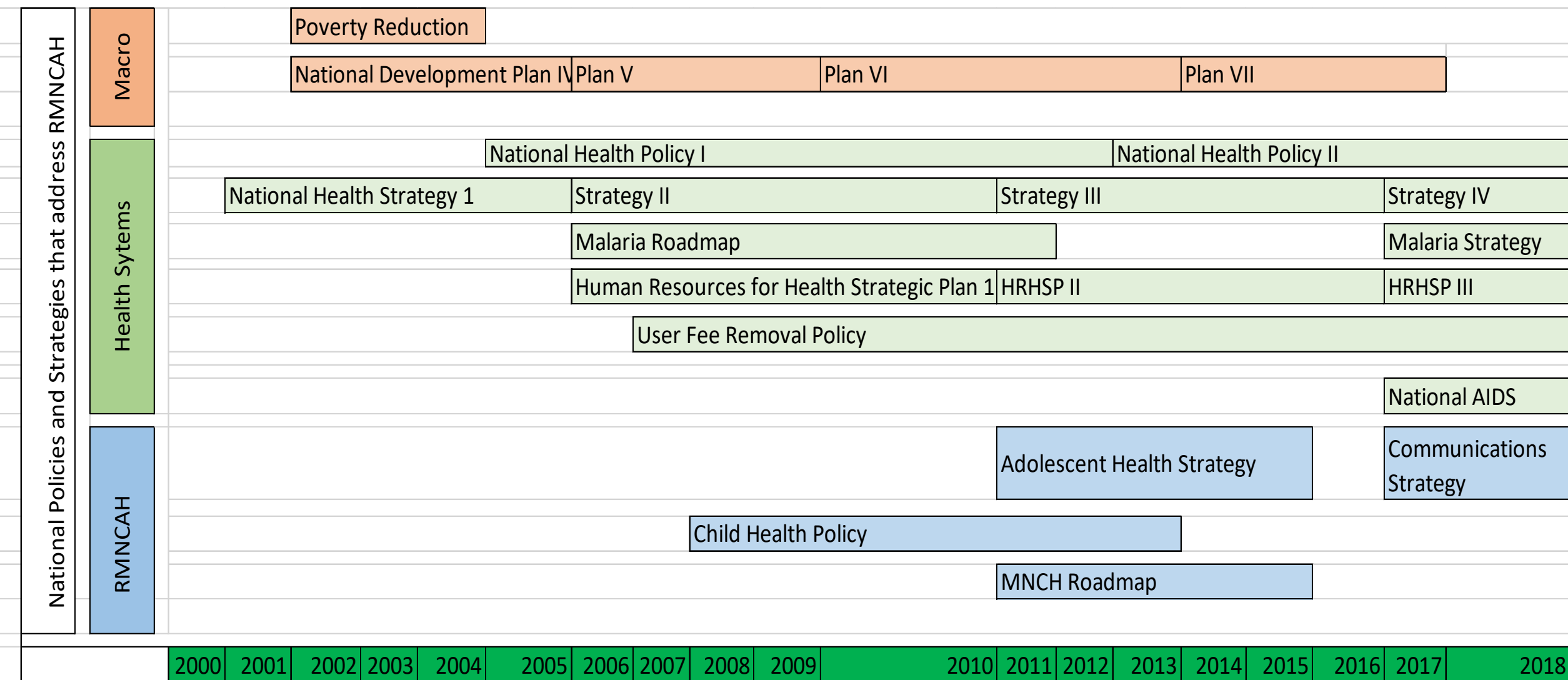


Health policy and systems analysis

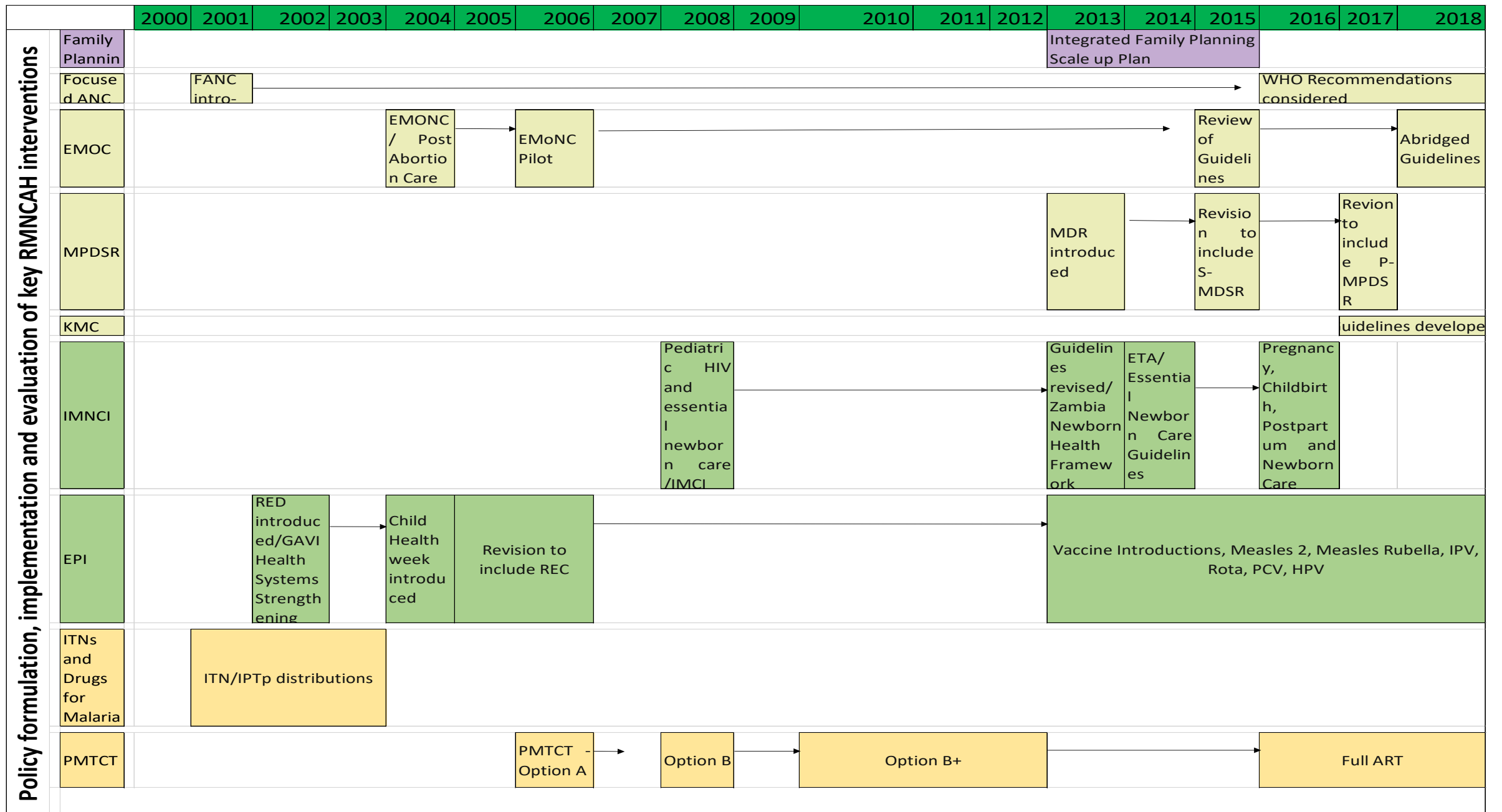
Health policy and systems analysis

- Assessment of policies and strategies
 - We reviewed reports and health policy strategy documents since 2000
 - Focus was on three levels: macro health systems and governance, health system building blocks, and high impact policies specific to RMNCAH
- Analysed data on health systems inputs including financing, human resources and infrastructure

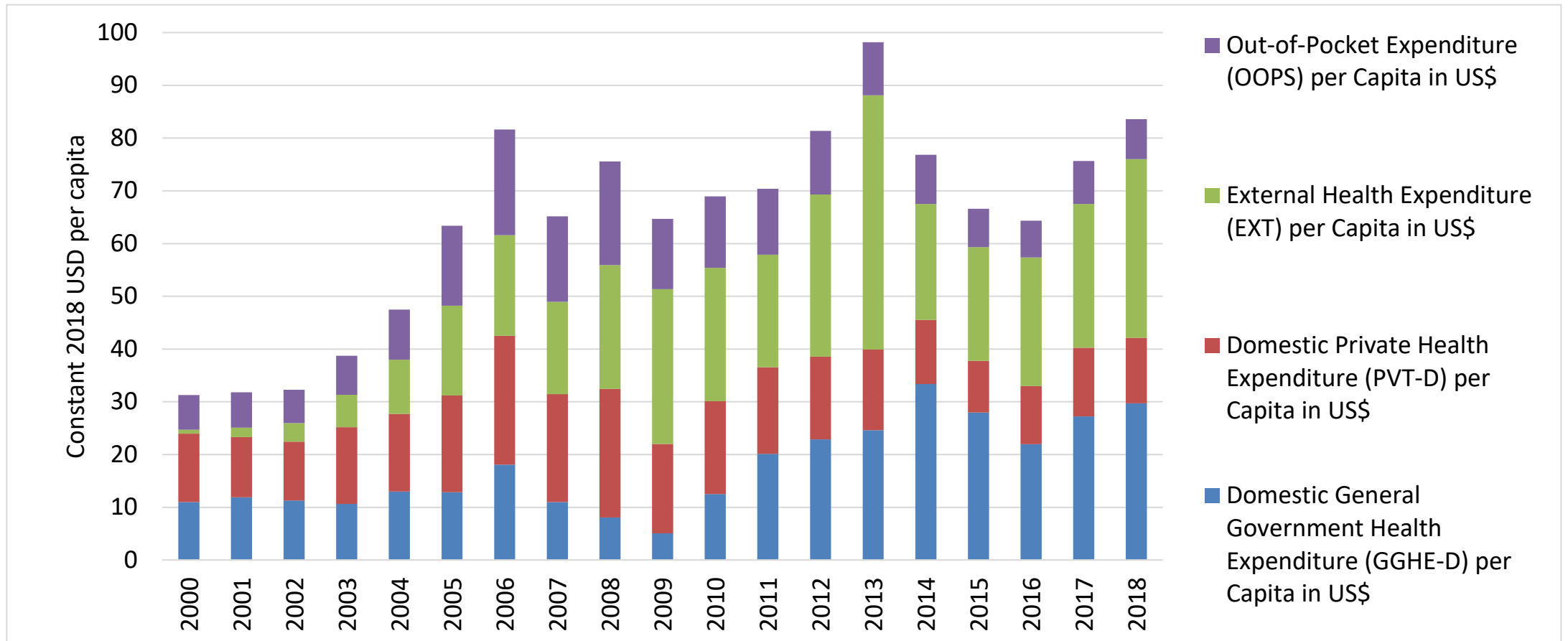
Policy commitments to improving equity in access to RMNCH services



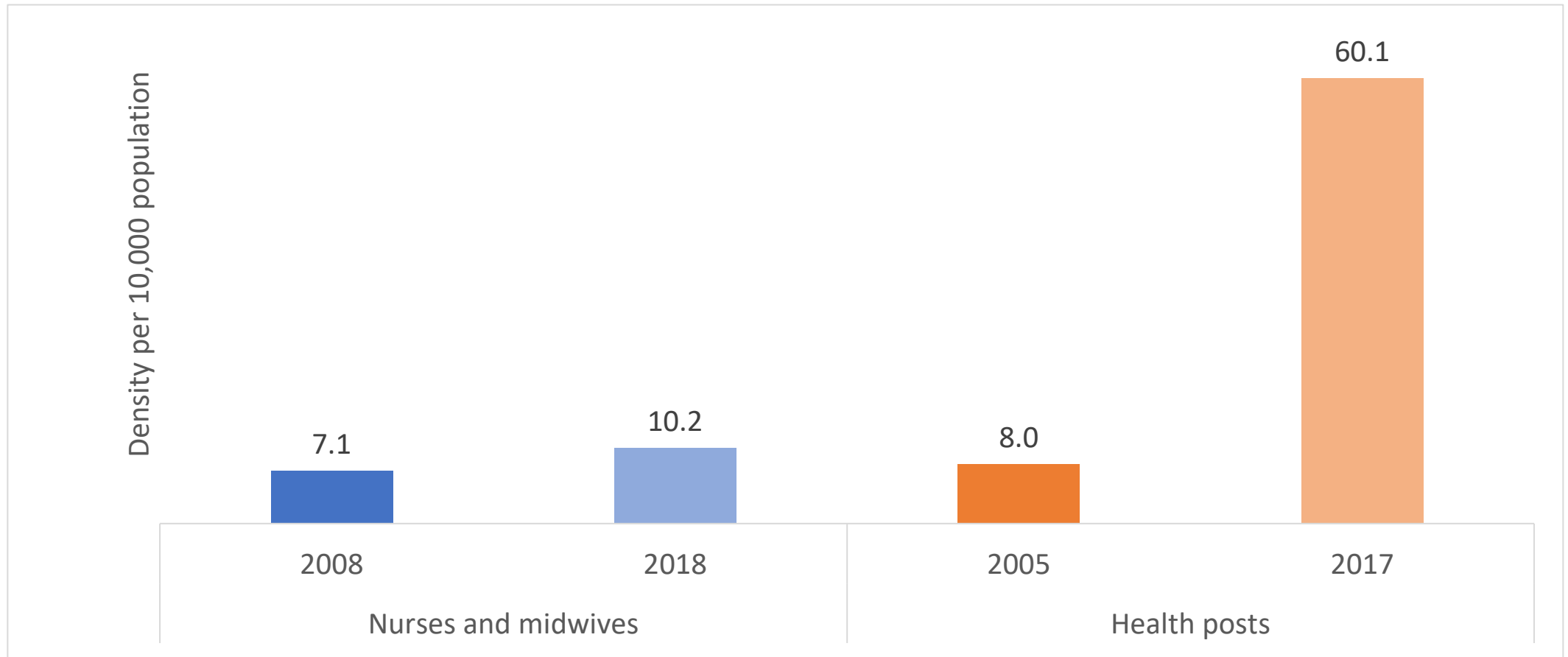
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018



Financing by source in Zambia, Global Health Expenditure Database 2000-18



Increasing density of nurses/ midwives and health post infrastructure



Health policy and systems changes to improve equity in RMNCH

- Consistent commitment in policies and programmes to improving equity in access to RMNCH services – expanding range of interventions over time
- Needs-based financing and decentralized planning at subnational levels for RMNCH
- Emphasis on multisectoral action and horizontal programming among government and development partners to address multiple causes of child mortality
- Efforts to expand health infrastructure and human resources in remote or rural areas
- Strengthening community-based groups and community health workers/assistants in RMNCH service delivery

COVID-19 impact on RMNCH services

COVID-19 impact on RMNCH services: Data and methods

Data

- The study compared the observed monthly service utilization patterns, obtained from the District Health Information Software 2 (DHIS2) for all districts from January 2017 to December 2020.

Indicators

- Family planning, ANC1, ANC4, C-Section, Institutional Deliveries, Penta1 and Penta3, Measles, BCG, OPD

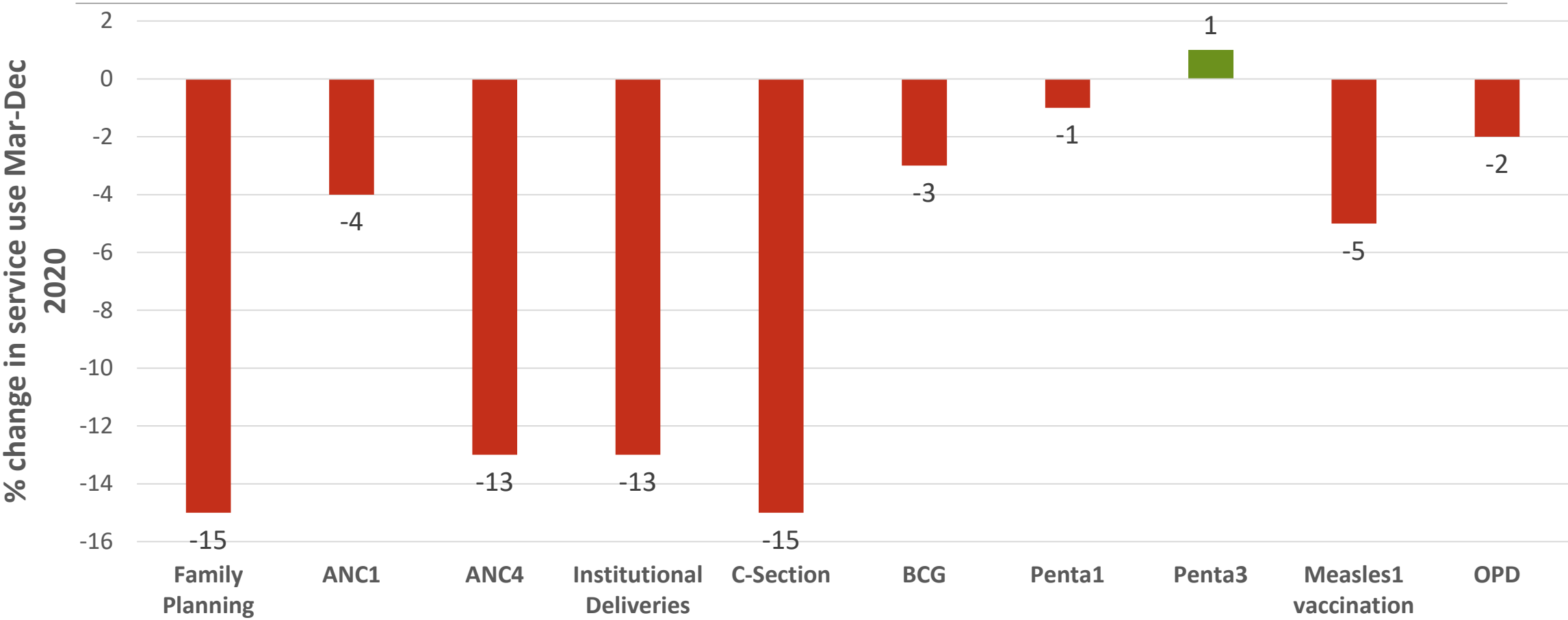
COVID-19 impact on RMNCH services: Data and methods

- 1 Compiled and standardized monthly district level data
- 2 Ran data quality checks
- 3 Corrected data set
- 4 Described annual and monthly trends in service indicators
- 5 Estimated the crude effect of COVID by comparing expected trend without Covid to trends with Covid
- 6 Ran an interrupted time series regression to estimate COVID effect in 2020

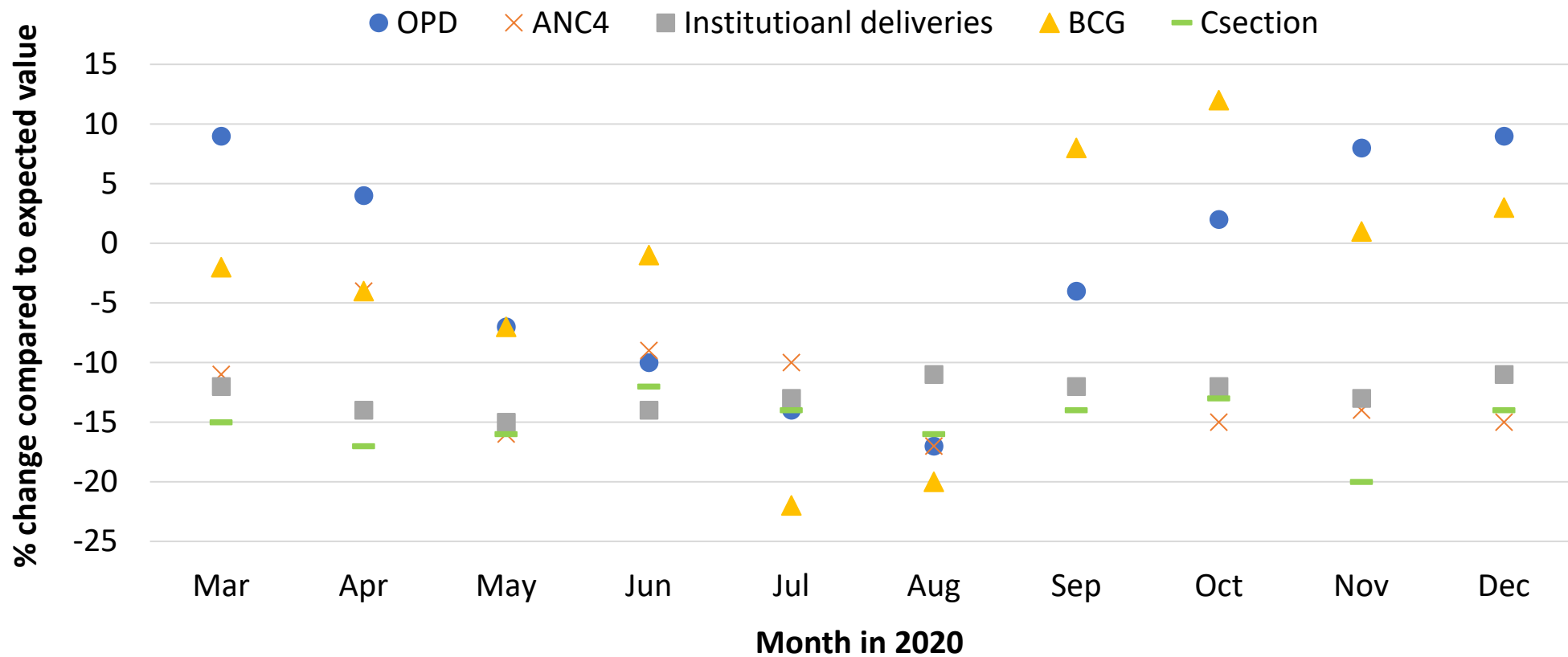
COVID-19 impact on RMNCH services: Results - Data quality

		2017	2018	2019	2020
1	Completeness of monthly facility reporting (green >90%)				
1a	% Of expected monthly facility reports (mean, national)*	95	96	93	96
1b	% Of districts with completeness of facility reporting >= 90%*	100	98	75	87
1c	% Of facilities with no missing monthly values in the year *	100	100	99	100
2	Extreme outliers (green > 95%)				
2a	% Of monthly values that are not extreme outliers (mean, national) *	100	100	100	99
2b	% Of districts with no extreme outliers in the year*	99	97	98	94
3	Consistency of annual reporting (green>85%)				
	Ratio ANC1 – penta1 numbers (national)	1.07	1.23	1.25	1.20
3a	% of districts with ANC1-penta1 ratio between 1.0 and 1.5	78	92	89	91
	Ratio Penta1 – penta3 numbers (national)	1.07	1.06	1.07	1.05
3b	% of districts with penta1-penta3 ratio between 1.0 and 1.5	83	83	87	79
	Annual data quality score (mean indicator 1a to 3b)	94	95	92	92

Percentage change for OPD, ANC1, ANC4, Penta1, Penta3, Institutional deliveries, BCG, C-Section, FP, Measles (Mar-Dec 2020)

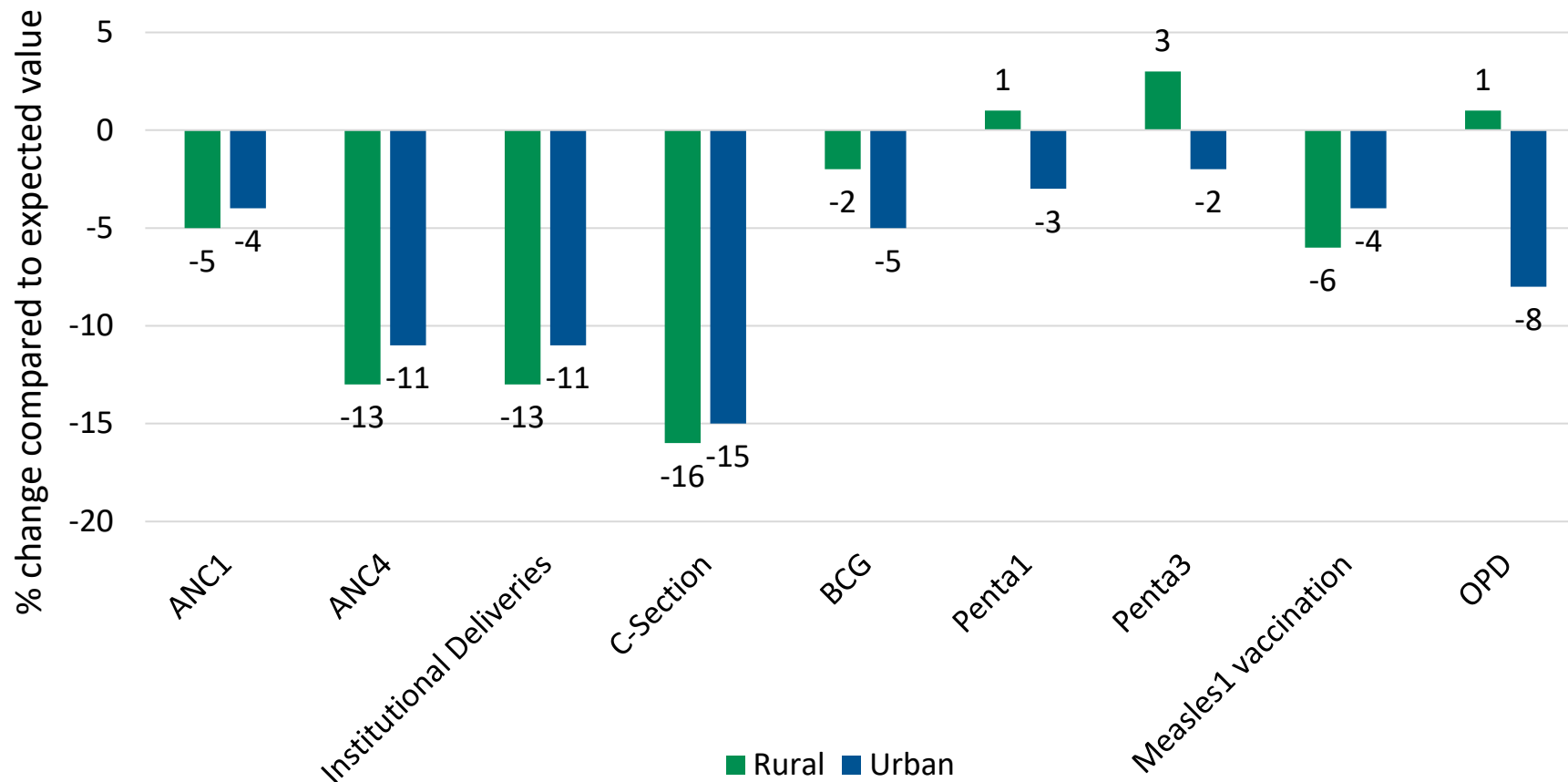


Monthly percentage change for OPD, ANC4, Institutional Deliveries, BCG, C-section, Penta1



Gradual decrease observed from March to August 2020

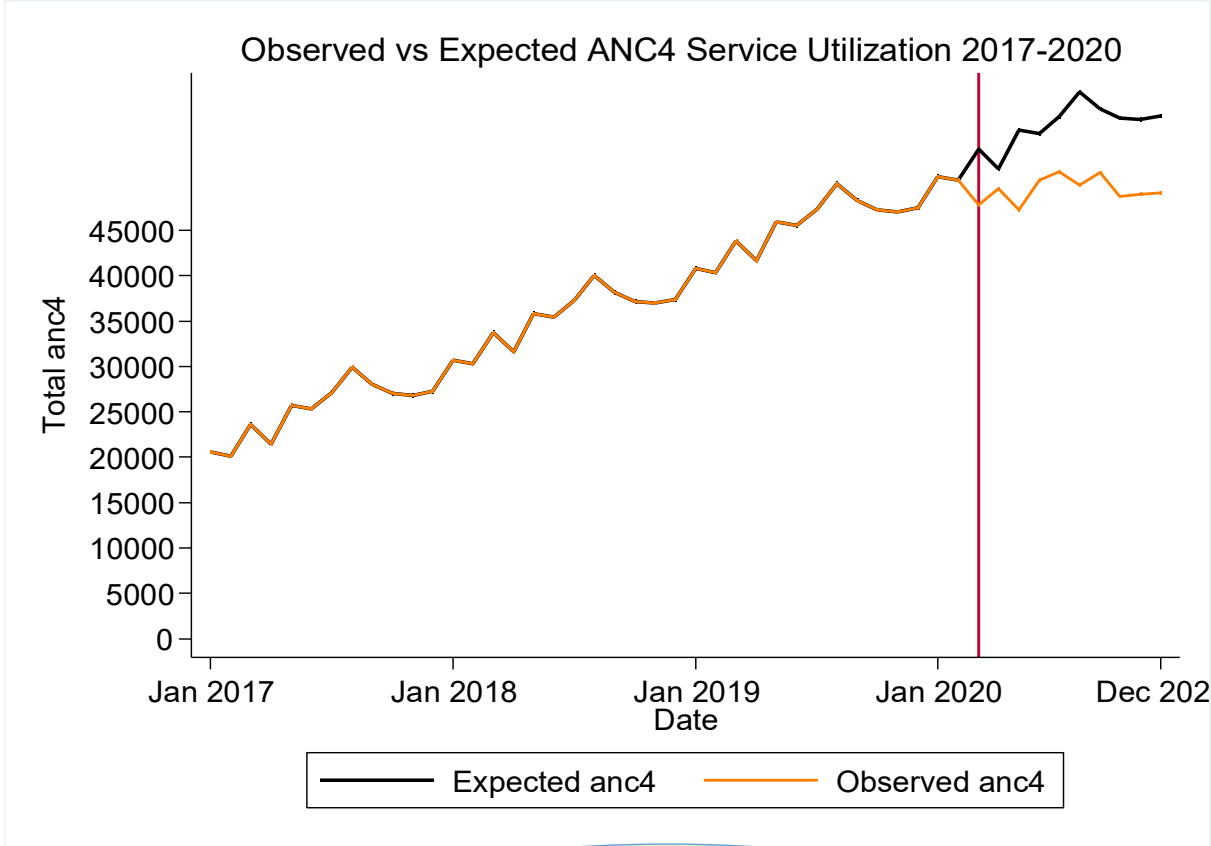
Rural-urban differences in the percentage change in continuation of essential services



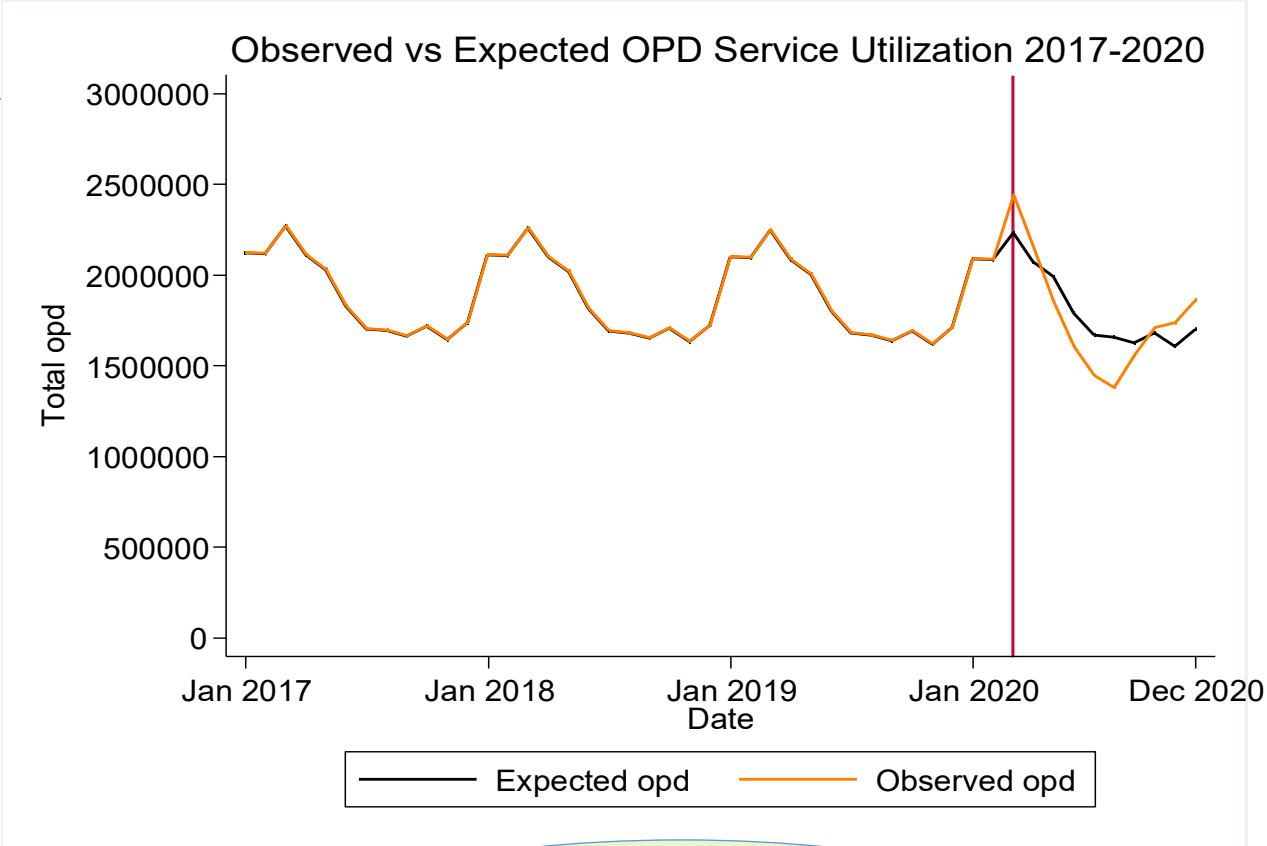
Minimal rural-urban disparities observed

Reductions were experienced in both rural and urban areas for 6 out of 10 indicators

Observed versus expected trends in ANC4 and OPD from 2017-19 to 2020



13% decrease in **ANC4** service utilization between March 2020 and Dec 2020



2% decrease in **OPD** service utilization between March 2020 to Dec 2020

Summary

- Under-five mortality rate has declined substantially across Zambia, although the national target of 25 per 1000 live births in the NHSP 2017-21 was not yet met
- Coverage of RMNCH interventions (measured as composite coverage index) has also greatly improved in all provinces, especially those starting with lower baseline levels in 2000
- Equitable gains were achieved in mortality and coverage, as improvements were greatest among women and children in rural areas and among the poorest socioeconomic groups, though some lag existed among the urban poor
- To achieve these improvements since 2000, Zambia has been implementing policy and health sector reforms at macro, health system and RMNCH specific levels, with a consistent focus on providing services to socioeconomic and geographically disadvantaged populations
- Despite these improvements, we found that the COVID-19 pandemic had moderate impacts on continuation of RMNCH services including family planning, ANC, institutional delivery and to a lesser extent immunization in 2020

Recommendations

- Scale-up and sustain implementation of child health interventions that can be provided in rural and remote communities, with increasing attention to newborns
- Re-adjust and reshape interventions to contextually target children and mothers in poorer groups for selected indicators in urban populations
- Need for continued and coordinated multisectoral approach for responding to RMNCAH+N
- Document lessons learnt on ensuring continuity of essential health services during epidemics and other health system shocks using routinely collected data (DHIS2)

Reflections

- Capacity building – analytical and knowledge translation
- Aligning research and policy priorities
- Data demand generation
- Data use - even with archived data, we are able to use it to respond to key questions
- Collaborations within country – efficient and minimal duplication of efforts

Acknowledgements



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