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Spatio-temporal trends of maternal and child health service coverage and child mortality in poor and rich districts of Addis Ababa city, Ethiopia

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Countdown to 2030
Women's Children's & Adolescent's Health

Presentation outline

- Introduction
- Objective
- Method
- Result
- Conclusion

Introduction #1

- ✓The ‘leave no one behind’ principle underlying the 2030 Agenda for SD underscores the need for equitable progress toward all SDGs—including:
  - ✓Goal 3, which covers maternal, newborn and child health (MNCH),
  - ✓Goal 11, which calls for making cities safe, resilient and sustainable.
- ✓Much attention has been given to closing the gaps between rural and urban populations,
- ✓But the considerable inequities within cities have been neglected, including the lack of basic services in many cities’ poorest areas.

(United Nations, 2016)

Introduction #2

- In Addis, there has been an increase in squatter settlements and urban slum areas, whose residents lack easy and consistent access to basic services such as health care **(UN-Habitat, 2018)**

- Such large concentrations of settlements impose an enormous burden to provide even the most basic urban services, including health care services for women and children.

- In Ethiopia MMR is 412/100,000LB
- Neonatal mortality 33/1000LB, under 5 mortality 59/1000LB

World Bank Group and UNPD
WHO, UNICEF 2015, EDHS, 2016,
Min DHS 2019)

- Skilled care before, during, and after childbirth saves the lives of women and newborn babies.
- However, significant maternal health service utilization disparities exist between the highest wealth quintile and the lowest quintile. (UN-Habitat, 2021)

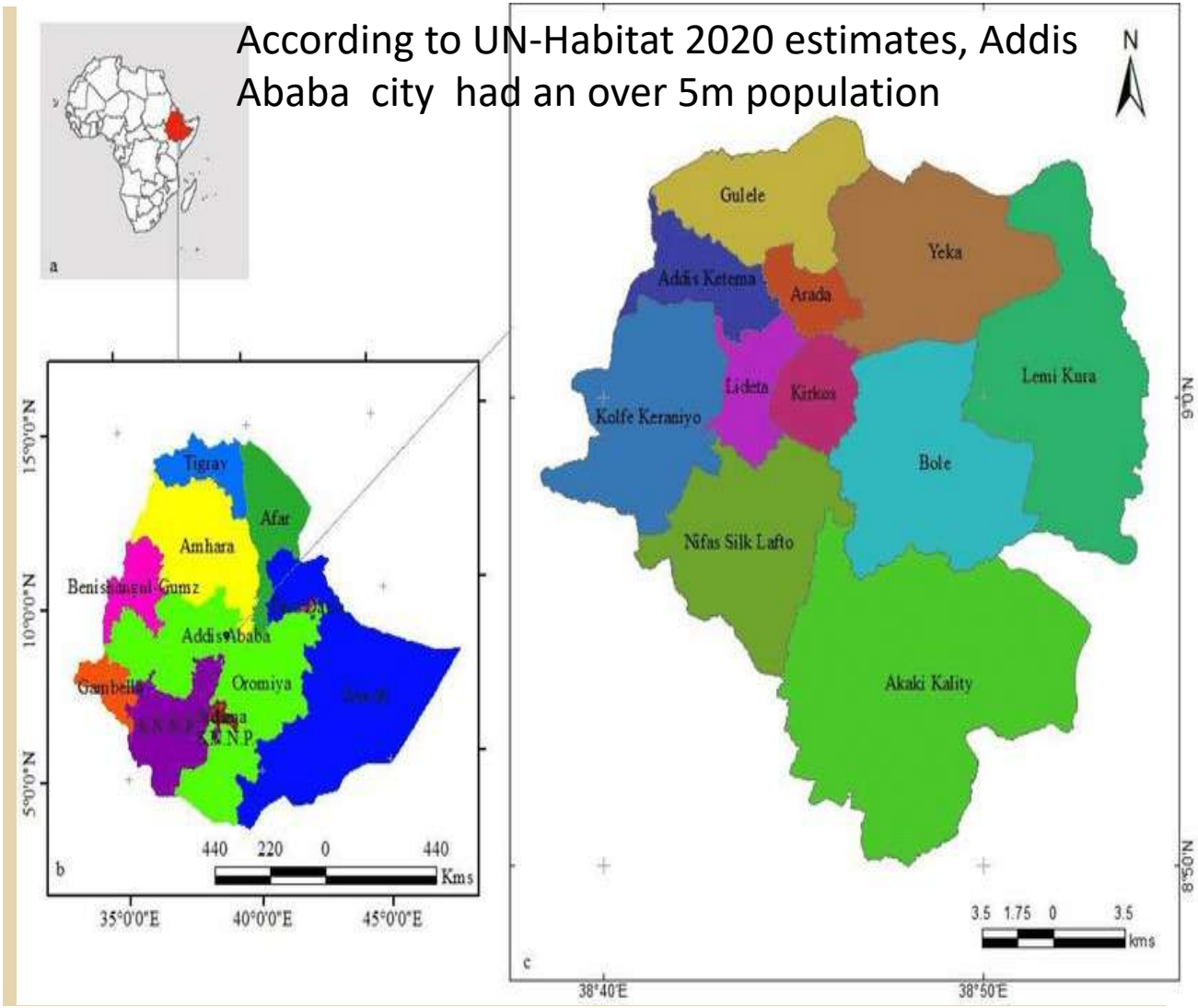
Objective #1

Methods Study

area

- This study specifically aims to examine temporal trends and spatial variations of MNCH service coverage and child mortality among the poor (bottom 40%) and non-poor (top 60%) districts and households in Addis Ababa city.

According to UN-Habitat 2020 estimates, Addis Ababa city had an over 5m population



Methods #2

African Union | AFRICA CDC Centres for Disease Control and Prevention Safeguarding Africa's Health | Hosted by: Republic of Zambia | ZNPHI Zambia National Public Health Institute

- **Sources of our data**
  - Administrative boundaries map of city with sub-city and districts
  - World Bank poverty rate index
  - Household wealth index data from the EDHS
  - Health facility data(DHIS 2 2018 to 2021)
  - EDHS data from 2000 to 2019

- **Data analysis**
  - Descriptive statistics
  - Temporal trend and spatial analyses using Stata version 14 software, QGIS software version 3.16.
  - Statistical significance assessed using p-values and confidence levels ($p<0.05$).

Result and Discussi

African Union

AFRICA CDC
Centres for Disease Control and Prevention
Safeguarding Africa's Health

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- ✓ **Major differences in coverage were observed for all maternal health service coverage indicators.**
- ✓ **While coverage estimates in the top 60% of districts approximated universality, and in the case of C-section far exceeded population need,**
- ✓ **low coverage in the bottom 40% of districts is most notable for SBA (54%) and also ANC4 (67%).**
- ✓ **On the other hand, both poor and non-poor districts are performing well in child immunization services.**

Map
Ababa city and the relative location of public health facilities.

Result and Discussion #2

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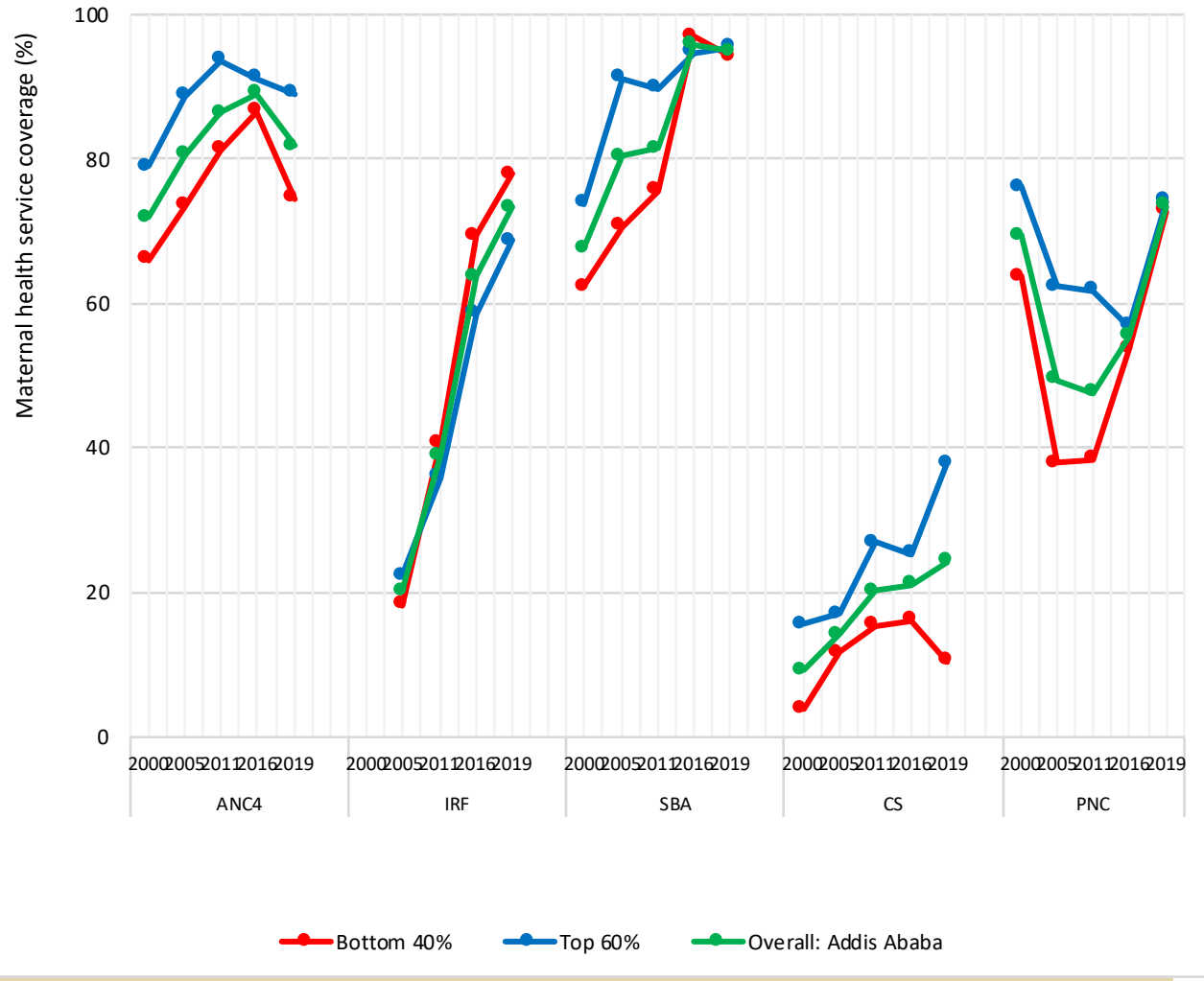
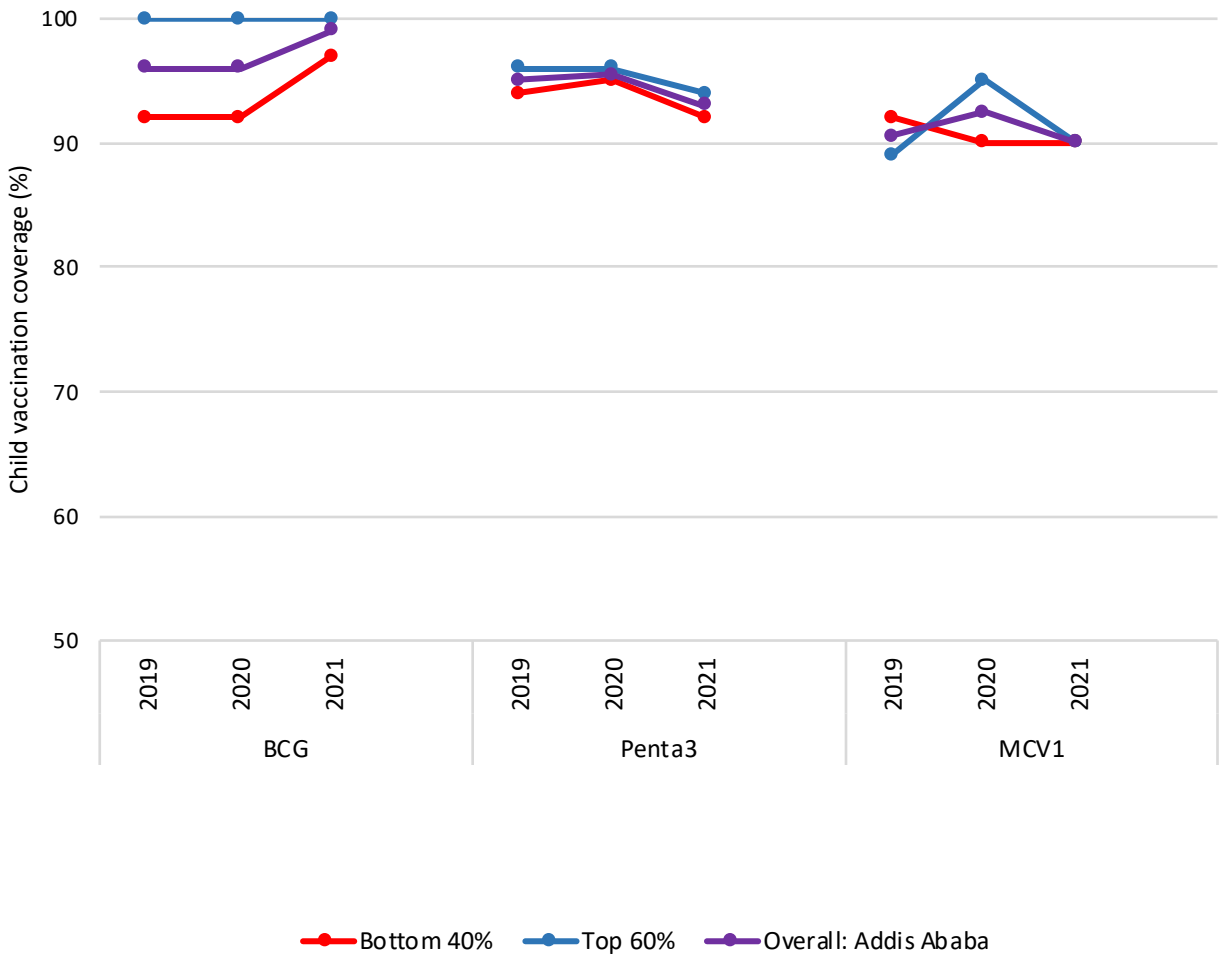
Trends of maternal health service coverage in urban Addis Ababa, 2019–2021.(DHIS 2) ... EDHS 2000–2019

- ANC4 service coverage during 2019 to 2021 was higher in the top 60% districts than the bottom 40% districts.
- Skilled birth attendance in the top 60% (non-poor) districts was 100% over the period.
- This implies that maximum coverage was achieved in the top 60% districts.
- The situation was substantially worse in the bottom 40% (poor) districts, where SBA coverage remained below 60% during 2019 to 2021.
- PNC service coverage was also higher near 97% in the top 60% districts while it remained below 63% in the bottom 40% (poor) districts during 2019-2021.



Result and Discussion

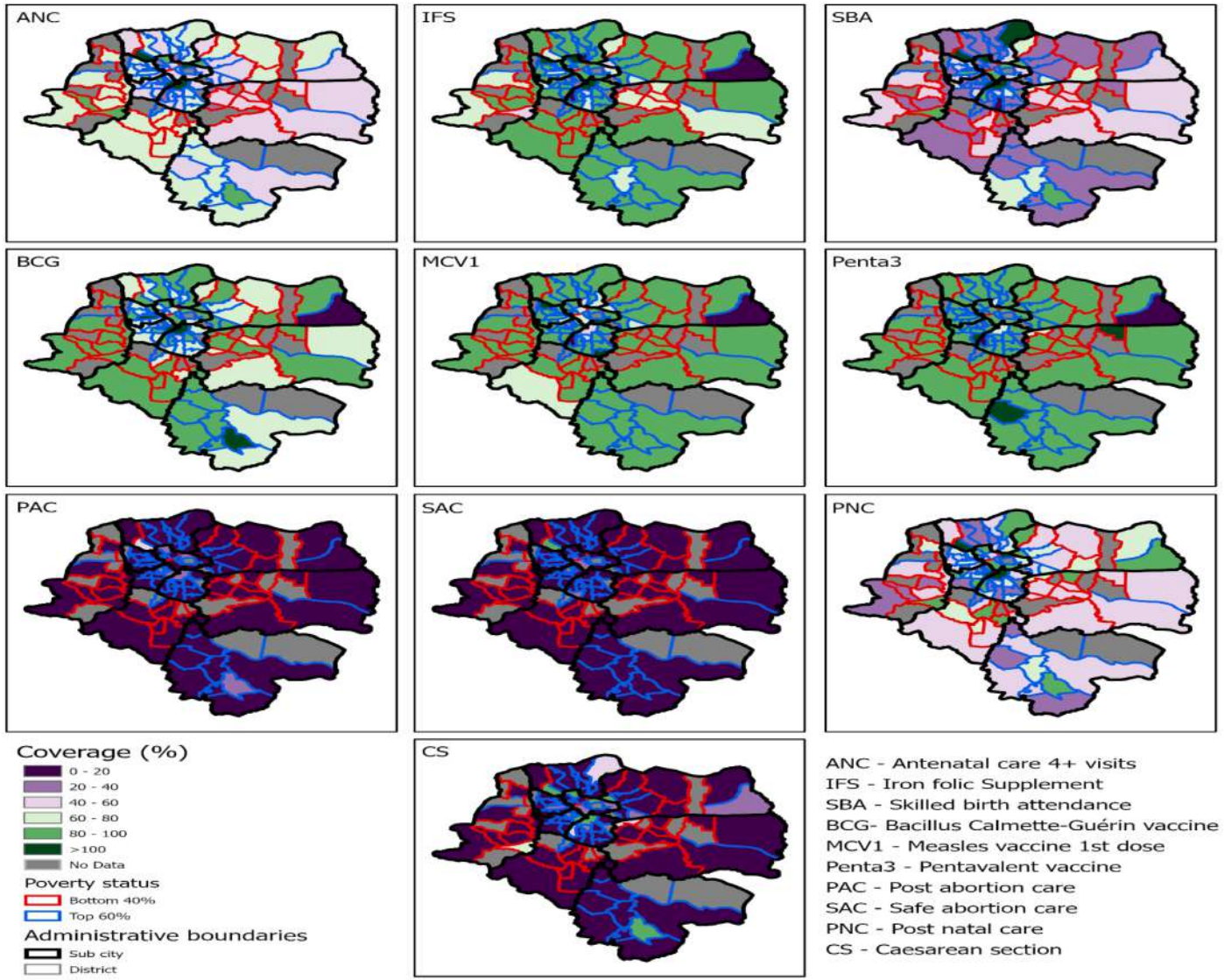
Trends of child vaccination coverage in urban Addis Ababa, 2019–2021.



- Overall, high vaccination rates are found in both the top 60% and bottom 40% of districts, indicating a narrowing of the immunization service gap between poor and non-poor districts.

Result and Discussion

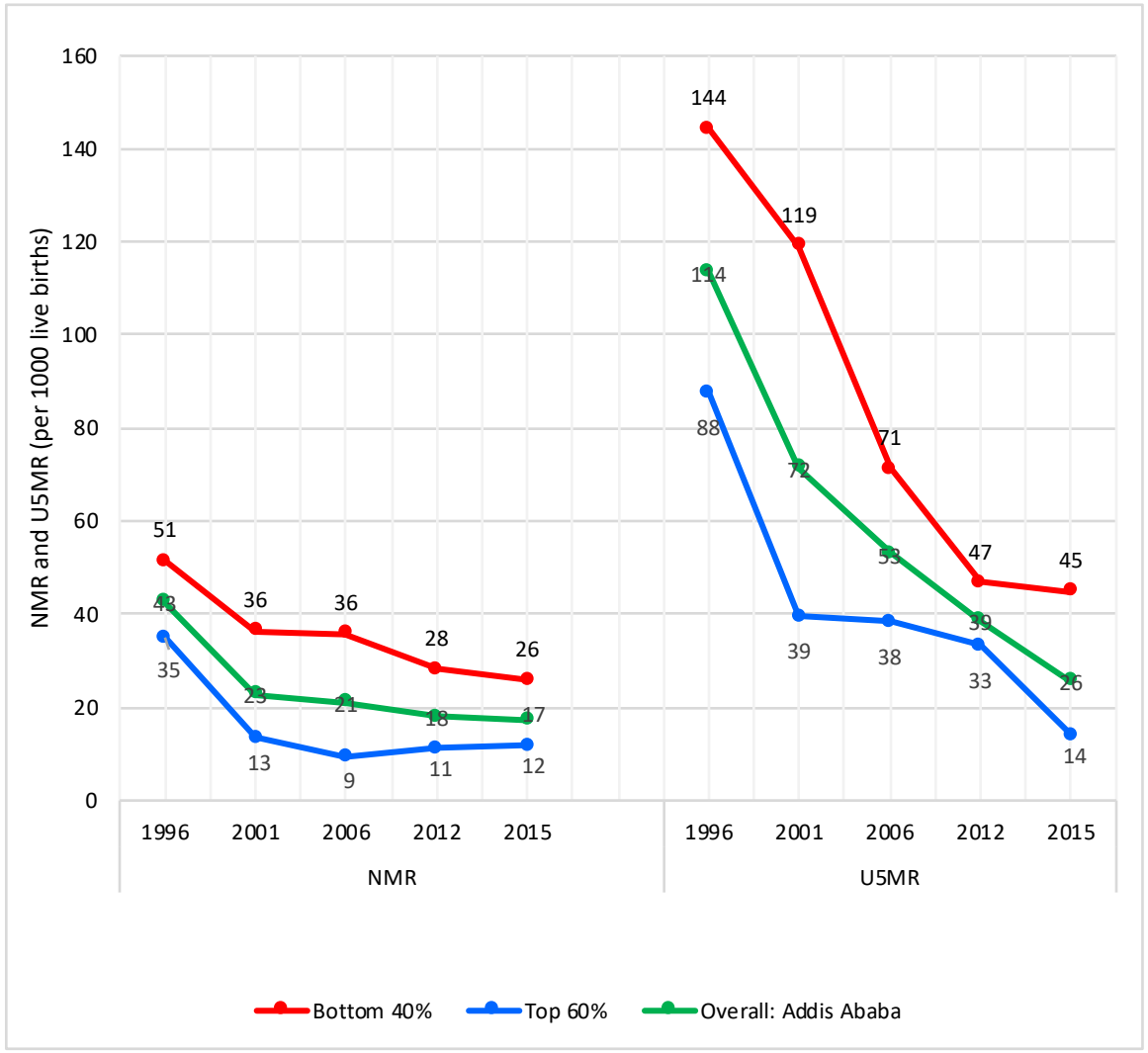
Geo-spatial distribution of MNCH services coverage at the sub-city level, 2019- 2021.



In summary, the image shows that there are significant disparities in maternal health service coverage between the top 60% and bottom 40% districts in Addis Ababa.

Result and Discussion

Trends of NMR and U5MR in urban Addis Ababa, referencer date 1996-2015 (2000-2019 EDHS).



- These findings reveal that both NMR and U5MR exhibited substantial declines, with NMR decreasing by 65% and U5MR by 77% over the two decades.
- This translates to an average annual reduction of 5% for NMR and 8% for U5MR.
- Howe esults diverge whe ering house th status.

U5MR 69%
AARR 6%

NMR
49%
AARR 4%

U5MR 84%
AARR 10%

NMR
66%
AARR 6%

Conclusion

- Addis Ababa exhibits substantial inequalities in MNCH service utilization as well as neonatal mortality.

- These disparities underscore the pressing need for a heightened focus on improving the health of women and children living in the most economically challenged

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Acknowledgement

✓CPHIA
✓Countdown to 2030
✓APHRC

Thank You!

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