



Invited Commentary | Global Health

Persistent Inequalities in Reproductive, Maternal, Newborn, Child, and Adolescent Health in Kenya

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In the context of the United Nations' Sustainable Development Goals, it is not enough to make progress overall at the country level. Equity is central to these goals; thus, it is essential to guarantee that progress is achieved among every subgroup in the population so that no one is left behind. The article by Keats and colleagues¹ presents a comprehensive analysis of inequalities for a set of reproductive, maternal, newborn, child, and adolescent health (RMNCAH) indicators that involve the whole continuum of care.

The article used data from national health surveys to present an overview of the progress in coverage of health interventions in Kenya and evaluates the inequalities related to these indicators. Along with several other health indicators, the authors presented the composite coverage index (CCI), a summary measure that can be considered a proxy for universal health coverage with RMNCAH interventions. The CCI is a weighted average of 8 essential health interventions and covers the spectrum of the continuum of care, including indicators of reproductive health, maternal and child interventions, vaccination coverage, and the management of sick children. Absolute and relative inequalities are evaluated with the slope index of inequality and the concentration index, both of which take into account the coverage in all wealth quintiles, not only in the extremes. Absolute and relative inequality measures are considered complementary, and equity analyses should always present both.² The authors also present geographical analyses that are extremely useful for policy makers. The north eastern region presented CCI coverage of less than 30% in all provinces, while in the central provinces coverage was greater than 70%. Finer geographical stratification would be desirable but is not usually available in these national health surveys. We urge the agencies that plan national health surveys to conduct the studies to be representative at smaller subnational levels than those currently used.

Kenya presented substantial improvement in RMNCAH intervention coverage overall. But examining the equiplot presented in Keats et al¹ in Figure 2, we can see that absolute inequalities remained largely unchanged. Unfortunately, this scenario is quite common in low- and middle-income settings—people living in rural areas and the poorest groups generally fare the worst in terms of health intervention coverage. In many settings, we can add to these groups illiterate or poorly educated people and marginalized minorities, including ethnic and religious groups.^{2,3} When coverage increases and equity is not built into the programs and policies, the first groups to be reached are usually the least vulnerable, further increasing the inequalities and leaving the most marginalized groups lagging.² This is an inequality pattern called *bottom inequality*, which can be clearly seen for full immunization coverage in Kenya in 2014.¹

The wealth-related inequalities observed for skilled birth attendance, family planning needs satisfied, and 4 or more antenatal care visits are striking. Kenya has one of the highest levels of inequality in eastern and southern Africa, especially for rates of skilled birth attendance.³ These inequalities are further revealed by the analysis of intersectionality between wealth and residence. The results show that the poorest individuals living in rural areas lag the most in access to family planning, antenatal care, skilled birth attendants, and vaccines. The CCI summarizes this disadvantage well, showing that the rural poorest are roughly 20 percentage points behind the urban poorest.

The global health monitoring community is increasingly interested in quality of care and not only in access to health services. Keats et al¹ highlight that almost all women in Kenya had at least 1

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antenatal care visit with a skilled provider. While this is positive, another study⁴ showed that only 12% of the women had the first antenatal care visit in the first trimester of pregnancy, as recommended by the World Health Organization. This is a common problem when countries commit to achieve the target goals but do not ensure the quality of the services provided. A large number of antenatal care visits does not guarantee that women are receiving all the antenatal care interventions needed.⁵ Taking quality of care into account is even more important in settings where maternal and neonatal mortality are high and the quality of antenatal care is low, such as in Kenya.^{6,7}

Continued progress in terms of maternal and child health requires an understanding and commitment to both the access to and quality of health services. Many other aspects of the quality of these services being offered to the population also must be assessed. Continuing with the antenatal care example, it should be ensured that all women receive at least the essential components recommended by the World Health Organization, including dietary counselling, iron and folic acid supplementation, screening blood and urine tests, and information about pregnancy complications. Therefore, we need to respond to the challenge in measuring service quality using health surveys and other sources of information for as many health interventions as possible.

Kenya has made progress in national coverage of RMNCAH interventions but failed to reduce inequalities in a relevant way, having some groups in the population lagging far behind others, such as the rural poor. To leave no one behind is a key target to achieve sustainable development, and the article by Keats et al¹ is a good example of how equity analyses can reveal disadvantaged groups and the need for equity-oriented policies and interventions.

ARTICLE INFORMATION

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REFERENCES

1. Keats EC, Akseer N, Bhatti Z, et al. Assessment of inequalities in coverage of essential reproductive, maternal, newborn, child, and adolescent health interventions in Kenya. *JAMA Netw Open*. 2018;1(8):e185152. doi:[10.1001/jamanetworkopen.2018.5152](https://doi.org/10.1001/jamanetworkopen.2018.5152)
2. Barros AJD, Victora CG. Measuring coverage in MNCH: determining and interpreting inequalities in coverage of maternal, newborn, and child health interventions. *PLoS Med*. 2013;10(5):e1001390. doi:[10.1371/journal.pmed.1001390](https://doi.org/10.1371/journal.pmed.1001390)
3. Countdown to 2030. *Tracking Progress Towards Universal Coverage for Women's, Children's and Adolescents' Health: The 2017 Report*. Washington, DC: United Nations Children's Fund and World Health Organization; 2017. <http://countdown2030.org/pdf/Countdown-2030-complete-with-profiles.pdf>. Accessed September 17, 2018.
4. Pell C, Meñaca A, Were F, et al. Factors affecting antenatal care attendance: results from qualitative studies in Ghana, Kenya and Malawi. *PLoS One*. 2013;8(1):e53747. doi:[10.1371/journal.pone.0053747](https://doi.org/10.1371/journal.pone.0053747)
5. Kanyangara M, Munos MK, Walker N. Quality of antenatal care service provision in health facilities across sub-Saharan Africa: evidence from nationally representative health facility assessments. *J Glob Health*. 2017;7(2):021101. doi:[10.7189/jogh.07.021101](https://doi.org/10.7189/jogh.07.021101)
6. Do M, Wang W, Hembling J, Ametepi P. Quality of antenatal care and client satisfaction in Kenya and Namibia. *Int J Qual Health Care*. 2017;29(2):183-193. doi:[10.1093/intqhc/mxz001](https://doi.org/10.1093/intqhc/mxz001)
7. Sharma J, Leslie HH, Kundu F, Kruk ME. Poor quality for poor women? inequities in the quality of antenatal and delivery care in Kenya. *PLoS One*. 2017;12(1):e0171236. doi:[10.1371/journal.pone.0171236](https://doi.org/10.1371/journal.pone.0171236)