Identification of gaps in the continuum of essential maternal and neonatal care in a high-mortality setting: findings from rural Guinea-Bissau

Policy Brief

Key messages

- Integrated, high-quality care throughout the pregnancy, childbirth, and early postnatal period is deemed instrumental to improve maternal and perinatal survival. Yet, continuum-of-care attainment of essential pregnancy, birthing, and postnatal care is critically low across sub-Saharan Africa.
- Meanwhile, there are important measurement gaps: despite Guinea-Bissau ranking among the countries with the highest maternal and perinatal mortality rates in the world, women's attainment of the continuum of essential pregnancy, birthing, and postnatal care has not been investigated to date.
- In this policy brief, we describe the continuum-of-care coverage of essential maternal and neonatal care in rural Guinea-Bissau, defined as the attainment of four or more antenatal care contacts, facility-based childbirth, and a postnatal care contact within 24 hours postpartum. The analyses were based on 2,258 births registered through Bandim Health Project's nationally representative rural health and demographic surveillance system between 1 February 2023 and 31 January 2024.
- Continuum-of-care completion was low at 35%; for 22% of the births, women obtained none of the contributing services. Continuum-of-care completion was higher among women who live near a health facility, have a higher socio-economic status, and low parity. Moreover, region, ethnicity, and recall time were associated with continuum-of-care completion.
- The low continuum-of-care attainment in rural Guinea-Bissau highlights the need for greater attention to continuum-of-care coverage, access barriers to essential maternal and child health services, and efforts to increase service integration.

Context

Despite remarkable progress over the past decades, Guinea-Bissau continues to rank among the countries with the highest maternal and perinatal mortality rates in the world. With an estimated 505 maternal deaths per 100,000 live births, 29 stillbirths per 1,000 births, and 33 neonatal deaths per 1,000 live births,[1] the country remains far from the Global 2030 Targets of less than 70 maternal deaths per 100,000 live births,[2] 12 stillbirths per 1,000 births,[3] and 12 neonatal deaths per 1,000 live births.[2]

To reduce maternal and perinatal mortality, integrated, high-quality care throughout the pregnancy, childbirth, and early postnatal period is deemed essential.[4-7] However, continuum-of-care attainment of essential pregnancy, birthing, and postnatal care is alarmingly low across sub-Saharan Africa.[8,9] Meanwhile, global indicators continue to focus on the attainment of individual

services[3,10-12] and continuum-of-care attainment is insufficiently tracked, leading to crucial data gaps.

In this policy brief, we describe coverage gaps along the continuum of essential maternal and neonatal care in rural Guinea-Bissau and background factors associated with continuum-of-care completion.

Methods

We employed a cross-sectional study nested in the Bandim Health Project's rural health and demographic surveillance system (HDSS). Through this system, we continuously monitor >50,000 women of reproductive age and children below 5 years of age in a nationally representative random sample of 182 village clusters across all ten rural health regions in Guinea-Bissau (i.e., all health regions except for the capital region) (Figure 1).[13] The cohort participants are followed through at least biannual household visits. During the household visits, we inquire about pregnancies, births, survival, the uptake of maternal and child health services, and socio-demographic background factors.

Figure 1: Village clusters under health and demographic surveillance across rural Guinea-Bissau.

Among HDSS-registered births between 1 February 2023 and 31 January 2024, we assessed the coverage of pregnancy, childbirth, and early postnatal care (PNC):

- any antenatal care (ANC) contact (ANC1)
- four or more ANC contacts (ANC4)
- eight or more ANC contacts (ANC8)
- facility-based childbirth
- first maternal and/or newborn PNC contact within 24 hours after birth
- postpartum admission of at least 24 hours among facility births

In the same cohort, we assessed the coverage of the continuum of essential maternal and neonatal care, defined as the attainment of ANC4, facility-based childbirth, and the first maternal and/or newborn PNC contact within 24 hours after birth. Moreover, we assessed associations between continuum-of-care completion and background factors:

- socioeconomic level: household assets, maternal education
- parity
- maternal age
- region of residence
- ethnicity
- geographical distance to nearest health facility
- recall time

We described all outcomes both overall, and stratified by perinatal survival to account for the differential care needs of women with complications.

Key results

Our analytical sample included a total of 2,258 births; among them, 1,831 were registered during pregnancy and were thereby eligible for the stratified analyses (1,740 perinatal survivors; 91 perinatal deaths, i.e., children who were stillborn or died within the first week of life).[i]

Overall, ANC1 coverage was 99% (2,236/2,258), ANC4 coverage 62% (1,403/2,258), ANC8 coverage 6% (128/2,258), facility-based childbirth coverage 56% (1,268/2,258), and PNC coverage 52% (1,167/2,258). Among women who gave birth at a health facility, 79% were admitted for at least 24 hours (981/1,249);[ii] 85% of the women with a facility-based childbirth obtained PNC (1,076/1,268). Facility-based childbirth coverage was statistically significantly higher in the perinatal death stratum (p<0.001); ANC coverage tended to be lower in the perinatal death stratum (statistically significant for ANC1; p=0.03) (Figure 2).

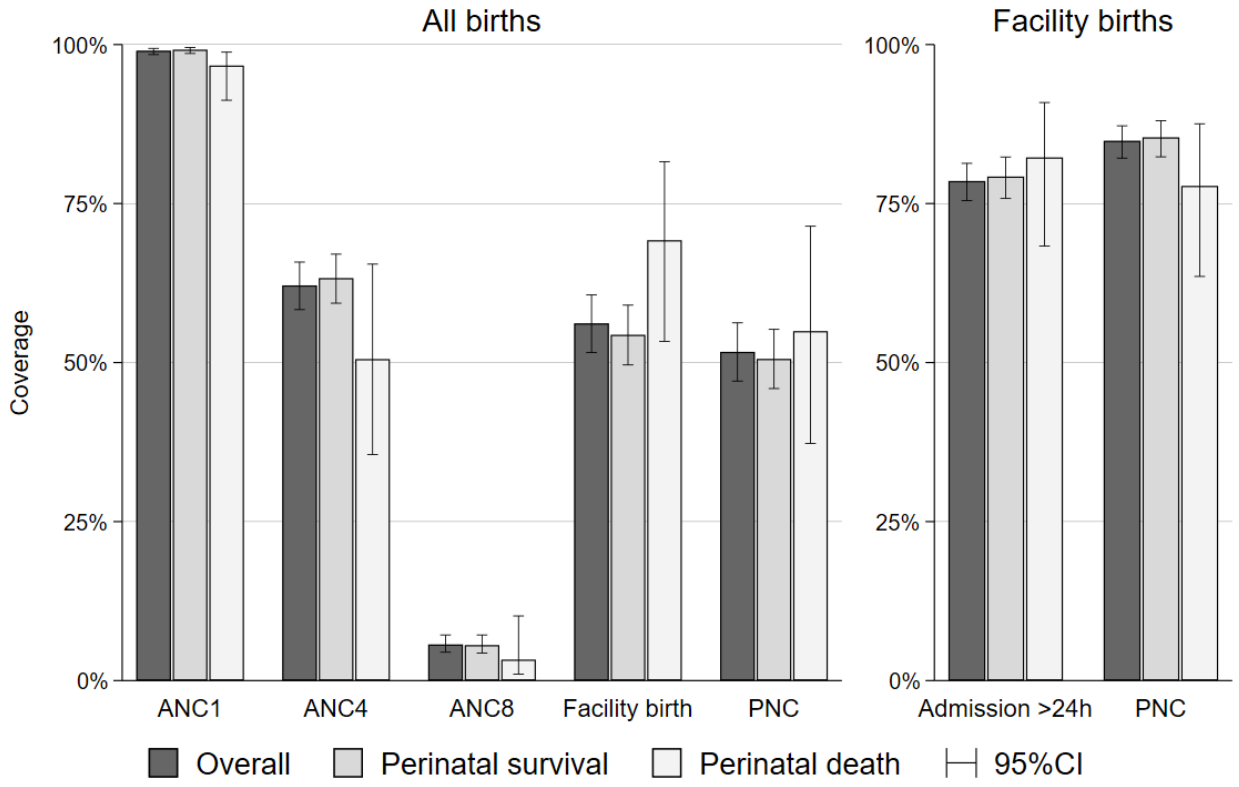

Figure 2: Coverage of at least one/four/eight antenatal care contacts (ANC1/ANC4/ANC8), facility-based childbirth (facility birth), and postnatal care (PNC) within 24 hours after birth among all registered pregnancies (left); coverage of postpartum admission of at least 24 hours and PNC within 24 hours among facility births (right). Coverage overall and by perinatal survival strata.[14]

Overall, 35% completed the continuum of care of ANC4, facility-based childbirth and maternal and/or newborn PNC within 24 hours (798/2,258); 22% obtained none of these services (494/2,258) (Figure 3). Continuum-of-care completion was higher among women living close to health facilities (p<0.001), with a higher socioeconomic level (higher education: p<0.001; more household assets: p=0.001), and with no or one prior birth (p<0.001). Coverage also differed markedly across regions (p<0.001) and ethnicities (p=0.02). Importantly, coverage also increased with longer recall time (p=0.002). Continuum-of-care completion rates were similar across the perinatal survival strata (Figure 3).

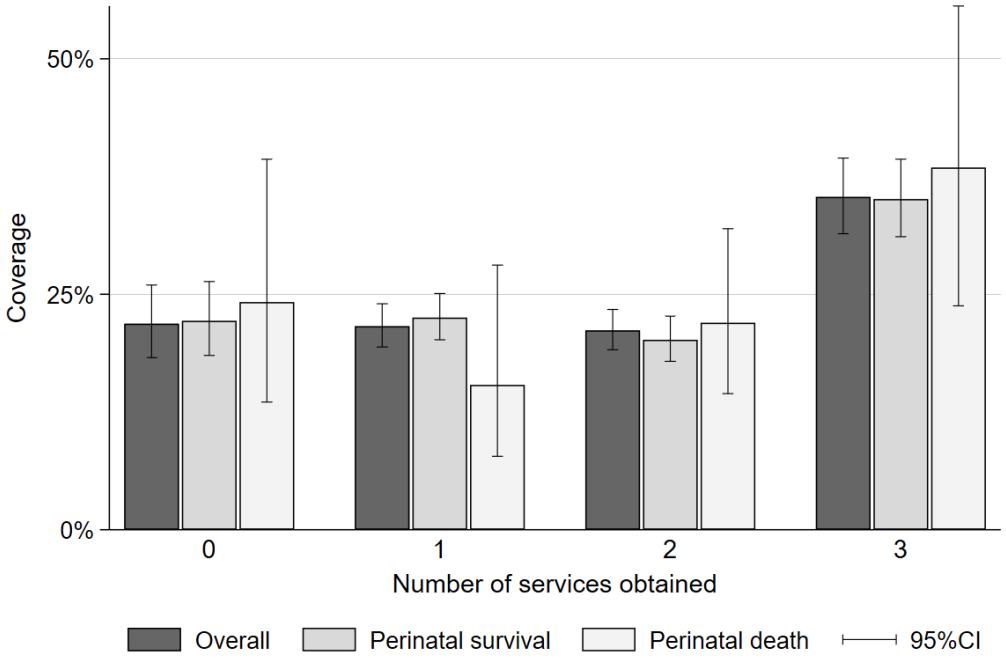

Figure 3: Number of services obtained along the continuum of care of four or more antenatal care consultations, skilled birth attendance, and postnatal care; overall and by perinatal survival strata.[14]

Key findings and recommendations

- Our findings indicate low continuum-of-care attainment of essential pregnancy, birthing, and postnatal care in rural Guinea-Bissau and inequities in continuum-of-care completion.
- Concerted action assuring the availability and equitable accessibility of essential pregnancy, birthing, and postnatal care is critical to promote continuum-of-care attainment.
- Meanwhile, our findings call for an improved integration of services focussing on enabling women who already have a health-facility contact to attain the full continuum of essential pregnancy, birthing, and postnatal care.
- Low-hanging fruits to promote continuum-of-care attainment include assuring the attainment of adequate postpartum care among women who gave birth at a health facility.

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This policy brief was prepared by Sabine Margarete Damerow, Anita Magdalena Zalisz, Kimberly Raisa Nehal, Paula Marise Silva, Oides Furtado, and Ane Bærent Fisker. The full study referred to in this policy brief is available from: https://onlinelibrary.wiley.com/doi/epdf/10.1111/tmi.14136. Further information including a translation into Portuguese can be found on www.measureeffects.org.

[i] We excluded pregnancies registered after birth to avoid bias from omission of perinatal deaths in retrospectively collected birth outcome information.
[ii] 19 facility births with missing postpartum admission information were excluded from this indicator.