RESEARCH LETTER

HIV, HBV and syphilis screening in antenatal care in Lubango, Angola

Screening for infections is part of antenatal care (ANC) evidence-based interventions.[1] The Angola's Health Development Plan 2012–2025[2] includes screening of human immunodeficiency virus (HIV), hepatitis B virus (HBV) and syphilis in the essential package of interventions for maternal and newborn health, which is done using an opt-out approach. There are only a few reports about ANC in Angola.[3–5] To our knowledge, this is the first one about ANC infection screening. We characterised ANC screening rates for HIV, HBV and syphilis among 500 parturient women admitted between October 2016 to September 2017 to the Irene Neto Maternity service in Lubango, Huíla, the second most populous province of Angola (Oliveira *et al*, 2020, accepted to *Sex Transm Infect*). One additional aim was to explore rural versus urban disparities in screening rates, according to parturients place of residence, and identify opportunities for improvement. Since no demographic surveillance system was available to us, rural or urban residence was determined by parturient description of her place of residence. Every parturient residing in Lubango or in its suburbs was considered to live in an urban area. On the contrary, those living outside this perimeter, whose source of livelihood was mostly agriculture, were considered to be from a rural area. Whenever they could not read or write, pregnant woman's fingerprint and witness signature were required, after informed consent was read to her (Oliveira *et al*, 2020, accepted to *Sex Transm Infect*). Timing and number of ANC visits and results of ANC infection screening were retrieved from each participant's pregnancy card. When a positive screening result was found, the woman was asked about the treatment received. At admission in labour, 6.6% (33/500) of the women did not present a pregnancy card. Of the remaining 467 women, some presented pregnancy cards that were only partially legible (reflected in the denominators below). One way of assessing the quality of ANC is to estimate the proportion of pregnant women initiating ANC during the first trimester of pregnancy.[3] Overall, 9.1% (42/462) of the women had initiated ANC in the first trimester of pregnancy (table 1), without difference based on rural or urban residence. In 2009, WHO recommended a minimum of four ANC visits and, in 2017, updated to a minimum of eight contacts to reduce perinatal mortality and improve women's experience of care.[6 7] The Angola's Health Development Plan 2012–2025 recommends that a pregnant woman should be observed in, at least, four ANC visits.[2] In this study, at least four ANC visits during pregnancy were observed in 62.7% (293/467). HIV, HBV and syphilis screening was performed in 66.5% (309/465), 44.6% (208/466) and 60.2% (281/467) respectively, and all infections screening rates were significantly lower in women from rural areas compared with those from urban areas. Only 2.6% (12/465), 0.6% (3/466) and 0.6% (3/467) of the parturients were tested two times during pregnancy against HIV, HBV and syphilis, respectively. Of the five women who had tested HIV positive, one referred that had not initiated antiretroviral therapy. Penicillin G treatment was reported by five of the seven women who tested positive for syphilis. Among the five treated with penicillin G, three recalled that had received the recommended three doses. None of those who tested positive for HBV referred having initiated treatment. In this study, the timing and number of ANC visits fell below the expectations set by the WHO[6 7] as also, although not so low, found in previous studies conducted in other Angola provinces.[3 5] In line with findings of previous studies,[8–10] rural women presented significantly lower rates of HIV, HBV and syphilis screening. This could be explained by the fact that in Angolan rural areas, the offer of health services in general is lower, particularly laboratory tests. Additionally, women from rural areas have a lower educational level, which probably makes them less able to communicate with and access healthcare services. Policies are required to improve the quality of ANC in Lubango and to address rural–urban disparities in ANC infection screening rates.

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Table 1 ANC characteristics: general and according with area of residence

ANC characteristics	Total		Area of residence		
	N (%)	95% CI	Urban n (%)	Rural n (%)	P value
Timing and number of visits					
First trimester (n=462)	42 (9.1)	6.8 to 12.1	35 (8.7)	7 (11.9)	0.428*
≥4 visits (n=467)	293 (62.7)	58.3 to 67.0	262 (64.2)	31 (52.5)	0.083*
≥8 visits (n=467)	16 (3.4)	2.1 to 5.5	14 (3.4)	2 (3.4)	1.000†
Infection screening documented (at least once)					
HIV (n=465)	309 (66.5)	62.0 to 70.6	285 (70.2)	24 (40.7)	<0.001*
HBsAg (n=466)	208 (44.6)	40.2 to 49.2	201 (49.4)	7 (11.9)	<0.001*
RPR (n=467)	281 (60.2)	55.7 to 64.5	269 (65.9)	12 (20.3)	<0.001*
Infection treatment reported by women					
HIV positive (n=5)	4 (80.0)	37.6 to 96.4	4 (80.0)	0 (0.0)	NA
HBsAg positive (n=10)	0 (0.0)	0.0 to 27.8	NA	NA	NA
RPR positive (n=7)	5 (71.4)	35.9 to 91.8	4 (80.0)	1 (50)	NA

*Pearson χ^2 test.
†Fisher's exact test.
ANC, antenatal care; n, absolute frequencies; %, relative frequencies; 95% CI, 95% confidence intervals (estimated with the Wilson method using EpiTools); HBsAg, hepatitis B surface antigen; RPR, rapid plasma reagin test; NA, not applicable.

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