RESEH

A da c a a ac c -c J a b , S A ca a d a c a b c l : a a da l b a ac

Siphamandla Gumede[1*], Vivian Black[1,2], Nicolette Naidoo[1] and Matthew F. Chersich[1]

Abstract

Background:

Background

The Sustainable Development Goal (SDG) that speaks directly to health (Goal 3) makes commitments to reduce the maternal mortality ratio to under 70 deaths per 100,000 live births, prevent deaths of newborns and children under 5, and reduce mortality related to Human Immunodeficiency Virus (HIV) and other communicable diseases [1]. High coverage of antenatal care (ANC) and of interventions for preventing mother-to-child transmission (PMTCT) [2] of HIV will be important for achieving these commitments. The SDGs place much emphasis on the need for reducing inequalities, and that targets will only be considered achieved if they are have been met for all relevant income and social groups [3].

Johannesburg is one of five districts of the Gauteng Province, the economic hub of the country. The inner-city is densely populated, consisting of the flatland areas of Hillbrow and Berea, as well as the Johannesburg Central Business District. It is estimated that the region contains about 15% of the 4 million people who live in the city of Johannesburg [21]. However, it is likely that this figure is well above 15% as the majority of the large transient population in the inner-city area are not included in those estimates. The inner-city is a uniquely complex and dynamic environment that has undergone major demographic, social and economic shifts over the last few decades. Many of its inhabitants are immigrants, both South Africans from other provinces of the country as well as foreigners. About a quarter of adults in the area are unemployed [21]. The inner-city houses several large taxi hubs and 800,000 commuters are said to pass through the city daily. Informal trading is the dominant economic activity. Unfortunately,

Table 2 Associations between antenatal attendance, and access to other services and birth outcomes in worst case scenario (women with unknown attendance classified as not having attended ANC)

Variable	Univariate odds ratio	P	Multivariate odds ratio	P
Had an HIV test				
Attended ANC				
Yes	1.0	<0.001	1.0	<0.001
No	0.04 (0.04–0.05)		0.05 (0.05–0.06)	
Site				
Primary level	1.0		1.0	
Secondary level	3.38 (3.04–3.76)	<0.001	3.01 (2.66–3.41)	<0.001
Tertiary level	6.74 (6.25–7.27)	<0.001	5.36 (4.92–5.85)	<0.001
Had a Caesarean section				
Attended ANC				
Yes	1.0	<0.001	1.0	<0.001
No	0.34 (0.31–0.38)		0.39 (0.35–0.44)	
Site				
Secondary level	1.0	<0.001	1.0	<0.001
Tertiary level	3.75 (3.47–4.05)		3.35 (3.10–3.63)	
HIV status				
Negative	1.0		1.0	
Positive	1.06 (1.00–1.13)	0.04	1.0 (0.94–1.06)	0.98
Unknown	0.50 (0.45–0.56)	<0.001	0.64 (0.57–0.72)	<0.001
Gestation at childbirth				
Term or post-term	1.0	<0.001	1.0	<0.001
Preterm	1.46 (1.37–1.56)		1.24 (1.17–1.33)	
Preterm birth				
Attended ANC				
Yes	1.0	0.77	1.0	<0.001
No	1.01 (0.92–1.11)		1.59 (1.40–1.79)	
Site				
Primary level	1.0	<0.001	1.0	<0.001
Secondary level	3.34 (2.07–5.40)		5.41 (3.34–8.78)	
Tertiary level	106.6 (72.5–156.9)	<0.001	216.9 (146.1–322.1)	<0.001
Infant sex				
Male	1.0	0.55	-	-
Female	0.98 (0.92–1.05)			
HIV status				
Negative	1.0	<0.001	1.0	<0.001
Positive	1.25 (1.16–1.33)		1.33 (1.23–1.43)	
Unknown	1.13 (1.03–1.24)	<0.001	4.01 (3.53–4.55)	<0.001
Stillbirth[a]				
Attended ANC				
Yes	1.0	<0.001	1.0	0.02
No	2.0 (1.6–2.4)		1.40 (1.06–1.85)	

Table 3 Proportion of women attending antenatal care in each facility, by maternal characteristics and birth outcomes in worst case scenario (women with unknown attendance classified as not having attended ANC)

Variable	Primary care clinic	*P*	Secondary level hospital	*P*	Tertiary hospital	*P*
	% attended (n/N)		% attended (n/N)		% attended (n/N)	
ANC attendance for facility	77.1 (5813/7543)		89.0 (3661/4113)		93.1 (18,177/19,523)	

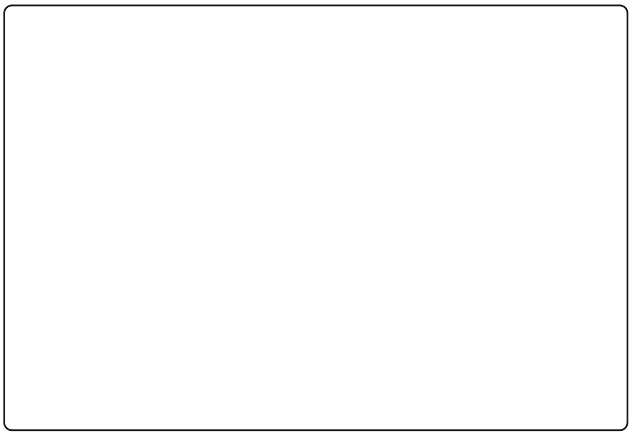
ANC than adults (95% CI OR = 1.3–1.6). The absolute percentage difference between adolescents' and adults' attendance was 3% at HCHC and 2% at CMJAH. Antenatal attendance in women above 30 years in CMJAH was higher than all other age groups in the other two facilities (94%, 6313/6700).

In HCHC only 95% of HIV-positive women had attended ANC (1803/1897), compared with 99% of negative women (3220/3270). HIV prevalence was similar in those who had or had not attended ANC in the other

Having attended ANC, regardless of number of visits, has been used for decades as an important measure of access to maternal health services [38–40]. The number of visits made to an antenatal clinic is, however, also a key measure of access, and was unfortunately not collected within birth registers in the study sites. The indicator 'proportion of women attending four or more visits' is one of the four indicators used to measure the

same-day initiation of antiretroviral treatment means that women attending even one visit can still access several important services.

The data collection periods differed between facilities. This could have biased the study findings as differences observed in attendance rates between the tertiary facility and other levels may be due to systematic improvements or reductions in ANC utilisation across the facilities, rather than due to the differences between levels of care. Also, patterns of patient referral may have shifted during that period and it is even possible that some women gave birth at the primary or secondary level facility in 2008–



Publisher's Note

Author details

[1]

41. World health statistics 2016: monitoring health for the SDGs, sustainable development goals. [http://www.who.int/gho/publications/world_health_statistics/2016/en/]. Accessed 4 Apr 2017.
42. National-level monitoring of the achievement of universal access to