



# HIV status, knowledge of mother-to-child transmission of HIV and antenatal care use among Ethiopian women

Ida Sahlu <sup>a</sup>, Chanelle J. Howe <sup>a,b,\*</sup>, Melissa A. Clark <sup>a,b,c</sup>,  
Brandon D.L. Marshall <sup>a,b</sup>

<sup>a</sup> Department of Epidemiology, Brown University School of Public Health, 121 South Main Street, Providence, RI, USA

<sup>b</sup> Center for Population Health and Clinical Epidemiology, Brown University School of Public Health, 121 South Main Street, Providence, RI, USA

<sup>c</sup> Department of Obstetrics and Gynecology, Brown University School of Public Health, 121 South Main Street, Providence, RI, USA

Received 11 October 2013; received in revised form 19 December 2013; accepted 2 January 2014  
Available online 13 February 2014

## KEYWORDS

Human immunodeficiency virus;  
Knowledge;  
Prevention of mother-to-child transmission;  
Antenatal care;  
Ethiopia

**Abstract** *Objective:* To determine whether HIV status and knowledge of mother-to-child-transmission (MTCT) of HIV are associated with antenatal care (ANC) use.

*Methods:* Data were obtained from the 2011 Ethiopia Demographic and Health Survey among women aged 15–49 years who agreed to HIV testing and who reported giving birth in the preceding five years. The two exposures of interest were HIV status and knowledge of MTCT. Unadjusted and adjusted prevalence ratios for ANC use were estimated by fitting modified Poisson regression models.

*Results:* Among the 7392 women in the sample, ANC use was lowest among HIV-negative, low MTCT knowledge women (31.6% [95% confidence interval: 28.1–35.1]), and highest among HIV-positive, high knowledge women (81.9% [69.8–94.0%]). ANC use was significantly higher among HIV-positive, high knowledge (adjusted prevalence ratio [APR] = 1.60 [1.32–1.94]) and HIV-negative, high knowledge women (1.37 [1.24–1.51]) compared with HIV-negative, low knowledge women. There was no statistically significant difference in ANC use by HIV status among low knowledge women (1.26 [0.71–2.25]).

\* Corresponding author at: Department of Epidemiology, Brown University School of Public Health, 121 South Main Street, Providence, RI 02912, USA. Tel.: +1 (401) 863 7406; fax: +1 (401) 863 3713.

E-mail address: [chanelle\\_howe@brown.edu](mailto:chanelle_howe@brown.edu) (C.J. Howe).

*Conclusions:* HIV-positive women generally had better MTCT knowledge. Among HIV-negative women, the prevalence of ANC use was greater among women with higher knowledge. Increasing MTCT knowledge may facilitate ANC use and in turn may eliminate MTCT.

© 2014 Ministry of Health, Saudi Arabia. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## 1. Introduction

The number of adults and children living with the human immunodeficiency virus (HIV) in sub-Saharan Africa has decreased from 2.2 million in 2001 to 1.8 million in 2009 [1]. However, women remain substantially affected by the epidemic in this region. In sub-Saharan Africa, young women aged 15–25 years are 8 times more likely than men to be HIV-positive [1]. With women of reproductive ages highly affected by HIV, identifying opportunities to prevent mother-to-child transmission (MTCT) of HIV is of utmost importance. Antenatal and postnatal services, where antiretroviral therapies (ART) can be provided to HIV-positive mothers to prevent transmission, represent an opportune setting to curb MTCT and achieve the World Health Organization (WHO) goal to eliminate MTCT by 2015 [1,2].

Ethiopia is among the sub-Saharan countries most affected by the HIV epidemic, with a prevalence of 1.5% among adults, and is among the 22 countries with the highest number of pregnant women living with HIV [2,3]. In recent years, the country has seen a 25% decline in new HIV infections in the general population based on ANC sentinel surveillance data, and there has been a decrease in HIV prevalence among women aged 15–24 years receiving antenatal care (ANC) [3–5]. Data from the 2011 Ethiopian Demographic and Health Survey (EDHS) also found that national general knowledge of the prevention of MTCT remains low [6]. At present, it remains unclear whether the observed decrease in HIV prevalence is due to a decline in HIV infection among pregnant women co-occurring with the decline in the general population, or instead that HIV-positive women have become less likely than HIV negative women to access ANC services.

HIV-positive status as well as low knowledge about MTCT may contribute to lower ANC use. Lower use of ANC services, particularly by HIV-positive women, hinders goals to eliminate MTCT. Therefore, the objective of this study was to determine whether HIV status and knowledge of MTCT are associated with ANC use among a national sample of Ethiopian women of reproductive age, 15–49 years.

## 2. Materials and methods

### 2.1. Source population

The data used for this analysis were obtained from the 2011 EDHS [7], a nationally representative cross-sectional survey conducted by the Central Statistical Agency (CSA), Ethiopia, and Macro International Inc., Calverton, Maryland, USA, as part of the MEASURE DHS project. HIV testing through the use of blood samples was conducted by the Ethiopia Health and Nutrition Research Institute. The survey sample was collected from December 2010 to June 2011 using a stratified, two-stage sample design from the Ethiopia 2007 Population and Health Census frame [6]. Each region was stratified into urban and rural areas and the two-stage sample selection was conducted independently within each sampling stratum. The first stage selected census enumeration units (EU), with the probability based on the EU size, and the second stage selected a fixed number of 30 households for each EU.

Three surveys were administered at sampled households: the Household Questionnaire, the Woman's Questionnaire and the Man's Questionnaire. The Household Questionnaire was used to gather household characteristics, to determine eligible men and women for the individual questionnaires, and to record the respondents that consented to give blood samples for HIV testing. All women aged 15–49 years were eligible for the Woman's Questionnaire if they were usual residents of the household or were present the day of the survey and had slept in the selected household the night prior to the survey. HIV testing was done separately by EDHS biomarker technicians for those aged 15–49 years who voluntarily consented to the testing.

### 2.2. Study sample

The study sample consisted of women aged 15–49 years who at the time of the current EDHS agreed to HIV testing and reported a live birth in the five years since the last EDHS in 2005. Antenatal care data were available for women that reported having a live birth within the preceding

Download English Version:

<https://daneshyari.com/en/article/3327605>

Download Persian Version:

<https://daneshyari.com/article/3327605>

[Daneshyari.com](https://daneshyari.com)